FCC Part 15.225

TEST REPORT

For

FEITIAN Technologies Co., Ltd.

Floor 17th, Tower B, Huizhi Mansion, No.9 Xueqing Road, Haidian District, Beijing, China

FCC ID: ZD3FTF20SC200RNA

Report Type:	**Product Type:**
Original Report	Android POS Terminal

Report Producer : Rody Liu Rody Liu

Report Number : RXZ210922002RF01

Report Date : 2021-11-1

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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ210922002	RXZ210922002RF01	2021-11-1	Original Report	Rody Liu

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1 General Information

1.1 Product Description for Equipment under Test (EUT)

Applicant	FEITIAN Technologies Co., Ltd.
	Floor 17th, Tower B, Huizhi Mansion, No.9 Xueqing Road, Haidian District, Beijing, China
Manufacturer	FEITIAN Technologies Co., Ltd.
	Floor 17th, Tower B, Huizhi Mansion, No.9 Xueqing Road, Haidian District, Beijing, China
Brand(Trade) Name	N/A
Product (Equipment)	Android POS Terminal
Main Model Name	F20 FP
Series Model Name	F20
Model Discrepancy	F20 FP with Touch Function F20 without Touch Function
Frequency Range	13.56 MHz
Number of Channels	1 Channel
Power Operation (Voltage Range)	Rechargeable Li-ion Battery Power Rating: 7.6V dc_2500mAh
Received Date	Sep 24, 2021
Date of Test	Oct 12, 2021 ~ Oct 19, 2021

*All measurement and test data in this report was gathered from production sample serial number: RXZ210922002-01 (Assigned by BACL).

1.2 Objective

This report is prepared on behalf of *FEITIAN Technologies Co., Ltd.* in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules, sec 15.203, 15.205, 15.207, 15.209 and 15.225.

1.3 Related Submittal(s)/Grant(s)

FCC Part 15.247 DTS submission with FCC ID: ZD3FTF20SC200RNA

FCC Part 15.247 DSS Submittal with FCC ID: ZD3FTF20SC200RNA

FCC Part 15.407 NII submissions with FCC ID: ZD3FTF20SC200RNA

FCC Part 22H24E27 PCB submissions with FCC ID: ZD3FTF20SC200RNA

FCC Part 90 PCB submissions with FCC ID: ZD3FTF20SC200RNA

1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.5 Statement of Compliance

Decision Rule: No, (The test results do not include MU judgment)

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.

Bay Area Compliance Laboratories Corp. is not responsible for the authenticity of the information provided by the applicant that affects the test results.

1.6 Measurement Uncertainty

Parameter		Uncertainty
AC Mains		+/- 2.36 dB
Emission Bandwidth		+/- 0.35 MHz
Frequency stability		+/- 0.05 MHz
Emissions, radiated	9 kHz~30MHz	+/- 2.80 dB
	30 MHz~1GHz	+/- 5.22 dB
	1 GHz~18 GHz	+/- 6.12 dB
Temperature		+/- 1.27 °C
Humidity		+/- 3 %

1.7 Environmental Conditions

Test Site	Test Data	Temperature (℃)	Relative Humidity (%)	ATM Pressure (hPa)	Test Engineer
AC Line Conducted Emissions	2021/10/12	27.2	50.5	1010	Boris
Radiation Spurious Emissions	2021/10/12 ~ 2021/10/19	24~24.6	54~65	1010	David Lee
Frequency Stability	2021/10/18	23.6	49	1010	David Lee
20 dB Bandwidth	2021/10/18	23.6	49	1010	David Lee

1.8 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. to collect test data is located on ☒70, Lane 169, Sec. 2, Datong Road, Xizhi Dist., New Taipei City 22183, Taiwan, R.O.C.

Bay Area Compliance Laboratories Corp. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3732) and the FCC designation No.TW3732 under the Mutual Recognition Agreement (MRA) in FCC Test.

2 System Test Configuration

2.1 Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

2.2 Equipment Modifications

No modification was made to the EUT.

2.3 EUT Exercise Software

No test software was used.

2.4 Support Equipment List and Details

Description	Manufacturer	Model Number	S/N
NB	DELL	E6410	8N7PXN1
Adapter	DEE VAN ENTERPRISE	DSA-10PF06-05 FSU	N/A
Adapter	TEKA	TEKA-UCA20US	N/A
Base frame	FEITIAN	F20-1	N/A

2.5 External Cable List and Details

Cable Description	Length (m)	From	To
USB Cable	1.5	Adapter	Base frame

2.6 Test Mode

Pre-scan

AC Line Conducted Emissions and Radiated Spurious Emissions

Mode 1: F20 FP + Adapter (Model : DSA-10PF06-05 FSU).

Mode 2: F20 FP + Adapter (Model : TEKA-UCA20US).

Mode 3: F20 + Adapter (Model : DSA-10PF06-05 FSU).

Mode 4: F20 + Adapter (Model : TEKA-UCA20US).

Worst case is the F20 + Adapter (Model : DSA-10PF06-05 FSU).

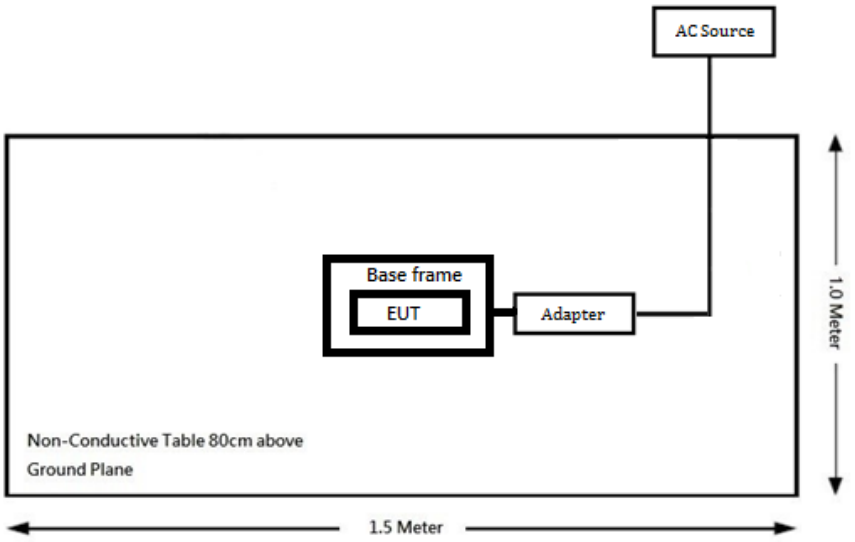
Full System F20 + Adapter (Model : DSA-10PF06-05 FSU) for all test item.

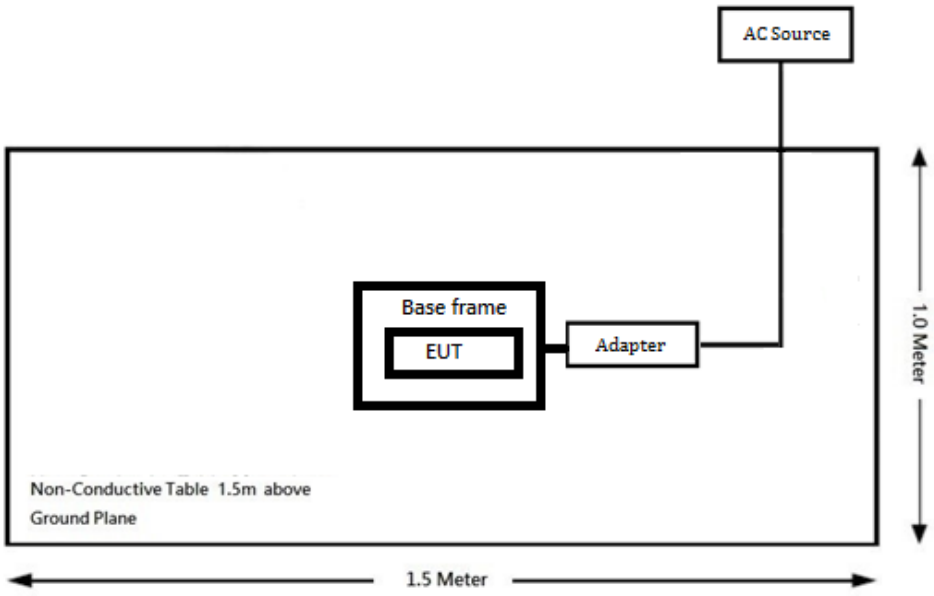
2.7 Block Diagram of Test Setup

See test photographs attached in setup photos for the actual connections between EUT and support equipment.

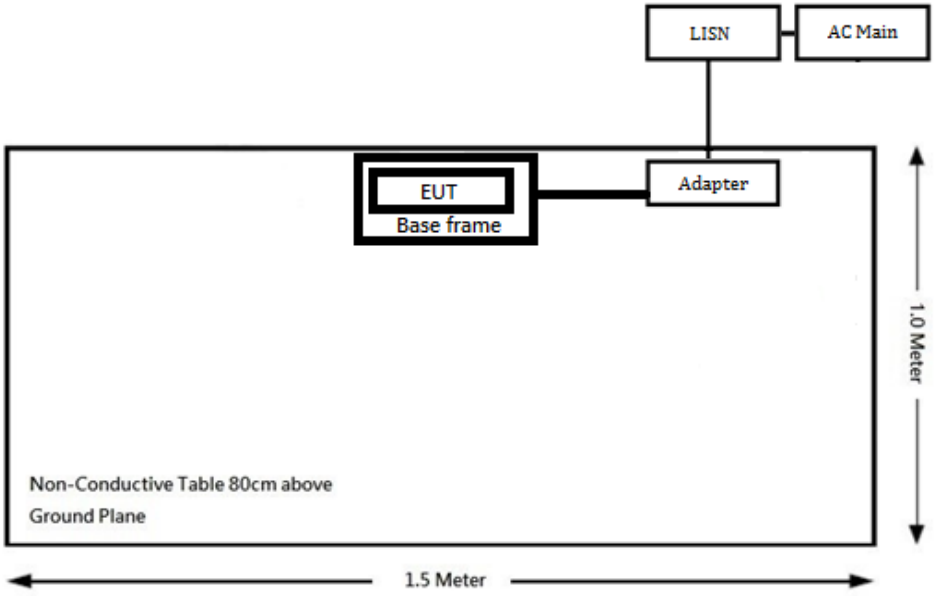
Radiation:

Below 1GHz / Above 1GHz:





Conduction:


LISN
AC Main
EUT
Base frame
Adapter
1.0 Meter
Non-Conductive Table 80cm above
Ground Plane
1.5 Meter

3 Summary of Test Results

FCC Rules	Description of Test	Results
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.225	Radiated Emissions	Compliance
§15.225(e)	Frequency Stability	Compliance
§15.215(c)	20dB Emission Bandwidth Testing	Compliance

4 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conduction Room (CON-A)					
LISN	Rohde & Schwarz	ENV216	101612	2020/12/30	2021/12/29
LISN	COM-POWER	LI-550A	211726	2020/12/30	2021/12/29
EMI Test Receiver	Rohde & Schwarz	ESR3	102099	2021/6/2	2022/6/1
Pulse Limiter	Rohde & Schwarz	ESH3Z2	TXZEM104	2021/7/29	2022/7/29
RF Cable	EMEC	EM-CB5D	1	2021/6/11	2022/6/11
Software	AUDIX	E3	V9.150826k	N.C.R	N.C.R
Radiated Room (966-A)					
Active Loop Antenna	ETS-Lindgren	6502	35796	2021/03/16	2022/03/15
Bilog Antenna with 6 dB Attenuator	SUNOL SCIENCES & MINI-CIRCUITS	JB6/UNAT-6+	A050115/15542_01	2021/01/19	2022/01/18
Preamplifier	Sonoma	310N	130602	2021/06/08	2022/06/07
EMI Test Receiver	Rohde & Schwarz	ESR7	101419	2020/11/12	2021/11/11
Spectrum Analyzer	Rohde & Schwarz	FSV40	101435	2021/01/07	2022/01/06
Micro flex Cable	UTIFLEX	FSCM 64639 / (2M)	93D0127	2018/07/31	2019/07/30
Micro flex Cable	UTIFLEX	UFA210A-1-3149-300300	MFR64639 226389-001	2018/11/16	2019/11/15
Micro flex Cable	ROSNOL	K1K50-UP0264-K1K50-450CM	160309-1	2021/02/01	2022/01/31
Micro flex Cable	ROSNOL	K1K50-UP0264-K1K50-80CM	160309-2	2021/02/01	2022/01/31
Turn Table	Champro	TT-2000	060772-T	N.C.R	N.C.R
Antenna Tower	Champro	AM-BS-4500-B	060772-A	N.C.R	N.C.R
Controller	Champro	EM1000	60772	N.C.R	N.C.R
Software	Farad	EZ_EMC	BACL-03A1	N.C.R	N.C.R
Conducted Room					
Spectrum Analyzer	Rohde & Schwarz	FSV40	101140	2021/1/7	2022/1/6
Cable	UTIFLEX	UFA210A	9435	2021/10/5	2022/10/4
Temp & Humidity Chamber	BACL	BTH-150	30028	2021/01/18	2022/01/17

***Statement of Traceability:** BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to the SI System of Units via the R.O.C. Center for Measurement Standards of the Electronics Testing Center, Taiwan (ETC) or to another internationally recognized National Metrology Institute (NMI), and were compliant with the current Taiwan Accreditation Foundation (TAF) requirements*

5 FCC §15.203 – Antenna Requirements

5.1 Applicable Standard

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

5.2 Antenna Information

The EUT has one internal antenna arrangement for NFC which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance.

6 FCC §15.207(a) – AC Line Conducted Emissions

6.1 Applicable Standard

According to §15.207

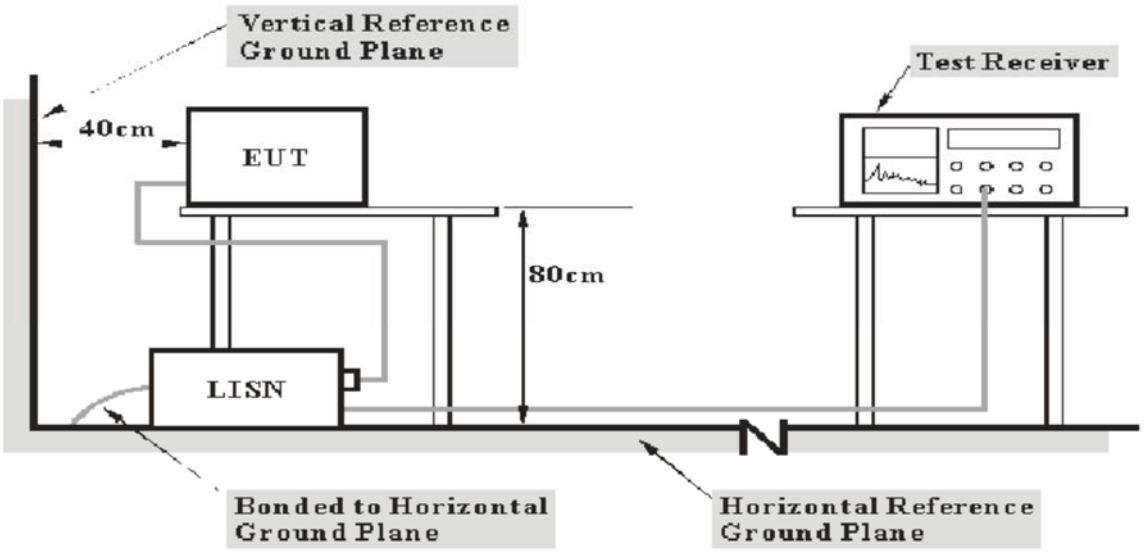
For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56 Note 1	56 to 46 Note 2
0.5-5	56	46
5-30	60	50

Note 1: Decreases with the logarithm of the frequency.

Note 2: A linear average detector is required

6.2 EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

6.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150kHz to 30MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations

Frequency Range	IF B/W
150kHz – 30MHz	9kHz

6.4 Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

6.5 Corrected Factor & Margin Calculation

The factor is calculated by adding LISN/ISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

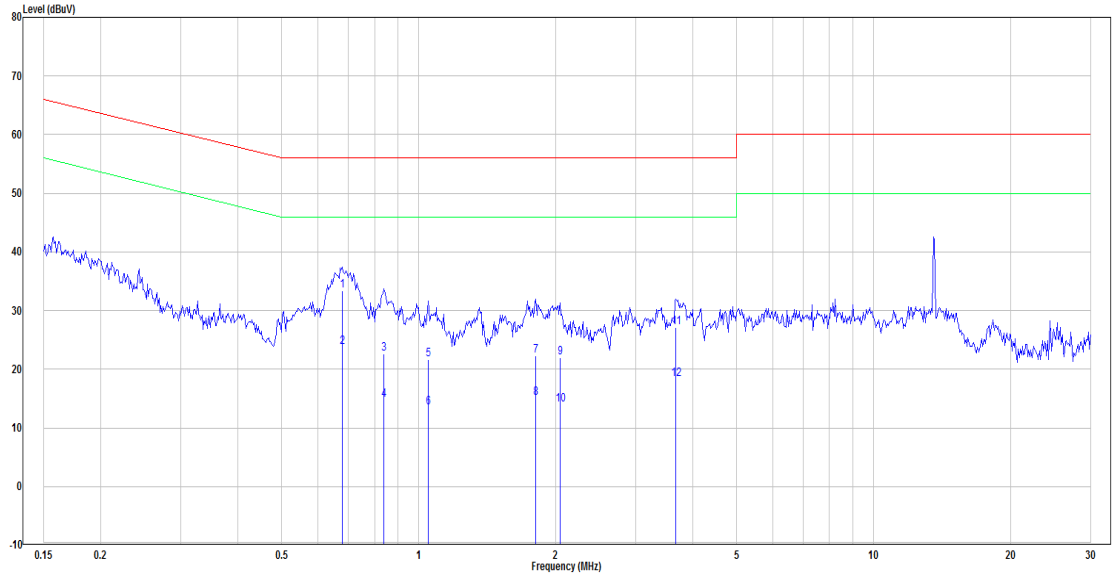
The “Over Limit” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for Over Limit calculation is as follows:

Over Limit = Level – Limit Line

6.6 Test Results

Test Mode: Transmitting

Main: AC120 V, 60 Hz, Line



No.	Frequency	Reading	Correct	Result	Limit	Over limit	Remark
	(MHz)	(dBµV)	Factor(dB)	(dBµV)	(dBµV)	(dB)	
1	0.679	13.79	19.60	33.39	56.00	-22.61	QP
2	0.679	4.21	19.60	23.81	46.00	-22.19	Average
3	0.839	3.00	19.60	22.60	56.00	-33.40	QP
4	0.839	-4.83	19.60	14.77	46.00	-31.23	Average
5	1.049	2.11	19.61	21.72	56.00	-34.28	QP
6	1.049	-6.20	19.61	13.41	46.00	-32.59	Average
7	1.810	2.68	19.63	22.31	56.00	-33.69	QP
8	1.810	-4.58	19.63	15.05	46.00	-30.95	Average
9	2.044	2.33	19.64	21.97	56.00	-34.03	QP
10	2.044	-5.77	19.64	13.87	46.00	-32.13	Average
11	3.681	7.47	19.68	27.15	56.00	-28.85	QP
12	3.681	-1.40	19.68	18.28	46.00	-27.72	Average

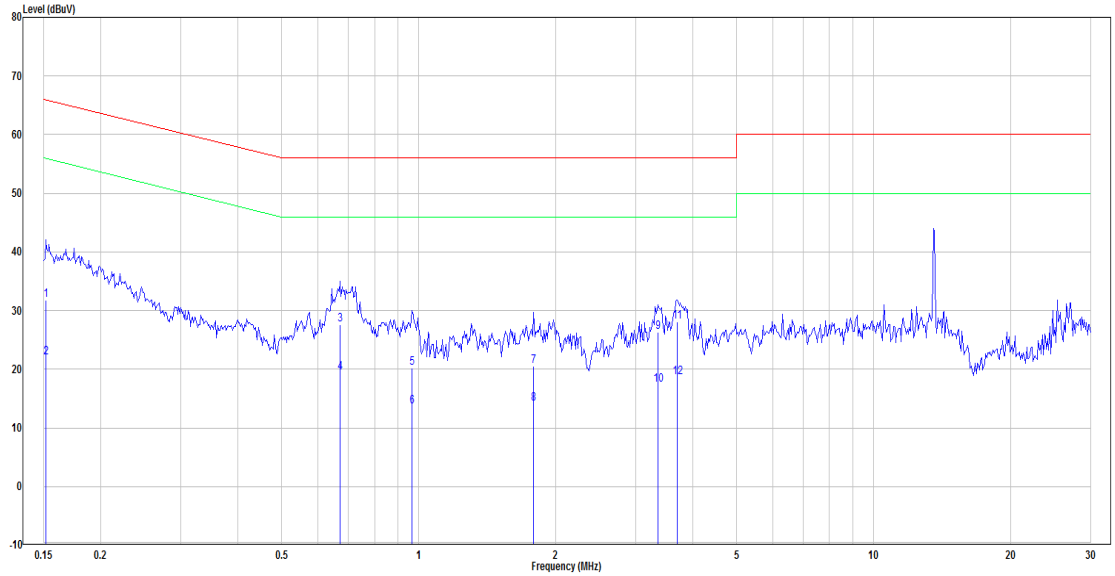
Note:

Level = Read Level + Factor

Over Limit = Level – Limit Line

Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss + Attenuator

Main: AC120 V, 60 Hz, Neutral



No.	Frequency	Reading	Correct	Result	Limit	Over limit	Remark
	(MHz)	(dBµV)	Factor(dB)	(dBµV)	(dBµV)	(dB)	
1	0.152	12.26	19.59	31.85	65.91	-34.06	QP
2	0.152	2.40	19.59	21.99	55.91	-33.92	Average
3	0.672	7.96	19.59	27.55	56.00	-28.45	QP
4	0.672	-0.22	19.59	19.37	46.00	-26.63	Average
5	0.968	0.54	19.60	20.14	56.00	-35.86	QP
6	0.968	-6.04	19.60	13.56	46.00	-32.44	Average
7	1.790	0.83	19.63	20.46	56.00	-35.54	QP
8	1.790	-5.55	19.63	14.08	46.00	-31.92	Average
9	3.364	6.63	19.67	26.30	56.00	-29.70	QP
10	3.364	-2.38	19.67	17.29	46.00	-28.71	Average
11	3.700	8.47	19.68	28.15	56.00	-27.85	QP
12	3.700	-1.10	19.68	18.58	46.00	-27.42	Average

Note:

Level = Read Level + Factor

Over Limit = Level – Limit Line

Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss + Attenuator

7 FCC §15.209, §15.205 , §15.225 – Radiated Emissions

7.1 Applicable Standard

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	608 – 614	4. 5 – 5. 15
0.495 – 0.505	16.69475 – 16.69525	960 – 1240	5. 35 – 5. 46
2.1735 – 2.1905	16.80425 – 16.80475	1300 – 1427	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1435 – 1626.5	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1645.5 – 1646.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1660 – 1710	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1718.8 – 1722.2	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	2200 – 2300	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2310 – 2390	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2483.5 – 2500	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2690 – 2900	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	3260 – 3267	22.01 – 23.12
8.41425 – 8.41475	162.0125 –167.17	3.332 – 3.339	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3 3458 – 3 358	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3.600 – 4.400	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4		Above 38.6
13.36 – 13.41	399.9 – 410		

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per FCC §15.225,

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

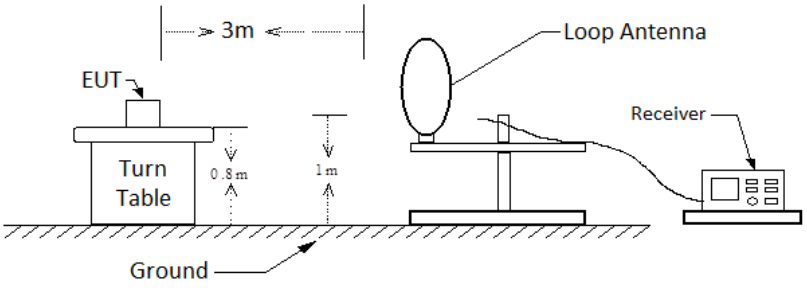
(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

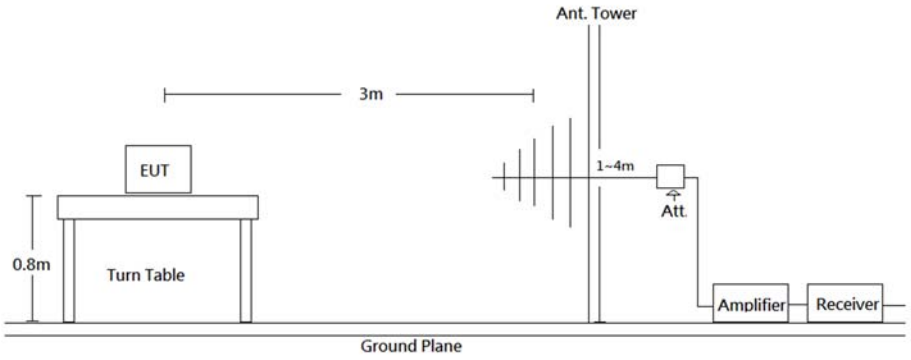
(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

7.2 EUT Setup

9 kHz to 30 MHz:



30 MHz to 1 GHz:



Radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part 15.209 and FCC 15.225 Limits.

7.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 1000 MHz, During the radiated emission test, the EMI test receiver was set with the following configurations measurement method 6.3 in ANSI C63.10.

Frequency Range	RBW	VBW	IF B/W	Detector
9 kHz - 150 kHz	200 Hz	1 kHz	/	QP
150 kHz - 30 MHz	9 kHz	30 kHz	/	QP
30 MHz - 1000 MHz	120 kHz	/	120 kHz	QP

7.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The Correct Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

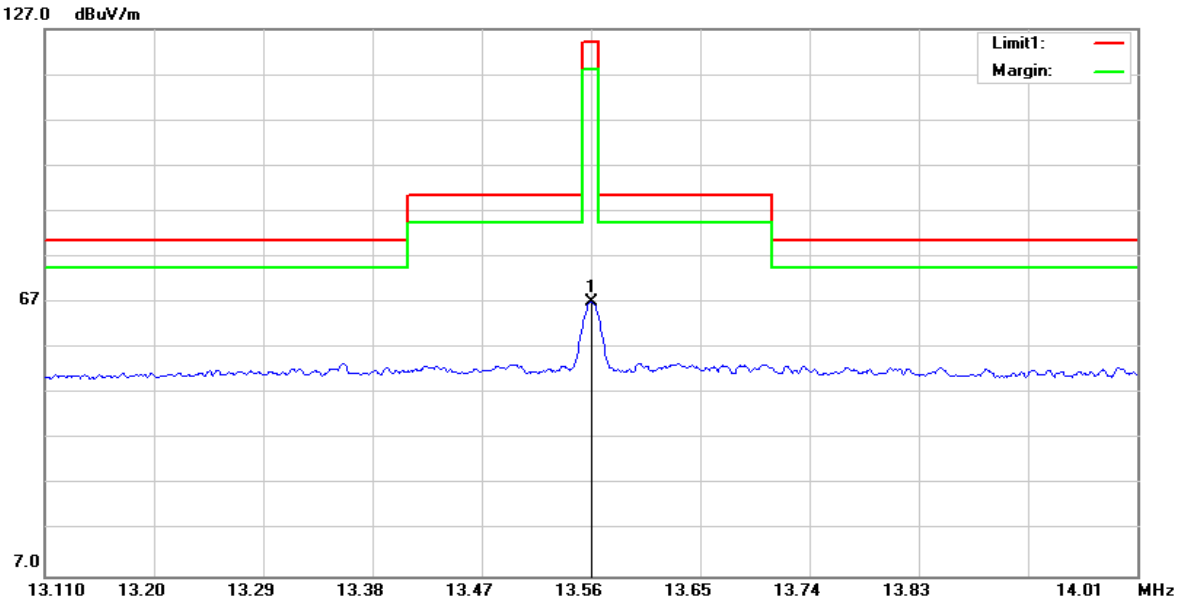
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Result – Limit

7.5 Test Results

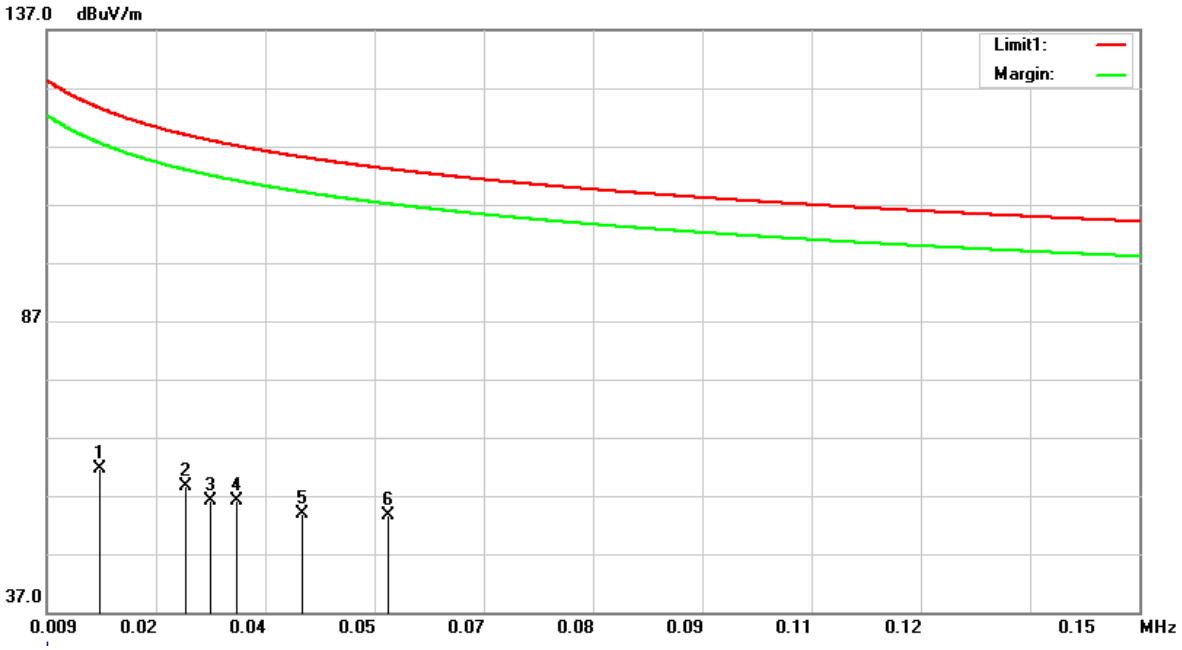
Fundamental:



Frequency (MHz)	Reading (dBµV)	Correct Factor(dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
13.5600	55.22	11.98	67.20	124.00	-56.80	132	203	QP

Result = Reading + Correct Factor
Margin = Result – Limit
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

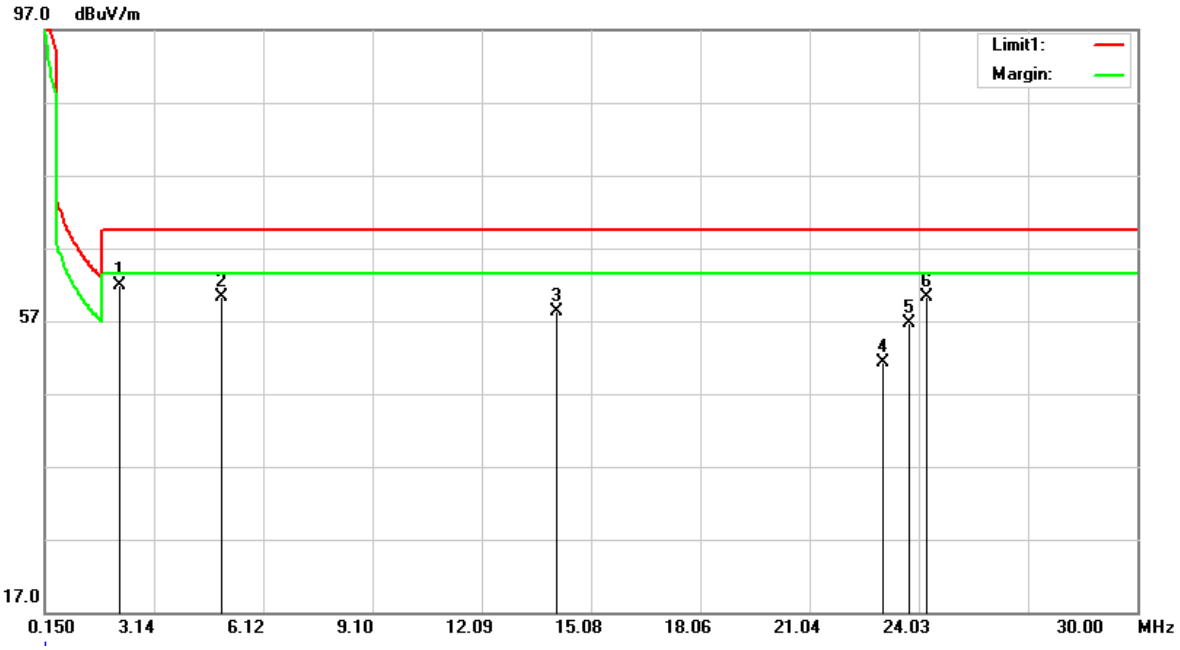
9kHz-150kHz



Frequency (MHz)	Reading (dBµV)	Correct Factor(dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
0.0159	45.47	16.21	61.68	123.56	-61.88	100	12	AVG
0.0269	44.05	14.50	58.55	119.00	-60.45	100	151	AVG
0.0301	42.19	14.01	56.20	118.02	-61.82	100	213	AVG
0.0335	42.24	13.81	56.05	117.09	-61.04	100	62	AVG
0.0420	40.56	13.30	53.86	115.13	-61.27	100	205	AVG
0.0531	40.79	12.73	53.52	113.09	-59.57	100	304	AVG

Result = Reading + Correct Factor
Margin = Result – Limit
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

150kHz -30MHz

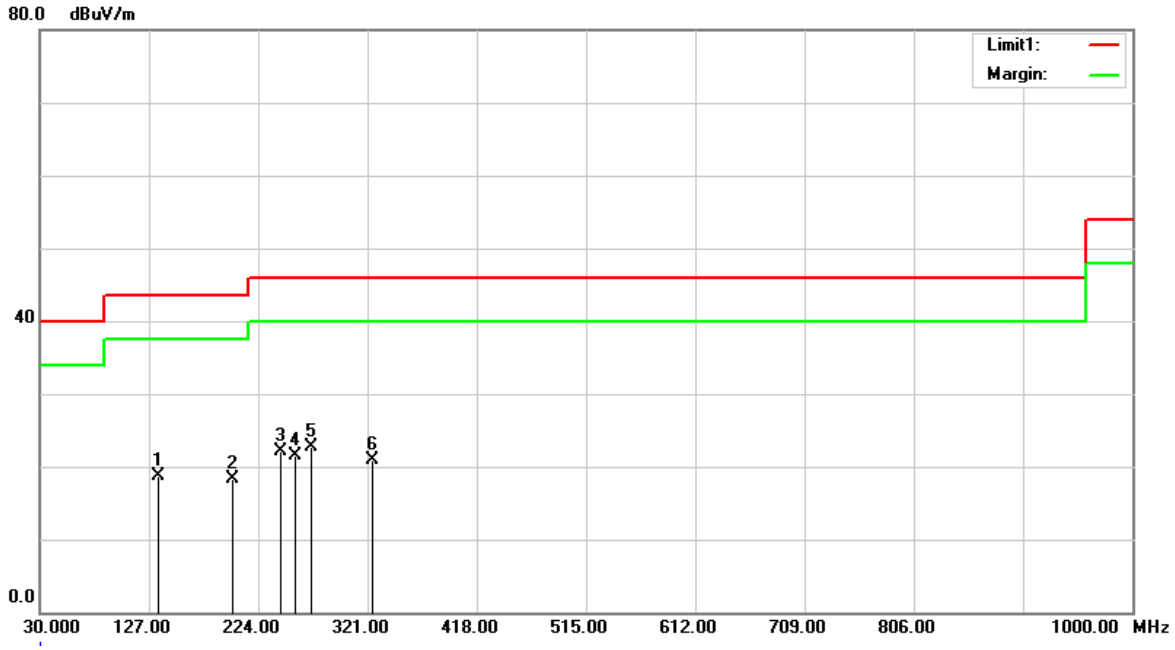


Frequency (MHz)	Reading (dBµV)	Correct Factor(dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
2.2096	51.20	10.77	61.97	69.50	-7.53	132	64	peak
4.9857	49.06	11.19	60.25	69.50	-9.25	132	43	peak
14.1496	46.38	12.00	58.38	69.50	-11.12	132	113	peak
23.0450	40.68	10.63	51.31	69.50	-18.19	132	216	peak
23.7614	46.26	10.54	56.80	69.50	-12.70	132	64	peak
24.2389	49.83	10.48	60.31	69.50	-9.19	132	276	peak

Result = Reading + Correct Factor
Margin = Result – Limit
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

30MHz-1Gz

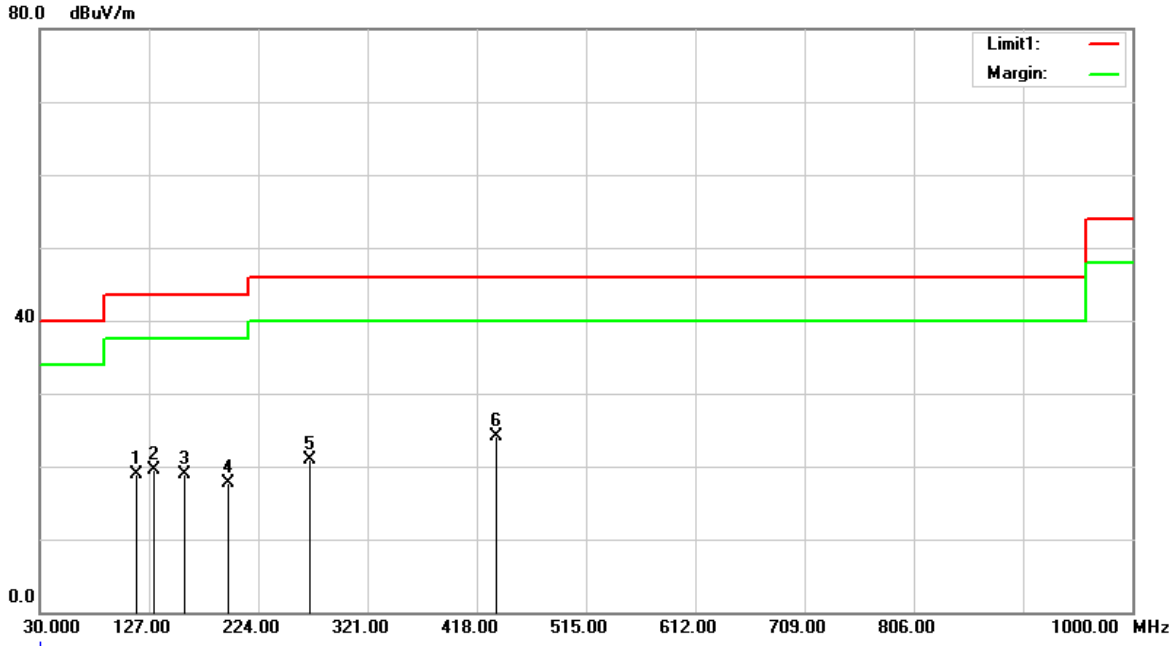
Horizontal



Frequency (MHz)	Reading (dBµV)	Correct Factor(dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
135.7300	29.26	-10.49	18.77	43.50	-24.73	100	178	peak
201.6900	29.87	-11.57	18.30	43.50	-25.20	100	84	peak
243.4000	34.35	-12.23	22.12	46.00	-23.88	100	67	peak
256.9800	33.46	-12.00	21.46	46.00	-24.54	100	53	peak
270.5600	33.19	-10.42	22.77	46.00	-23.23	100	48	peak
325.8500	30.42	-9.51	20.91	46.00	-25.09	100	203	peak

Result = Reading + Correct Factor
Margin = Result – Limit
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain
Spurious emissions more than 20 dB below the limit were not reported.

Vertical



Frequency (MHz)	Reading (dBµV)	Correct Factor(dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
115.3600	29.89	-10.90	18.99	43.50	-24.51	100	277	peak
130.8800	29.84	-10.29	19.55	43.50	-23.95	100	236	peak
159.0100	30.24	-11.24	19.00	43.50	-24.50	100	220	peak
196.8400	29.30	-11.50	17.80	43.50	-25.70	100	273	peak
269.5900	31.35	-10.46	20.89	46.00	-25.11	100	136	peak
435.4600	30.78	-6.71	24.07	46.00	-21.93	100	144	peak

Result = Reading + Correct Factor
Margin = Result – Limit
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain
Spurious emissions more than 20 dB below the limit were not reported.

8 FCC §15.225(e) –FREQUENCY STABILITY

8.1 Applicable Standard

According to FCC §15.225(e),

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery

8.2 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power. The EUT was placed inside the temperature chamber.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Spectrum Analyzer.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to the end point of the battery. The output frequency was recorded for each voltage.

8.3 Test Results

Test Mode: Transmitting

Temperature (℃)	Voltage (V)	Measured Frequency (MHz)	Frequency Error (Hz)	Limit (Hz)	Result
-20	7.6	13.55969	-310	±1356	Pass
-10	7.6	13.55963	-370	±1356	Pass
0	7.6	13.56000	0	±1356	Pass
10	7.6	13.56060	600	±1356	Pass
20	7.6	13.56058	580	±1356	Pass
30	7.6	13.56083	830	±1356	Pass
40	7.6	13.55915	-850	±1356	Pass
50	7.6	13.56004	40	±1356	Pass
20	6.46	13.55918	-820	±1356	Pass
	7.6	13.56028	280	±1356	Pass
	8.74	13.55994	-60	±1356	Pass

9 FCC §15.215(c) – 20 dB Emission Bandwidth

9.1 Applicable Standard

According to FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. In the case of intentional radiators operating under the provisions of subpart E, the emission bandwidth may span across multiple contiguous frequency bands identified in that subpart. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

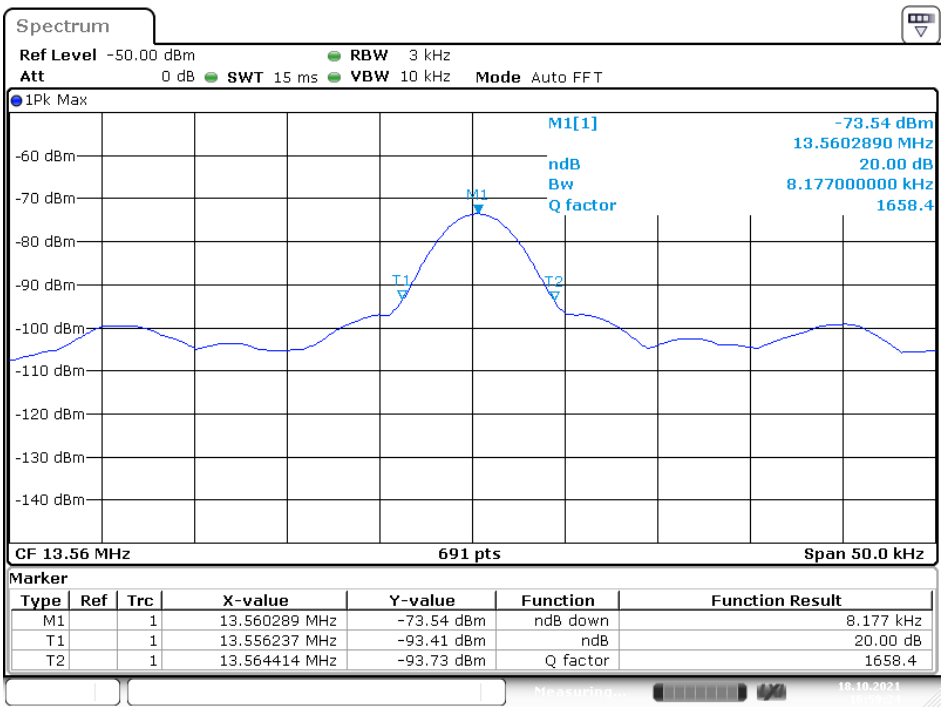
9.2 Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to measuring equipment.

9.3 Test Results

Frequency (MHz)	20dB Bandwidth (kHz)
13.56	8.177

20 dB Emission Bandwidth



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