

RADIO PERFORMANCE TEST REPORT

Test Report No. : OT-204-RWD-043

AGR No. : A202A-377R

Applicant : SINSUNG ICT

Address : #533, 55, Hanyangdaehak-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, Republic of Korea

Manufacturer : SINSUNG ICT

Address : #533, 55, Hanyangdaehak-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, Republic of Korea

Type of Equipment : Personal medium frequency stimulator and body fat meter

FCC ID. : 2AVY4SS-M100K

Model Name : SS-M100K

Multiple Model Name : SS-M100KW, SS-M100KB, SS-M100KR, SS-M100KY, SS-M100KS

Serial number : N/A

Total page of Report : 32 pages (including this page)

Date of Incoming : March 05, 2020

Date of issue : April 08, 2020

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.

Reviewed by:



Ha-Ram Lee / Manager
ONETECH Corp.

Approved by:



Jae-Ho Lee / Chief Engineer
ONETECH Corp.

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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-204-RWD-043	April 08, 2020	Initial Issue	All

1. VERIFICATION OF COMPLIANCE

Applicant : SINSUNG ICT

Address : #533, 55, Hanyangdaehak-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, Republic of Korea

Contact Person : Seung-ho Lee / CEO

Telephone No. : 070-7622-2114

FCC ID : 2AVY4SS-M100K

Model Name : SS-M100K

Brand Name : TOOK TOOK

Serial Number : N/A

Date : April 08, 2020

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
KIND OF EQUIPMENT	Personal medium frequency stimulator and body fat meter
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
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.

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

Note: -

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-4112/ C-14617/ G-10666 / T-1842

-. Lab Accreditation:

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

3. GENERAL INFORMATION

3.1 Product Description

The SINSUNG ICT, Model SS-M100K (referred to as the EUT in this report) is an Personal medium frequency stimulator and body fat meter. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Personal medium frequency stimulator and body fat meter
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz
RF OUTPUT POWER	-10.17 dBm
NUMBER OF CHANNEL	40 Channels
MODULATION TYPE	GFSK(Bluetooth LE)
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	2.3 dBi
LIST OF EACH OSC. OR CRYSTAL. FREQ.(FREQ.>=1 MHz)	32.768 kHz, 24 MHz, 16 MHz
RATED SUPPLY VOLTAGE	DC 3.7 V

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

-. The following lists consist of the added model and their differences.

Model Name	Differences	Tested
SS-M100K	Basic Model	☒
SS-M100KW	This model is identical to the basic model except for color.	☐
SS-M100KB		☐
SS-M100KR		☐
SS-M100KY		☐
SS-M100KS		☐

Note: 1. Applicant consigns only basic model to test. Therefore, this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

4. EUT MODIFICATIONS

-. None

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	N/A	N/A	-
Sub Board	N/A	N/A	-
Battery	N/A	N/A	-

5.2 Peripheral equipment

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

Model	Manufacturer	Description	Connected to
HP Probook	HP	Notebook PC	EUT
PPP009C	LITE-ON TECHNOLOGY (CHANGZHOU)CO.,LTD.	AC Adapter	

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 2 402 MHz, 2 440 MHz, and 2 480 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.

5.4 Configuration of Test System

Line Conducted Test: The EUT was connected to LISN. All supporting equipments 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 antenna of the EUT is a Chip Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Tests, the following operating modes were investigated.

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

6.2 General Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

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

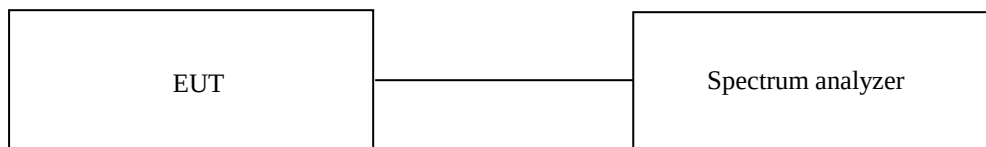
7. MINIMUM 6 dB BANDWIDTH

7.1 Operating environment

Temperature : 24 °C
Relative humidity : 48 % 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 equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101200	Jul. 24, 2019 (1Y)

All test equipment used is calibrated on a regular basis.

7.4 Test data

-. Test Date : March 17, 2020

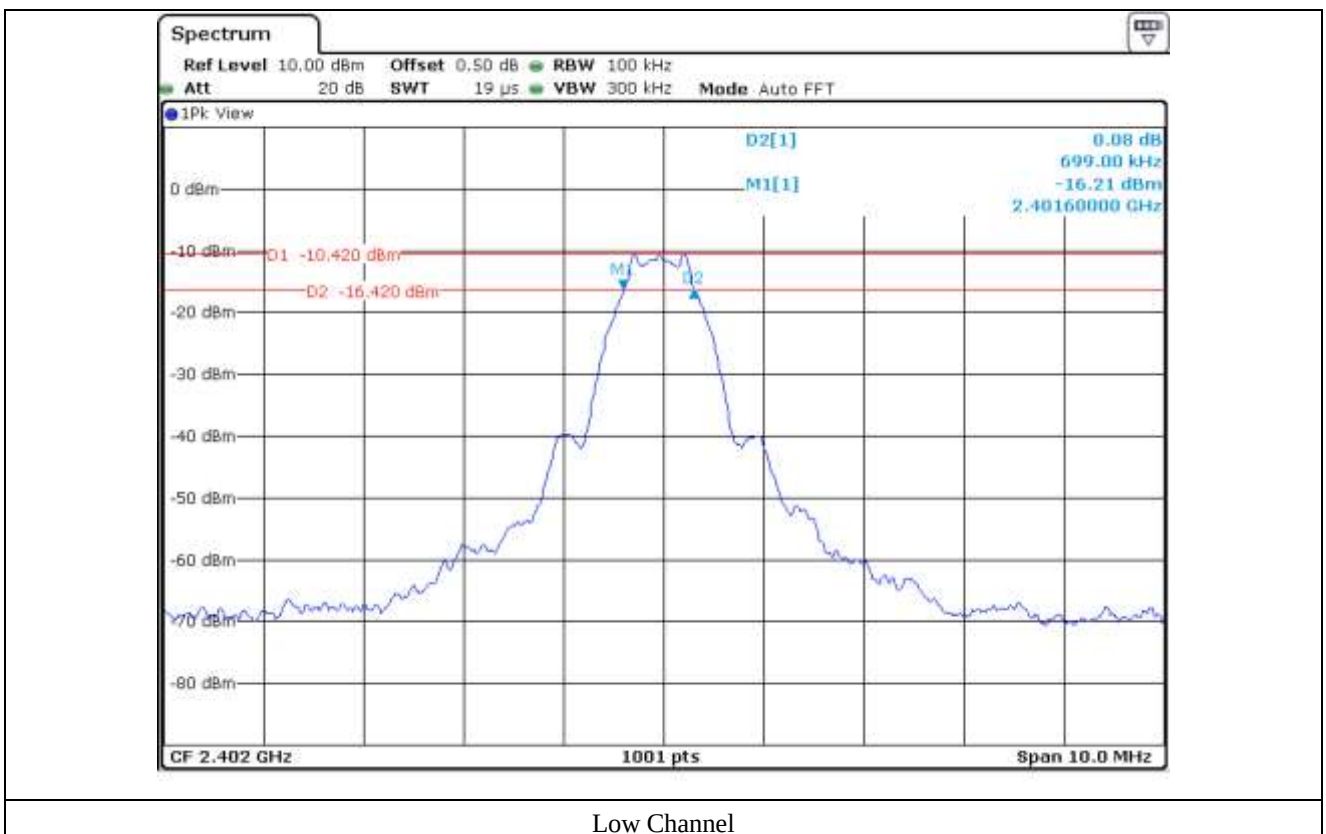
-. Test Result : Pass

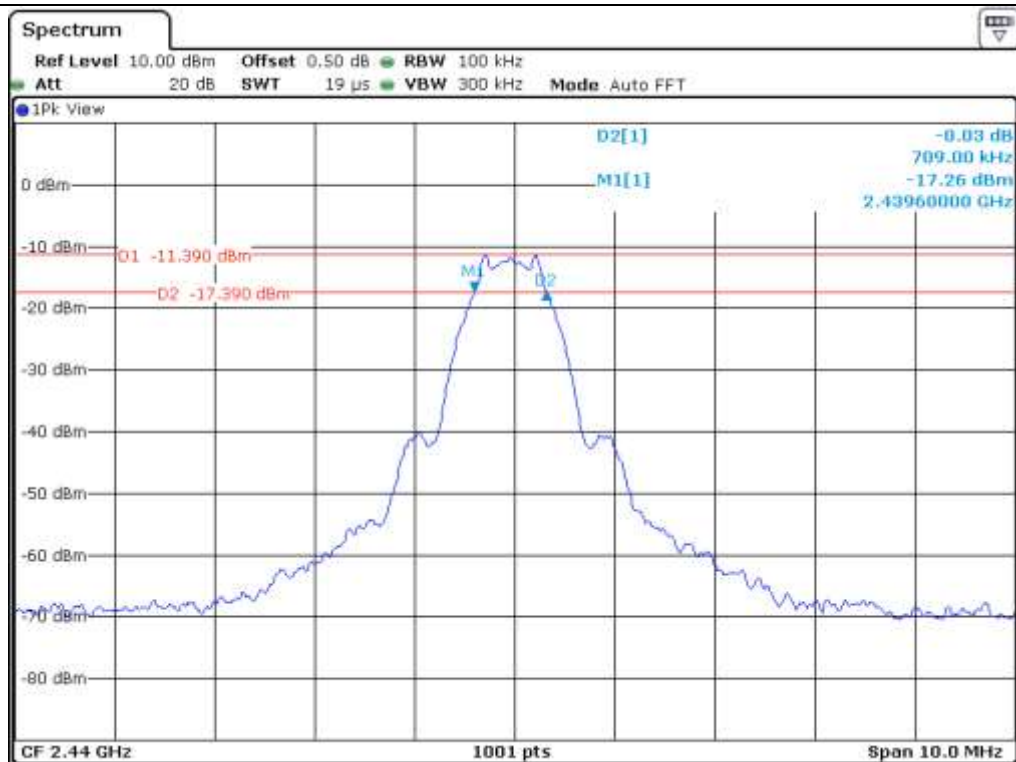
CHANNEL	FREQUENCY(MHz)	MEASURED VALUE (kHz)	LIMIT (kHz)	MARGIN (kHz)
Low	2 402.00	699.00	500	199.00
Middle	2 440.00	709.00	500	209.00
High	2 480.00	729.00	500	229.00

Remark. Margin = Measured Value – Limit

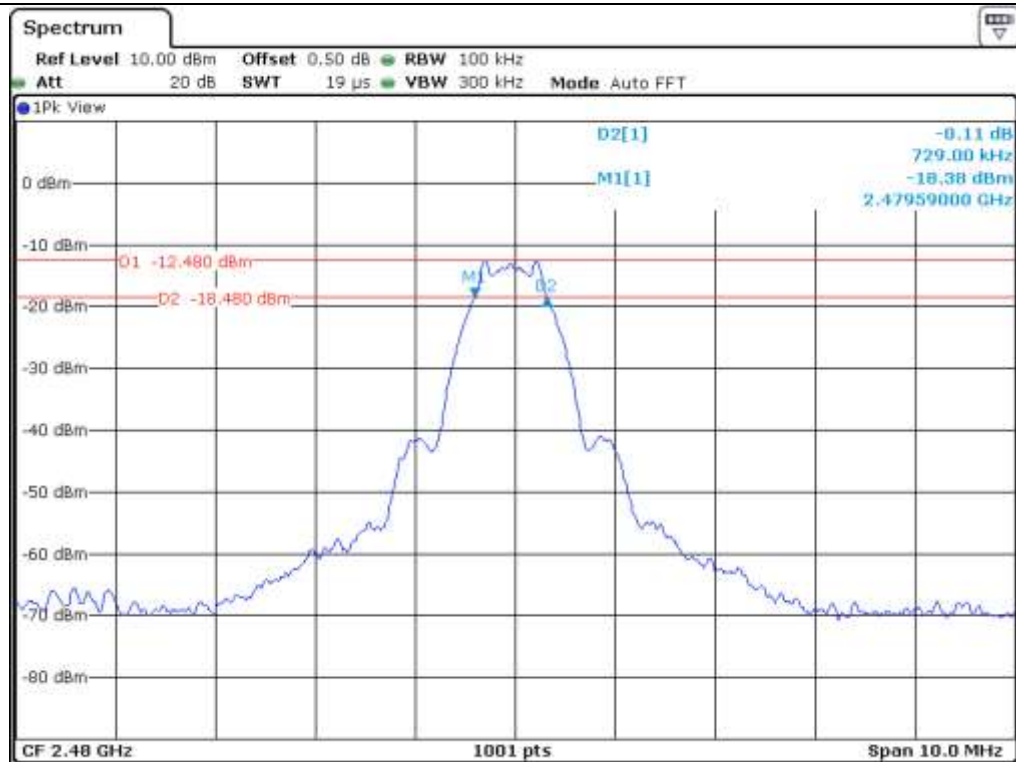


Tested by: Ha-Ram Lee / Manager





Middle Channel



High Channel

8. MAXIMUM PEAK OUTPUT POWER

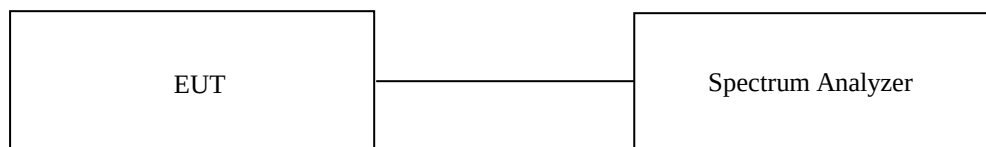
8.1 Operating environment

Temperature : 24 °C
Relative humidity : 48 % 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 $\geq$ DTS Bandwidth, the video bandwidth is set to 3 times the resolution bandwidth.



8.3 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ - FSV30	Rohde & Schwarz	Signal Analyzer	101200	Jul. 24, 2019 (1Y)

All test equipment used is calibrated on a regular basis.

8.4 Test data

-. Test Date : March 17, 2020

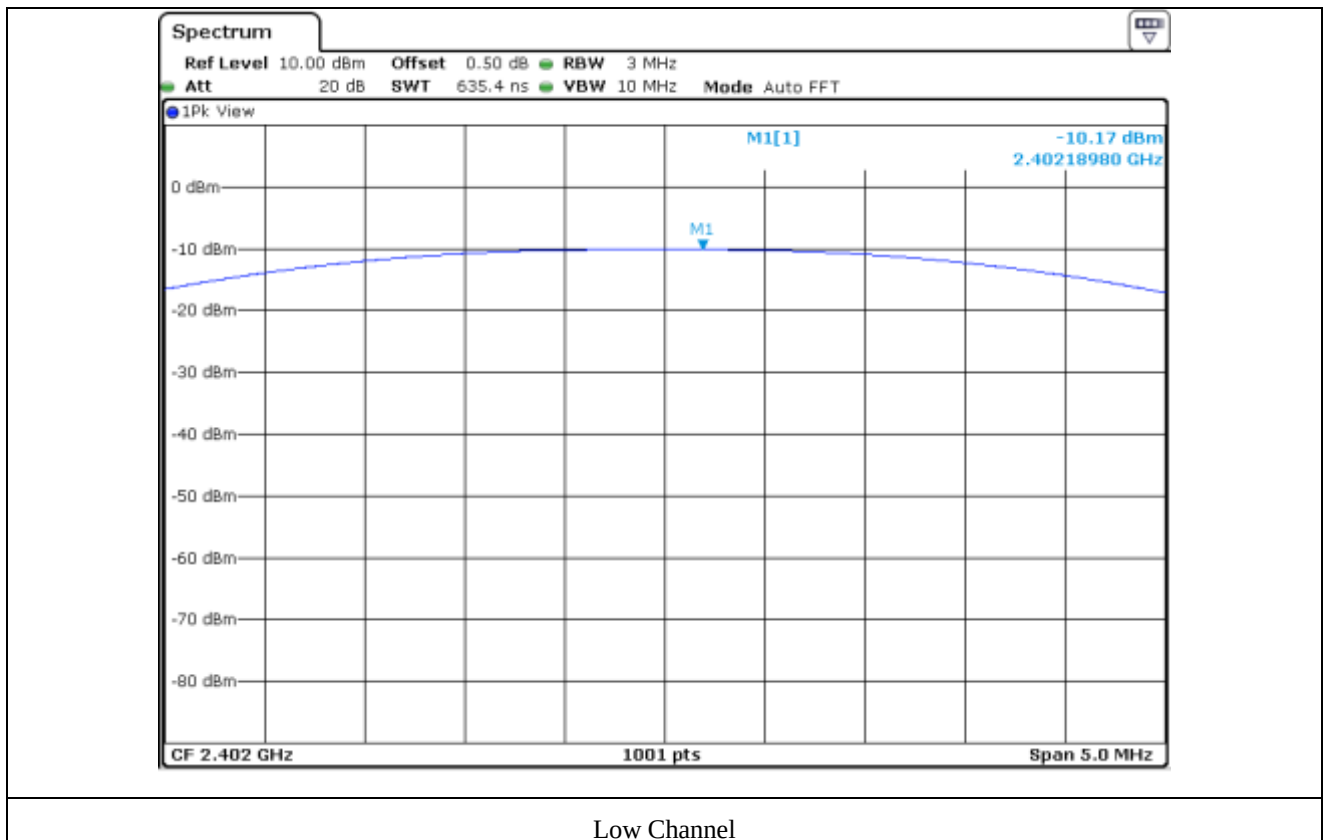
-. Test Result : Pass

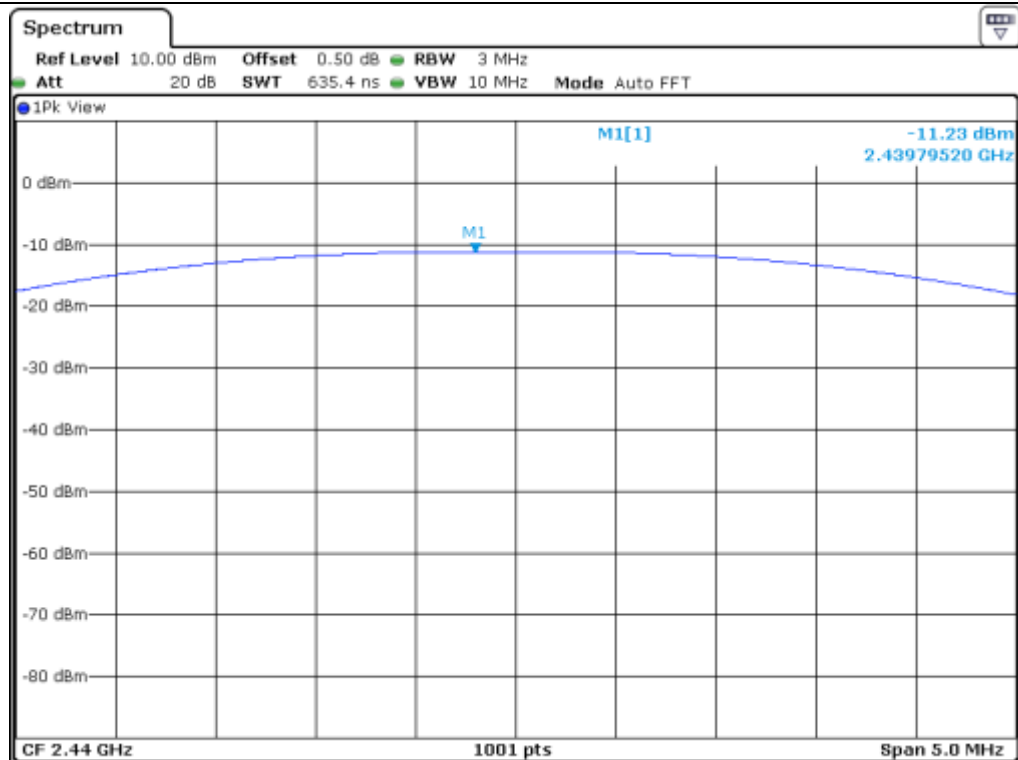
CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 402.00	-10.17	30.00	40.17
MIDDLE	2 440.00	-11.23	30.00	41.23
HIGH	2 480.00	-12.39	30.00	42.39

Remark. Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

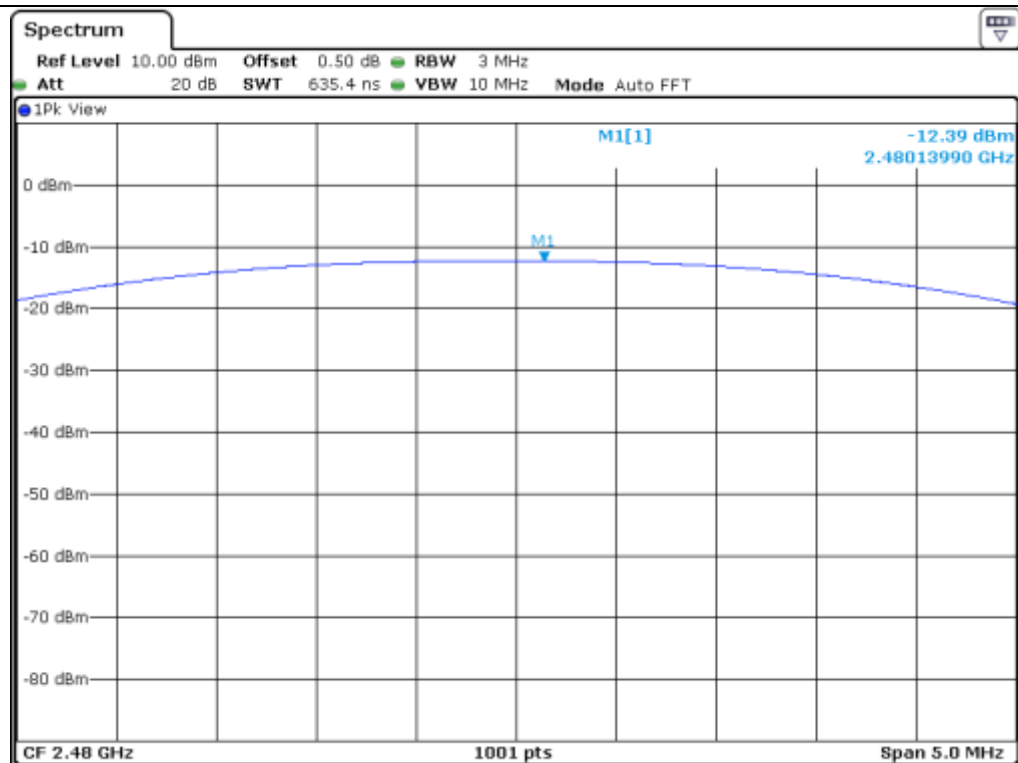


Tested by: Ha-Ram Lee / Manager





Middle Channel



High Channel

9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

9.1 Operating environment

Temperature : 24 °C
Relative humidity : 48 % R.H.

9.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution and video bandwidth is set to 100 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.

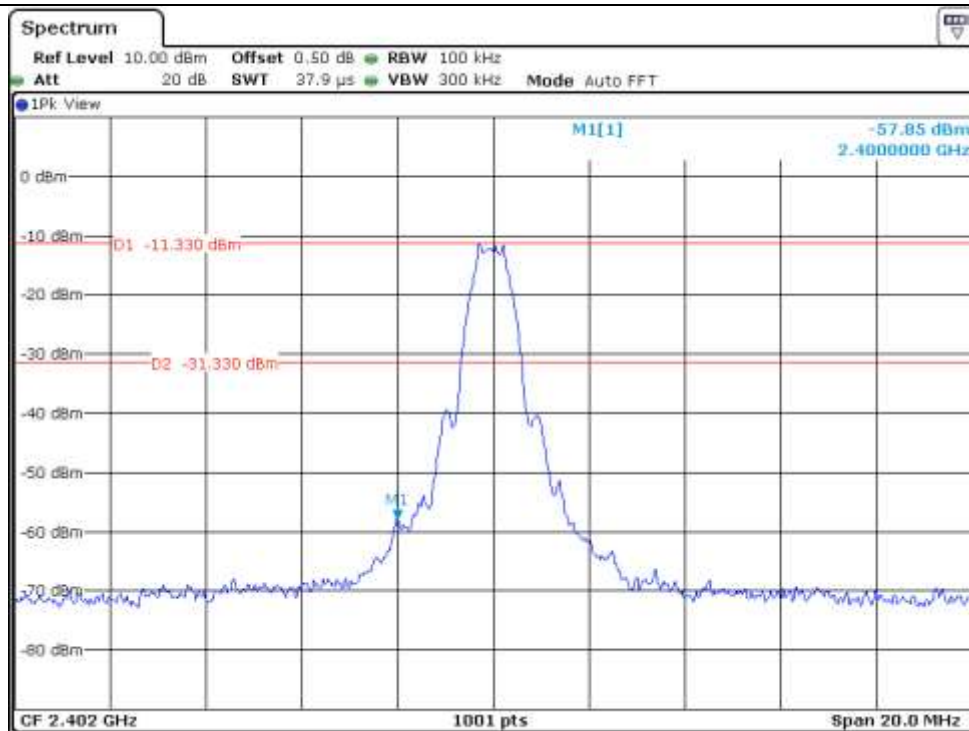
The frequency spectrum from 30 MHz to 26.5 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal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

9.4 Test equipment used

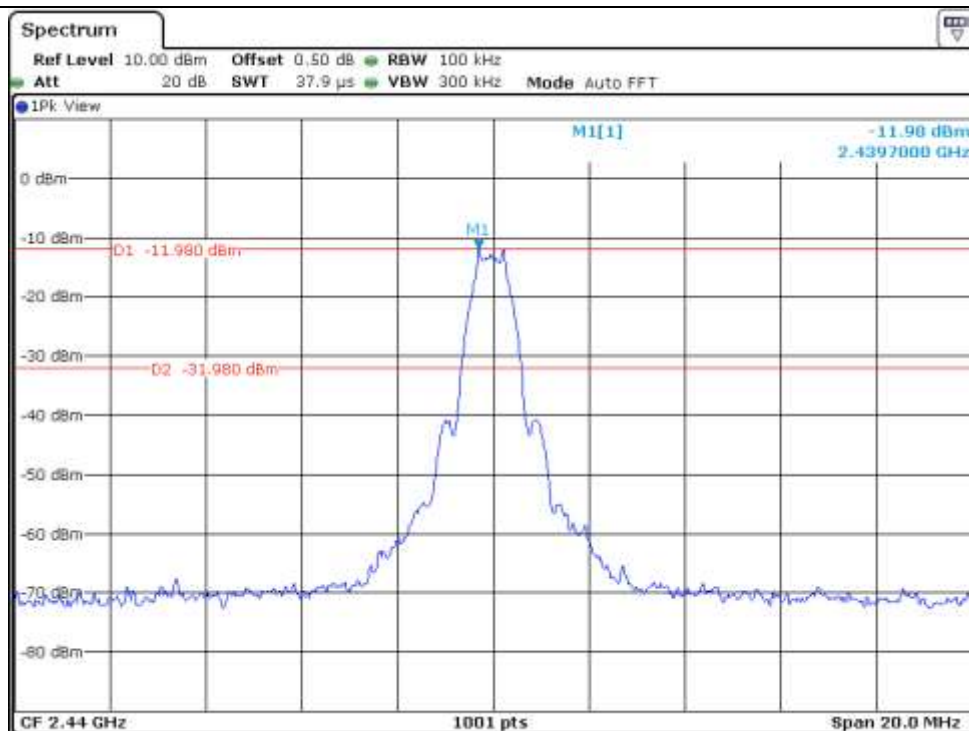
	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESW44	Rohde & Schwarz	EMI Test Receiver	101851	Aug. 07, 2019 (1Y)
■ -	310N	Sonoma Instrument	AMPLIFIER	312545	Mar. 16, 2020 (1Y)
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101200	Jul. 24, 2019 (1Y)
■ -	SCU-18F	Rohde & Schwarz	Pre-Amplifier	180117	Jul. 11, 2019 (1Y)
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	HD1000202261	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	FMZB 1513	Schwarzbeck	LOOP ANTENNA	1513-235	May. 13, 2018 (2Y)
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-255	Jun. 05, 2018 (2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	1366	Jul. 16, 2019 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 07, 2020 (1Y)
■ -	SCU40A	Rohde & Schwarz	Pre-Amplifier	100436	Feb. 20, 2020 (1Y)

All test equipment used is calibrated on a regular basis.

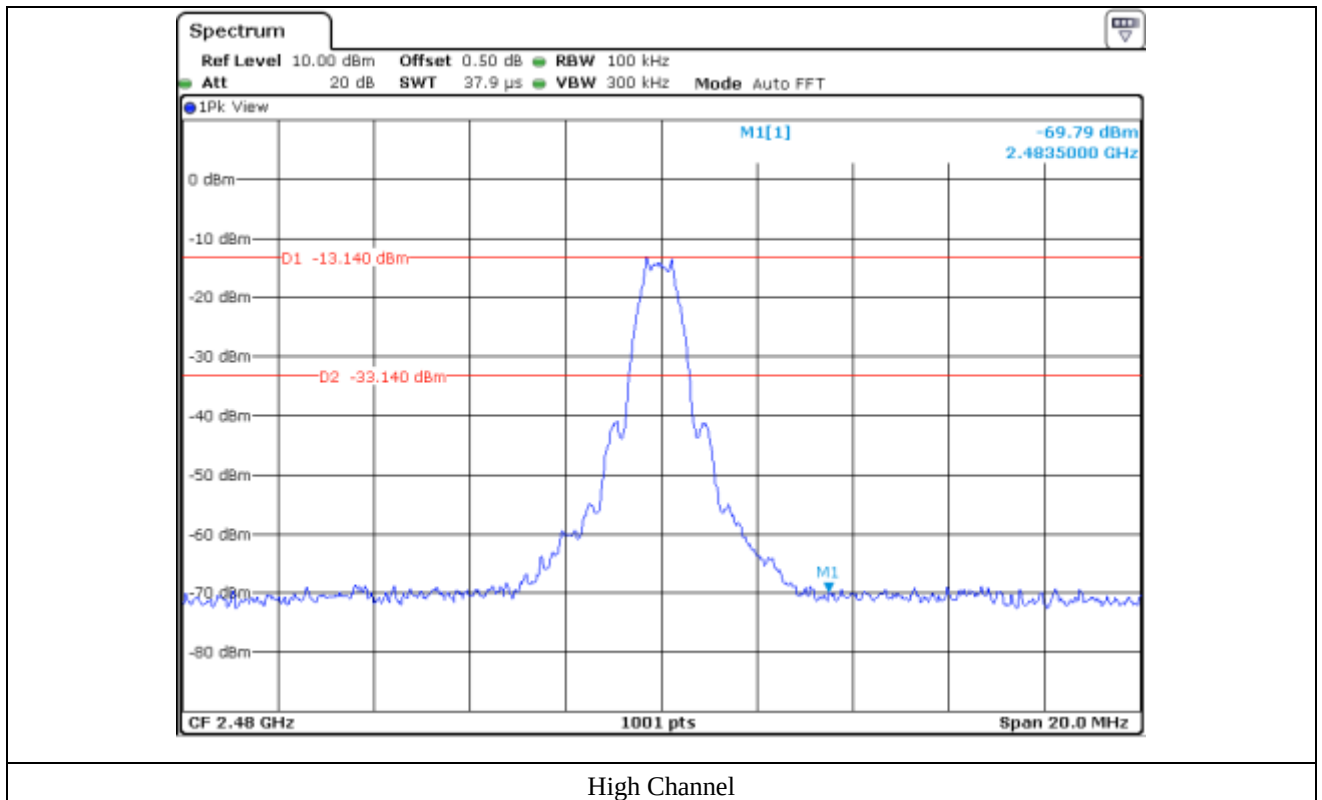
9.5 Test data for conducted emission

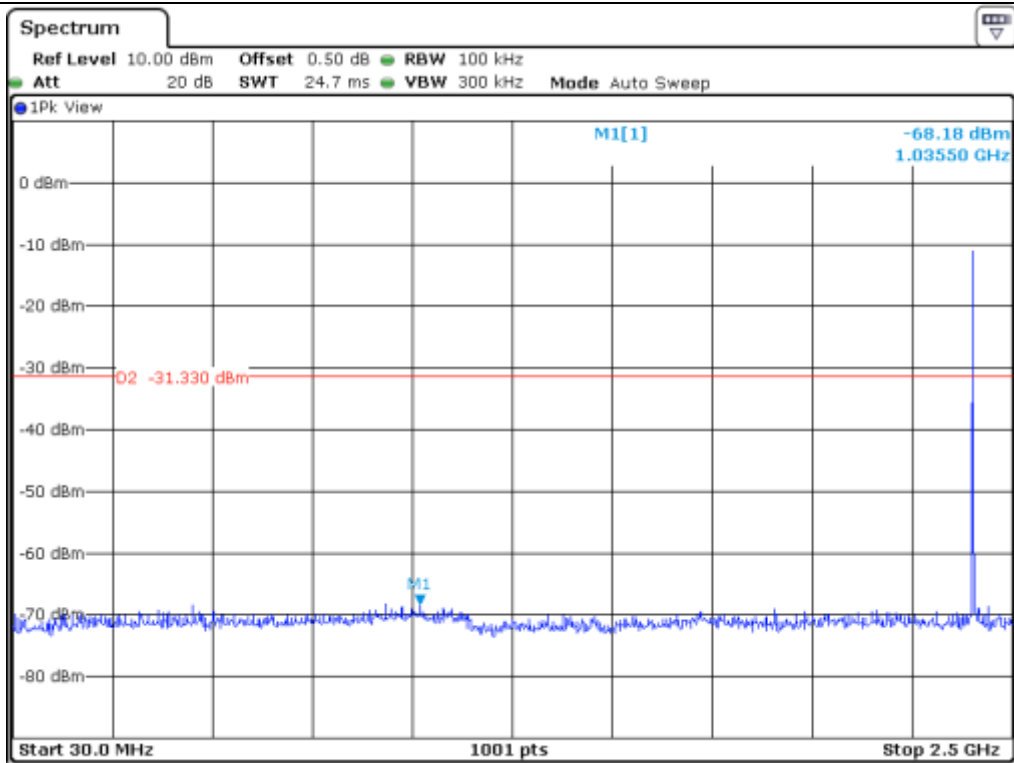


Low Channel

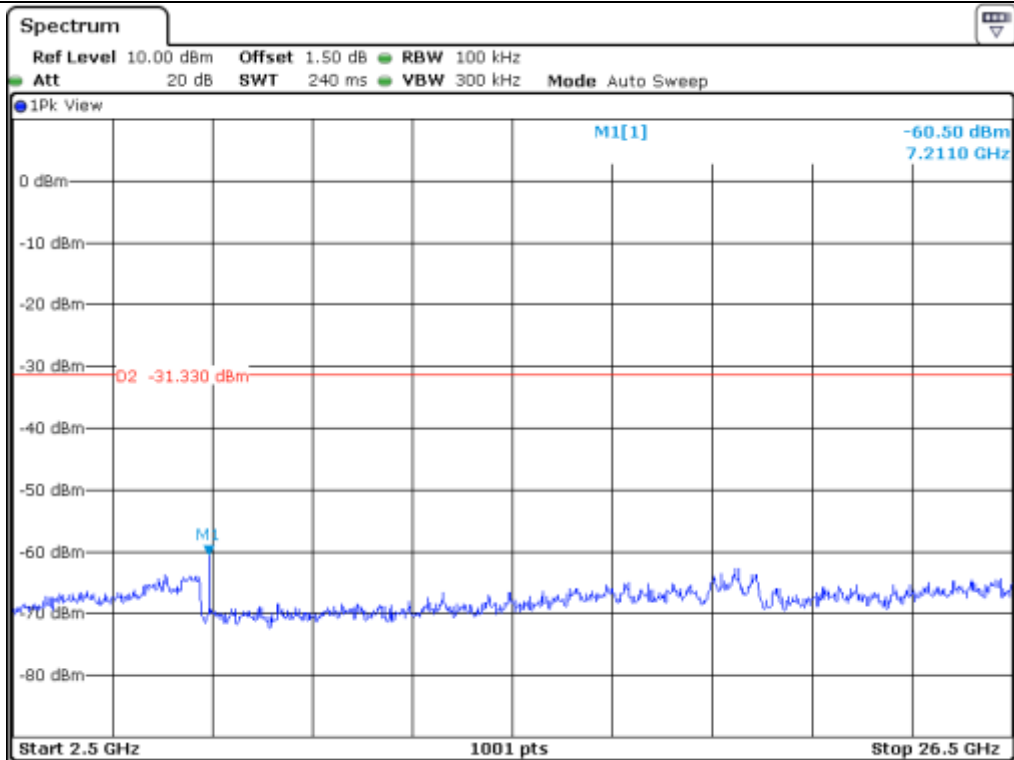


Middle Channel

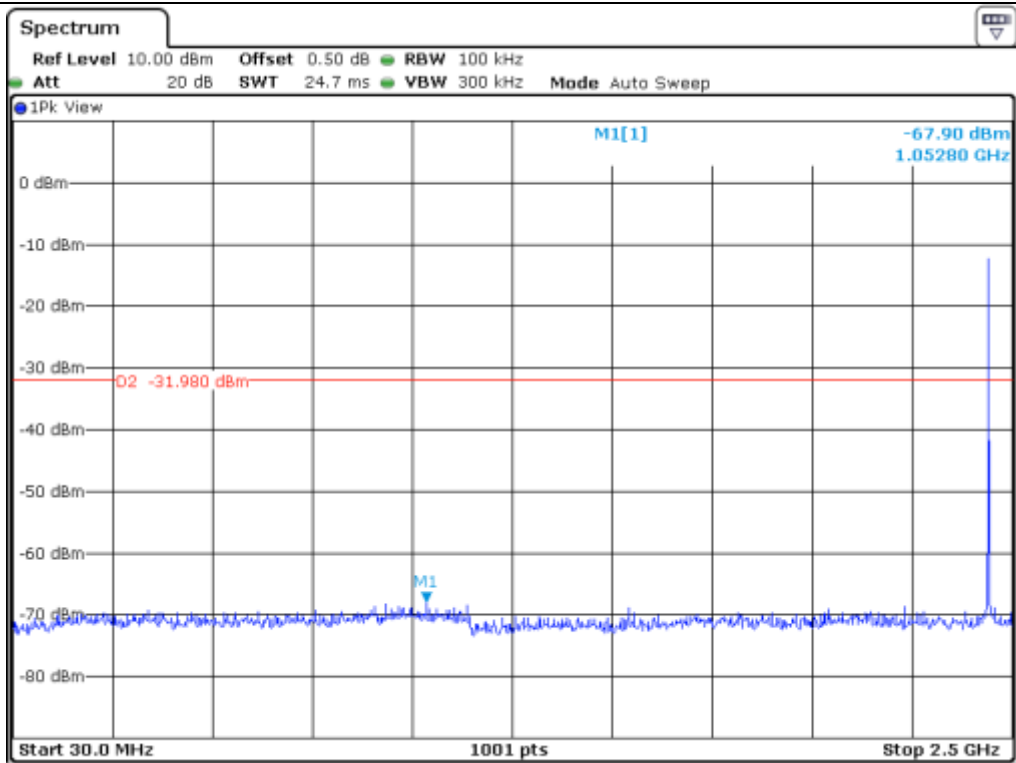




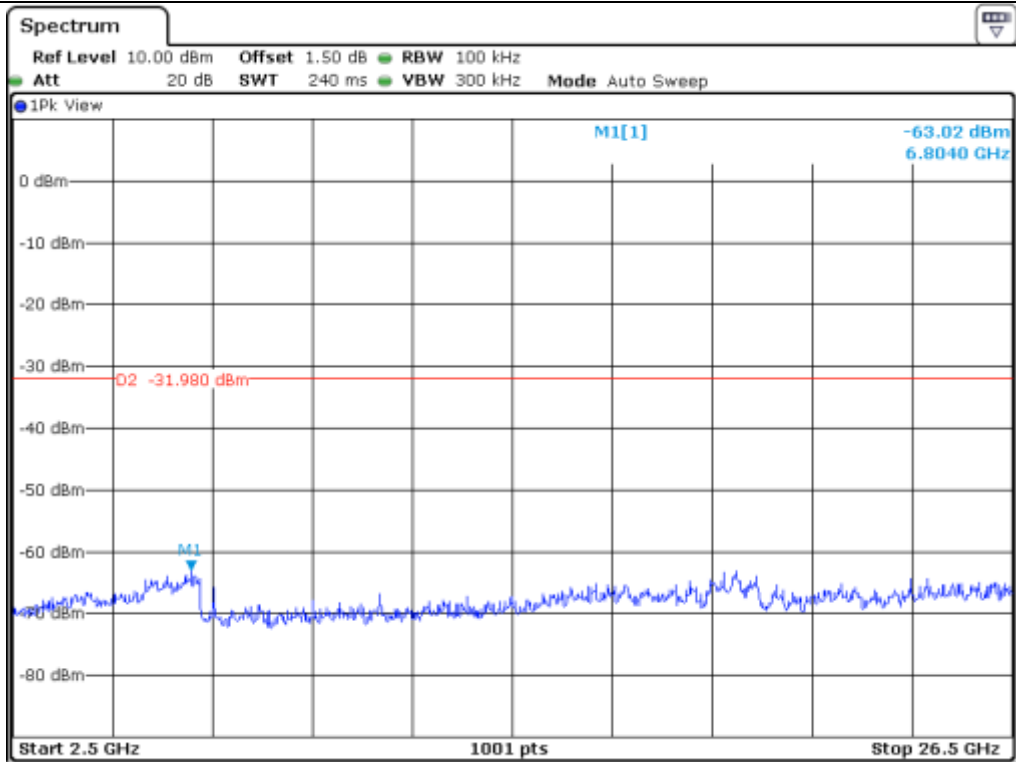
Low Channel



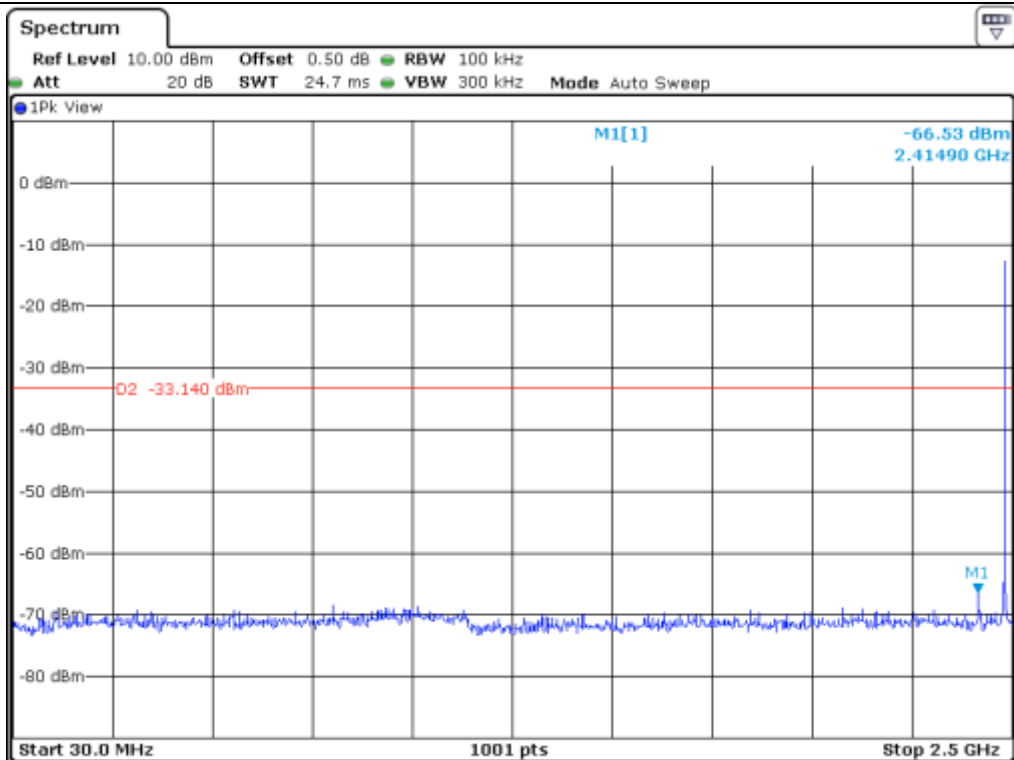
Low Channel



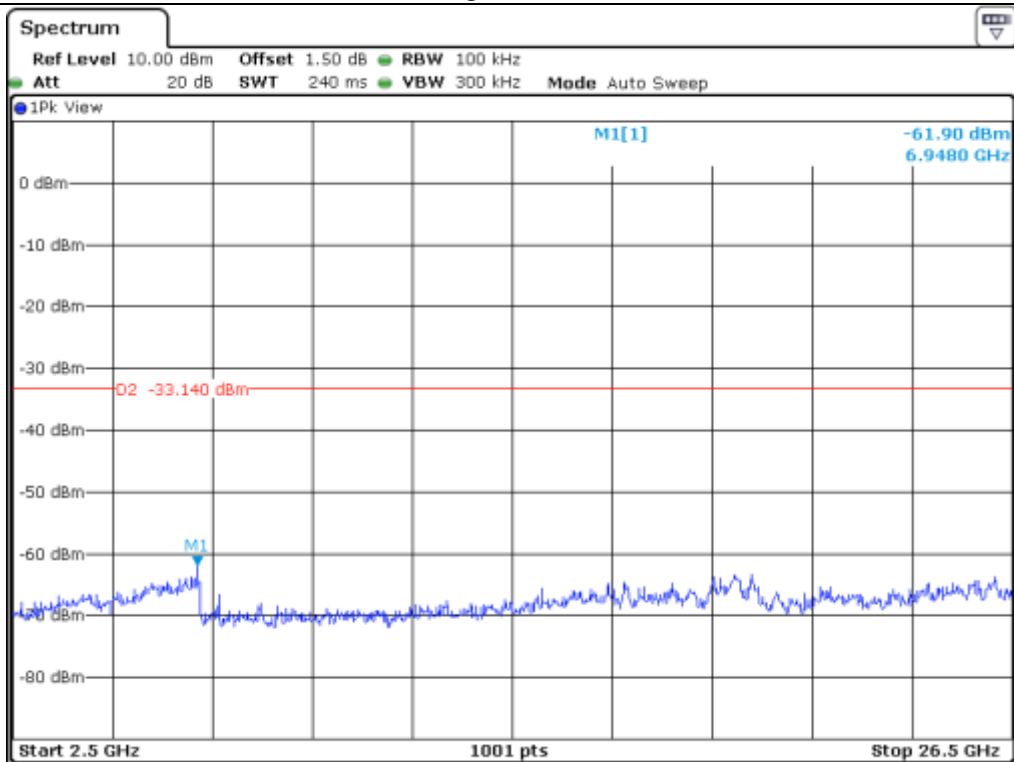
Middle Channel



Middle Channel



High Channel



High Channel

9.6 Test data for radiated emission

9.6.1 Radiated Emission which fall in the Restricted Band

- . Test Date : March 18, 2020
- . Resolution bandwidth : 1 MHz for Peak and Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Detector : Peak Mode(Peak), Average Mode(RMS)
- . Measurement distance : 3 m
- . Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
2 342.97	14.93	Peak	H	27.90	5.10	-	47.93	74.00	26.07
2 338.54	5.60	Average	H				38.60	54.00	15.40
2 326.18	14.61	Peak	V				47.61	74.00	26.39
2 344.56	5.27	Average	V				38.27	54.00	15.73
Test Data for High Channel									
2 495.34	14.68	Peak	H	29.00	5.20	-	48.88	74.00	25.12
2 491.37	5.30	Average	H				39.50	54.00	14.50
2 494.49	14.30	Peak	V				48.50	74.00	25.50
2 491.18	5.02	Average	V				39.22	54.00	14.78

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss



Tested by: Ha-Ram Lee / Manager

9.6.2 Spurious & Harmonic Radiated Emission

- Test Date : March 18, 2020
- Resolution bandwidth : 1 MHz for Peak and Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Detector : Peak Mode(Peak), Average Mode(RMS)
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Result : PASSED

Frequency (GHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 804.00	16.67	Peak	H	33.50	7.10	-	57.27	74.00	16.73
	5.95	Average	H				46.55	54.00	7.45
	16.49	Peak	V				57.09	74.00	16.91
	5.77	Average	V				46.37	54.00	7.63
Test Data for Middle Channel									
4 880.00	16.59	Peak	H	33.40	7.10	-	57.09	74.00	16.91
	6.78	Average	H				47.28	54.00	6.72
	16.49	Peak	V				56.99	74.00	17.01
	6.75	Average	V				47.25	54.00	6.75
Test Data for High Channel									
4 960.00	16.67	Peak	H	33.60	7.00	-	57.27	74.00	16.73
	6.93	Average	H				47.53	54.00	6.47
	16.57	Peak	V				57.17	74.00	16.83
	6.63	Average	V				47.23	54.00	6.77

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss



Tested by: Ha-Ram Lee / Manager

10. PEAK POWER SPECTRAL DENSITY

10.1 Operating environment

Temperature : 24 °C
Relative humidity : 48 % R.H.

10.2 Test set-up

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

The resolution bandwidth is set to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$, the video bandwidth is set to 3 times the resolution bandwidth.



10.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101200	Jul. 24, 2019 (1Y)

All test equipment used is calibrated on a regular basis.

10.4 Test data

-. Test Date : March 17, 2020

-. Test Result : Pass

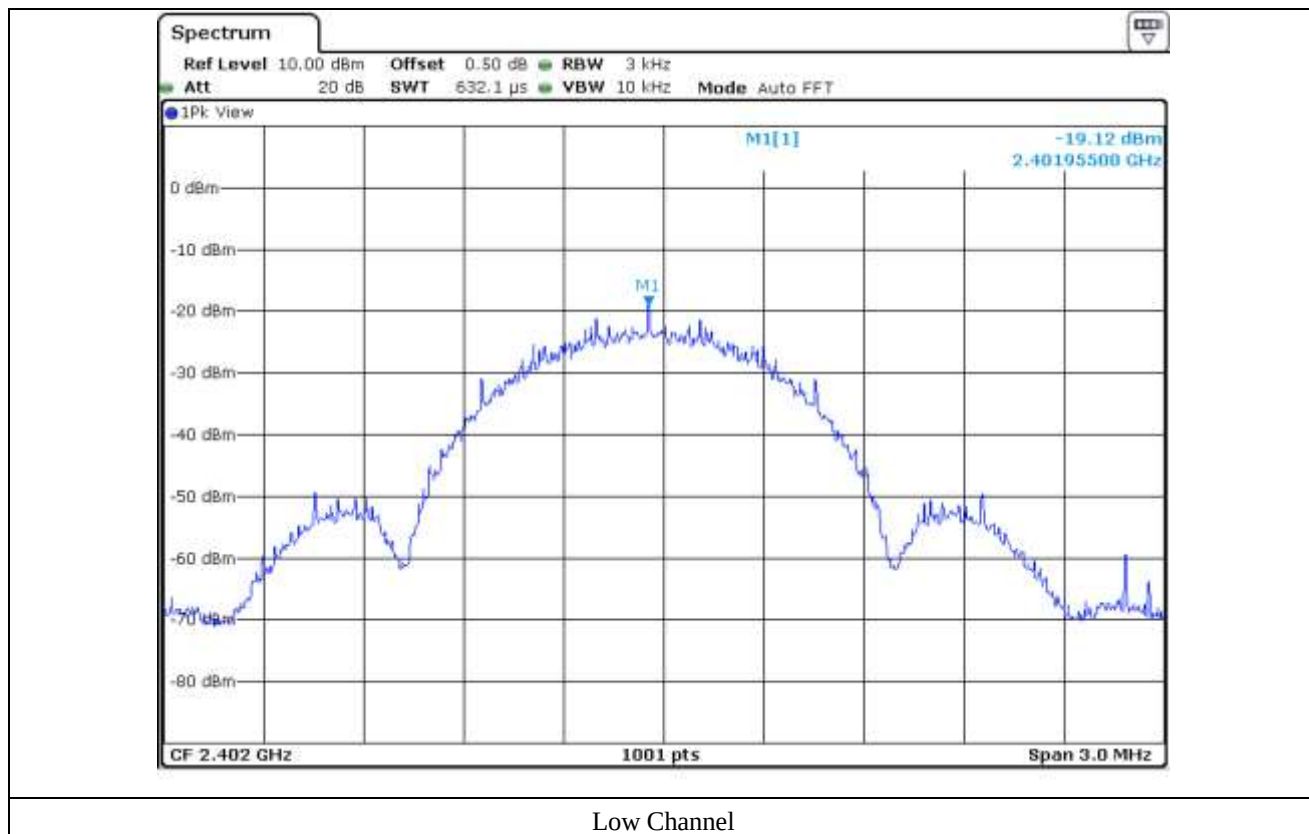
-. Operating Condition : Continuous transmitting mode

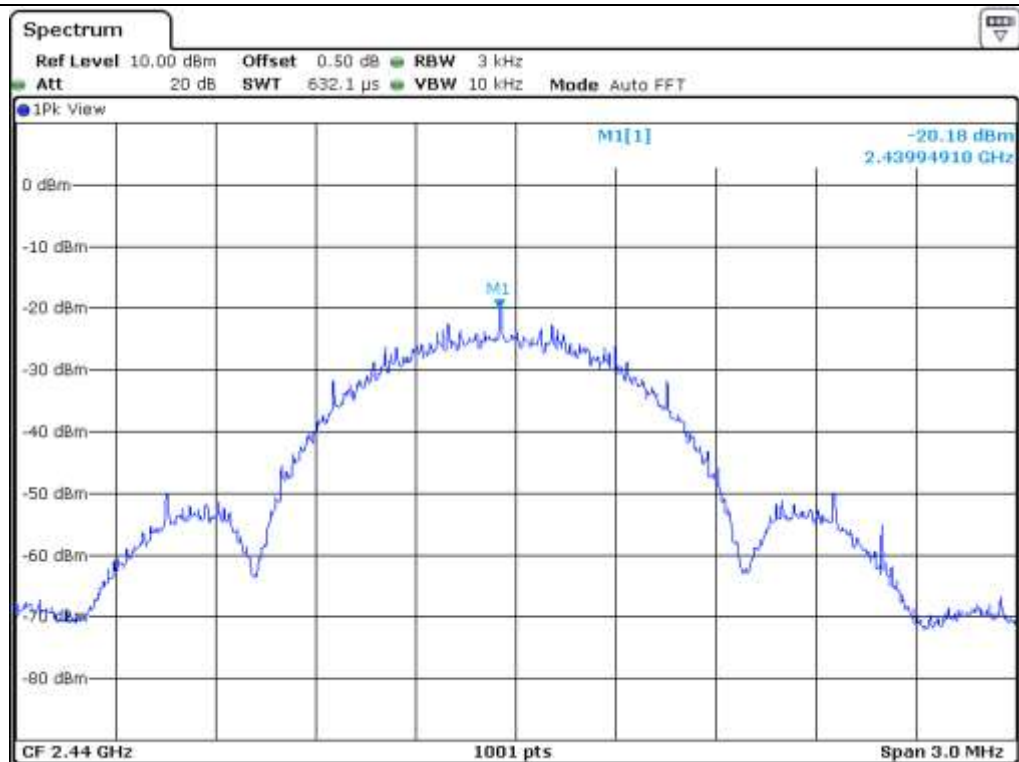
CHANNEL	FREQUENCY(MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 402.00	-19.12	8.00	27.12
Middle	2 440.00	-20.18	8.00	28.18
High	2 480.00	-21.02	8.00	29.02

Remark. Margin = Limit – Measured value

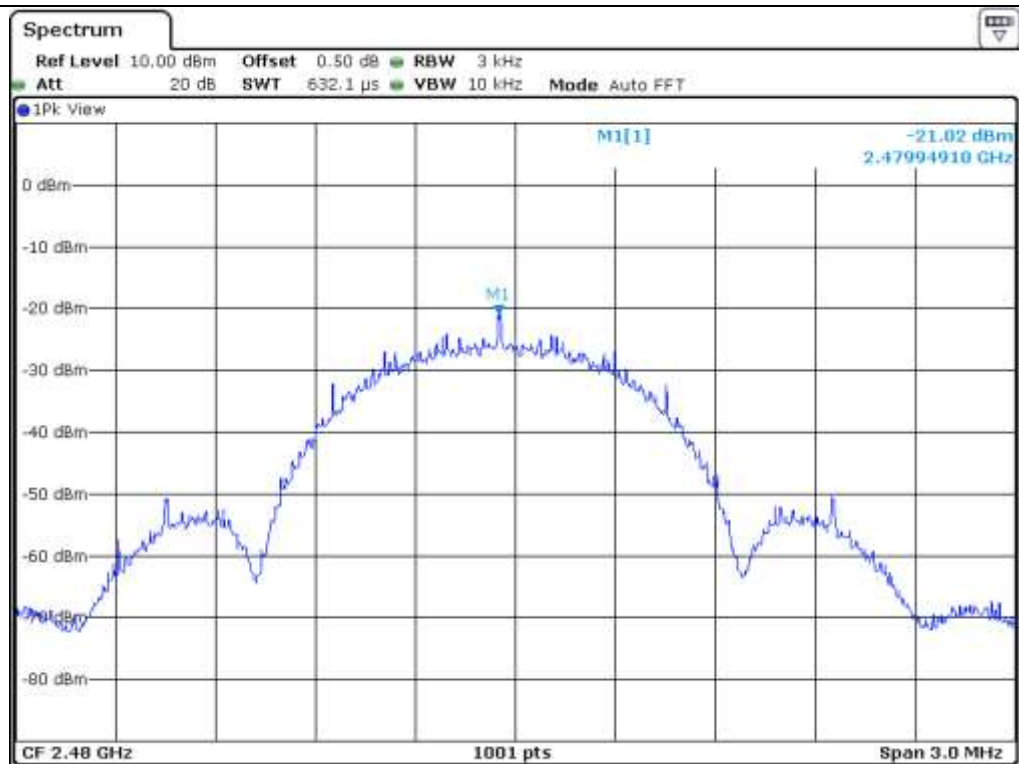


Tested by: Ha-Ram Lee / Manager





Middle Channel



High Channel

11. RADIATED EMISSION TEST

11.1 Operating environment

Temperature : 24 °C
Relative humidity : 48 % R.H.

11.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

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

11.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESW44	Rohde & Schwarz	EMI Test Receiver	101851	Aug. 07, 2019 (1Y)
■ -	310N	Sonoma Instrument	AMPLIFIER	312545	Mar. 16, 2020 (1Y)
■ -	SCU-18F	Rohde & Schwarz	Pre-Amplifier	180117	Jul. 11, 2019 (1Y)
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	HD1000202261	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	FMZB 1513	Schwarzbeck	LOOP ANTENNA	1513-235	Mar. 24, 2020 (2Y)
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-255	Jun. 05, 2018 (2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	1366	Jul. 16, 2019 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 07, 2020 (1Y)
■ -	SCU40A	Rohde & Schwarz	Pre-Amplifier	100436	Feb. 20, 2020 (1Y)

All test equipment used is calibrated on a regular basis.

11.4 Test data for Transmitting Mode

11.4.1 Test data for 30 MHz ~ 1 GHz

Humidity Level : 48 % R.H.

Temperature: 24 °C

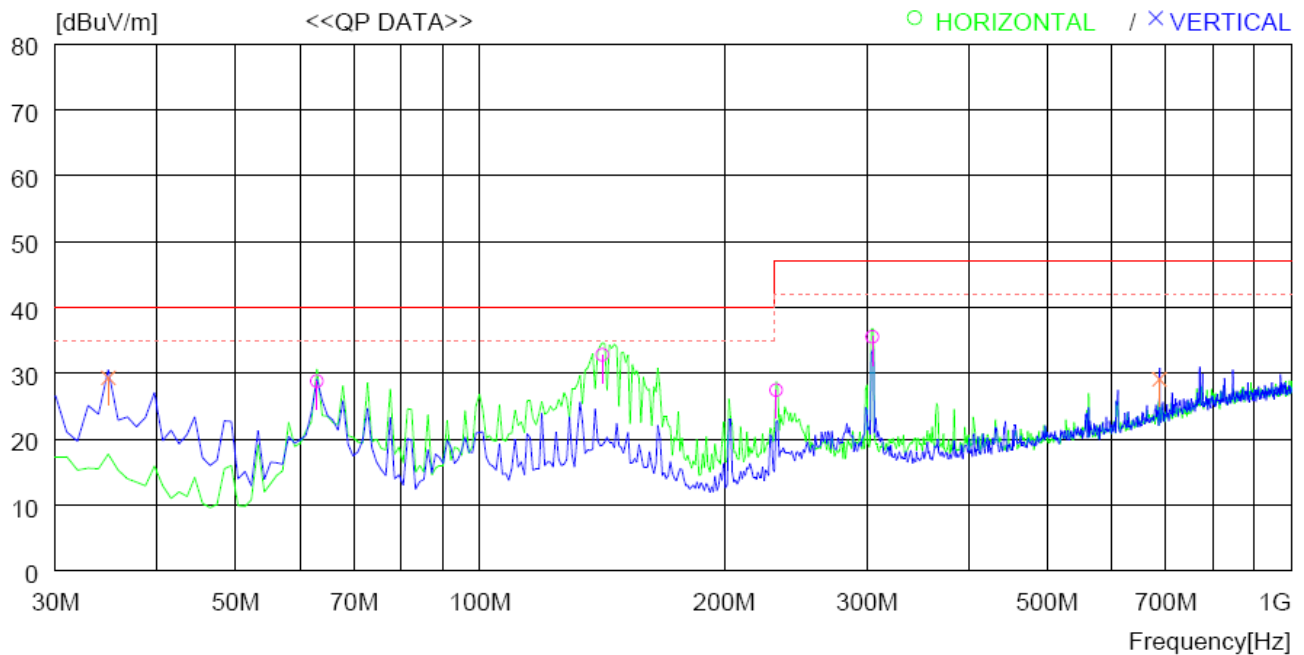
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Personal medium frequency stimulator and body fat meter

Date: March 18, 2020

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	62.980	48.3	12.3	0.9	32.7	28.8	40.0	11.2	300	213
2	141.550	44.7	19.4	1.4	32.7	32.8	40.0	7.2	200	283
3	231.760	41.1	17.0	1.9	32.6	27.4	47.0	19.6	200	330
4	304.510	46.8	19.3	2.1	32.7	35.5	47.0	11.5	100	260
----- Vertical -----										
5	34.850	41.8	19.2	0.9	32.6	29.3	40.0	10.7	100	359
6	687.655	33.2	25.4	3.4	32.9	29.1	47.0	17.9	100	359



Tested by: Ha-Ram Lee / Manager

11.4.2 Test data for Below 30 MHz

- . Test Date : March 18, 2020
- . Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- . Frequency range : 9 kHz ~ 30 MHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
All emissions observed were 20dB below the limit.									

11.4.3 Test data for above 1 GHz

- . Test Date : March 18, 2020
- . Resolution bandwidth : 1 MHz for Peak and Average Mode
- . Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- . Frequency range : 1 GHz ~ 26.5 GHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
All emissions observed were 20dB below the limit.									



Tested by: Ha-Ram Lee / Manager

12. CONDUCTED EMISSION TEST

12.1 Operating environment

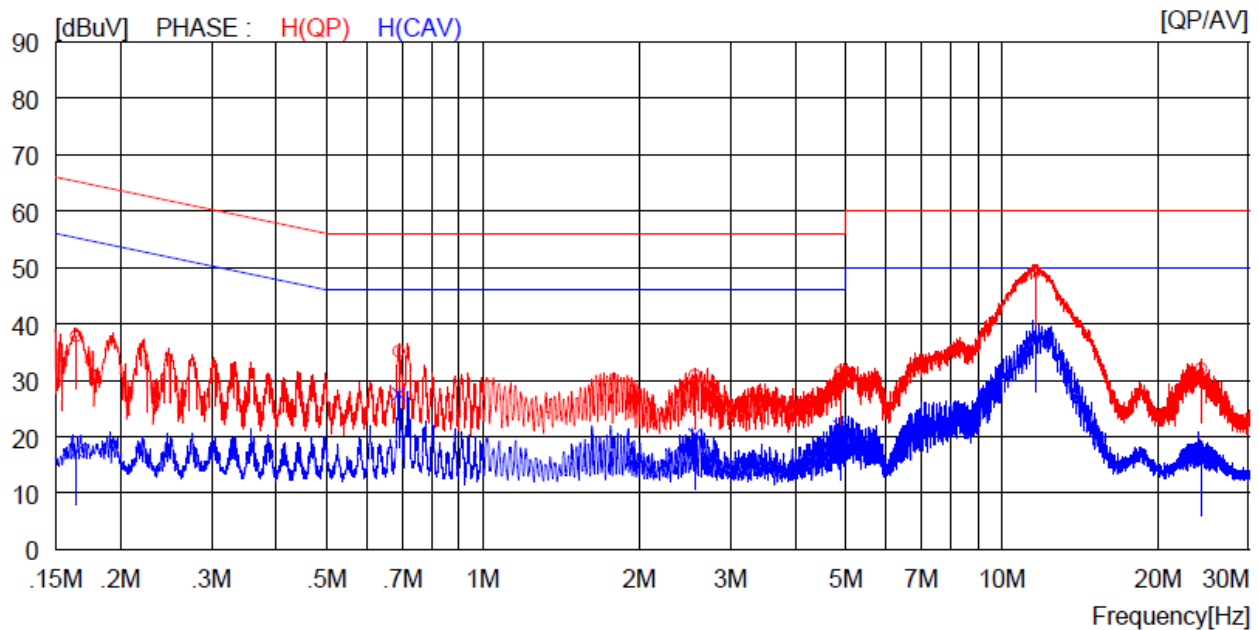
Temperature : 24 °C
Relative humidity : 48 % R.H

12.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

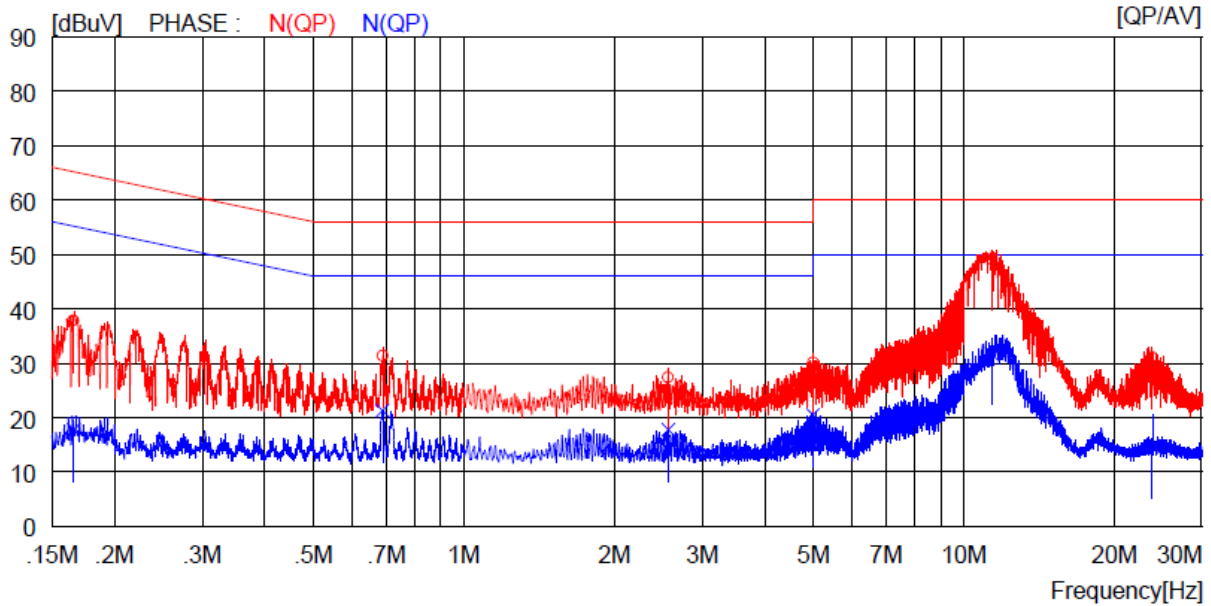
12.3 Test data

- Test Date : March 23, 2020
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : HOT LINE



NO	FREQ		READING		C.FACTOR		RESULT		LIMIT		MARGIN	PHASE
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
1	0.16500	27.9	---	10.0	37.9	---	65.2	---	27.3	---	H(QP)	
2	0.68900	25.1	---	10.0	35.1	---	56.0	---	20.9	---	H(QP)	
3	2.56400	20.8	---	10.1	30.9	---	56.0	---	25.1	---	H(QP)	
4	4.88800	21.4	---	10.1	31.5	---	56.0	---	24.5	---	H(QP)	
5	11.62000	39.0	---	10.2	49.2	---	60.0	---	10.8	---	H(QP)	
6	24.26000	21.6	---	10.4	32.0	---	60.0	---	28.0	---	H(QP)	
7	0.16500	---	7.4	10.0	---	17.4	---	55.2	---	37.8	H(CAV)	
8	0.68900	---	17.6	10.0	---	27.6	---	46.0	---	18.4	H(CAV)	
9	2.56400	---	10.2	10.1	---	20.3	---	46.0	---	25.7	H(CAV)	
10	4.88800	---	11.7	10.1	---	21.8	---	46.0	---	24.2	H(CAV)	
11	11.62000	---	27.3	10.2	---	37.5	---	50.0	---	12.5	H(CAV)	
12	24.26000	---	5.2	10.4	---	15.6	---	50.0	---	34.4	H(CAV)	

-. Tested Line : NEUTRAL LINE



NO	FREQ		READING		C.FACTOR		RESULT		LIMIT		MARGIN	PHASE
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
1	0.16600	27.8	---	10.0	37.8	---	65.2	---	27.4	---	N(QP)	
2	0.68900	21.4	---	10.0	31.4	---	56.0	---	24.6	---	N(QP)	
3	2.56800	17.3	---	10.1	27.4	---	56.0	---	28.6	---	N(QP)	
4	5.00000	20.0	---	10.1	30.1	---	56.0	---	25.9	---	N(QP)	
5	11.38000	38.9	---	10.2	49.1	---	60.0	---	10.9	---	N(QP)	
6	23.83000	20.8	---	10.4	31.2	---	60.0	---	28.8	---	N(QP)	
7	0.16600	---	7.8	10.0	---	17.8	---	55.2	---	37.4	N(CAV)	
8	0.68900	---	11.3	10.0	---	21.3	---	46.0	---	24.7	N(CAV)	
9	2.56800	---	7.7	10.1	---	17.8	---	46.0	---	28.2	N(CAV)	
10	5.00000	---	10.4	10.1	---	20.5	---	46.0	---	25.5	N(CAV)	
11	11.38000	---	21.6	10.2	---	31.8	---	50.0	---	18.2	N(CAV)	
12	23.83000	---	4.2	10.4	---	14.6	---	50.0	---	35.4	N(CAV)	

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Ha-Ram Lee / Manager