TEST REPORT

Application No.:	KSCR2412002626AT
FCC ID:	2AL8S-0235C9RE
Applicant:	Zhejiang Uniview Technologies Co., Ltd.
Address of Applicant:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Manufacturer:	Zhejiang Uniview Technologies Co., Ltd.
Address of Manufacturer:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Equipment Under Test (EUT):	
EUT Name:	Doorbell
Model No.:	ED-525B-WB,ED-525B-WB-xxxxxxxx-yyyyyyyy-zzz (“x”,”y”,”z” can be 0-9,A-Z,a-z or blank;”-” may be blank) ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	unv
Standard(s) :	47 CFR Part 15, Subpart C 15.231
Date of Receipt:	2024-12-24
Date of Test:	2024-12-26 to 2025-01-14
Date of Issue:	2025-01-20
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2025-01-20	/

Authorized for issue by:				
Tested By		 **Maker_Qi/Project Engineer**		
Approved By		 **Terry Hou /Reviewer**		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.231	N/A	47 CFR Part 15, Subpart C 15.203	Customer Declaration

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.231	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
20dB Bandwidth		ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.231(c)	Pass
Dwell Time (15.231(a))		ANSI C63.10 (2013) Section 7.8.4	47 CFR Part 15, Subpart C 15.231(e)	Pass
Radiated Emissions below 1GHz		ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15C Section 15.231(b) and 15.209	Pass
Field Strength of the Fundamental Signal (15.231(b))		ANSI C63.10 (2013) Section 6.5	47 CFR Part 15, Subpart C 15.231(b)	Pass
Radiated Emissions above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15C Section 15.231(b) and 15.209	Pass

Declaration of EUT Family Grouping:

Note: There are series models mentioned in this report, and they are identical in electrical and electronic characters. Only the model ED-525B-WB was tested since their differences were the model number .

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	~12-24V,50-60Hz,1.0A
Test voltage:	AC 120V/60Hz
Operation Frequency	433.17MHz
Channel Numbers:	1
Modulation Type:	FSK
Antenna Type:	Internal antenna
Transmitter type:	Manually

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	LENOVO	K27	EB24537645

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.4 Test Location

All tests were performed at:
Compliance Certification Services (Kunshan) Inc.
No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.
Tel: +86 512 5735 5888 Fax: +86 512 5737 0818
No tests were sub-contracted.
Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301101	01/15/2024	01/14/2025
2	LISN	R&S	ENV216	KS301197	01/15/2024	01/14/2025
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2024	01/14/2025
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/15/2024	01/14/2025
5	CE test Cable	Thermax	/	CZ301102	01/15/2024	01/14/2025
6	Test Software	ESE	E3_V 6.111221a	/	N.C.R	N.C.R
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	08/22/2026
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/12/2024	08/11/2025
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/12/2024	08/11/2025
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/21/2024	03/20/2025
14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement:

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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is Internal Antenna and no consideration of replacement.

Antenna location: Refer to Internal photos

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz		

7.1.1 E.U.T. Operation

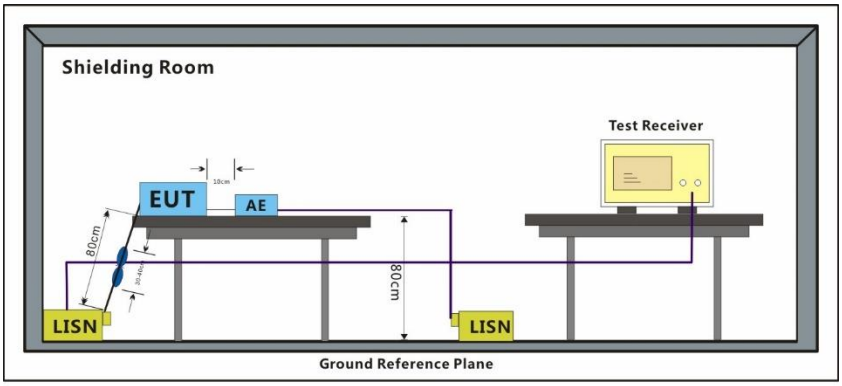
Operating Environment:

Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

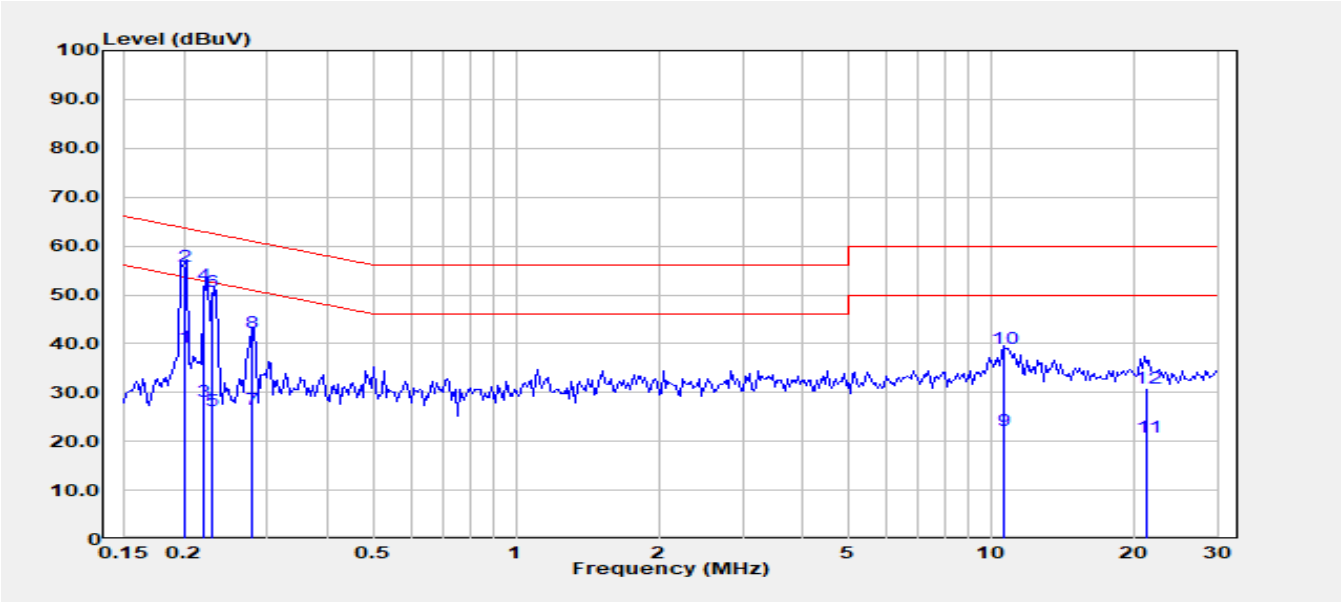
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

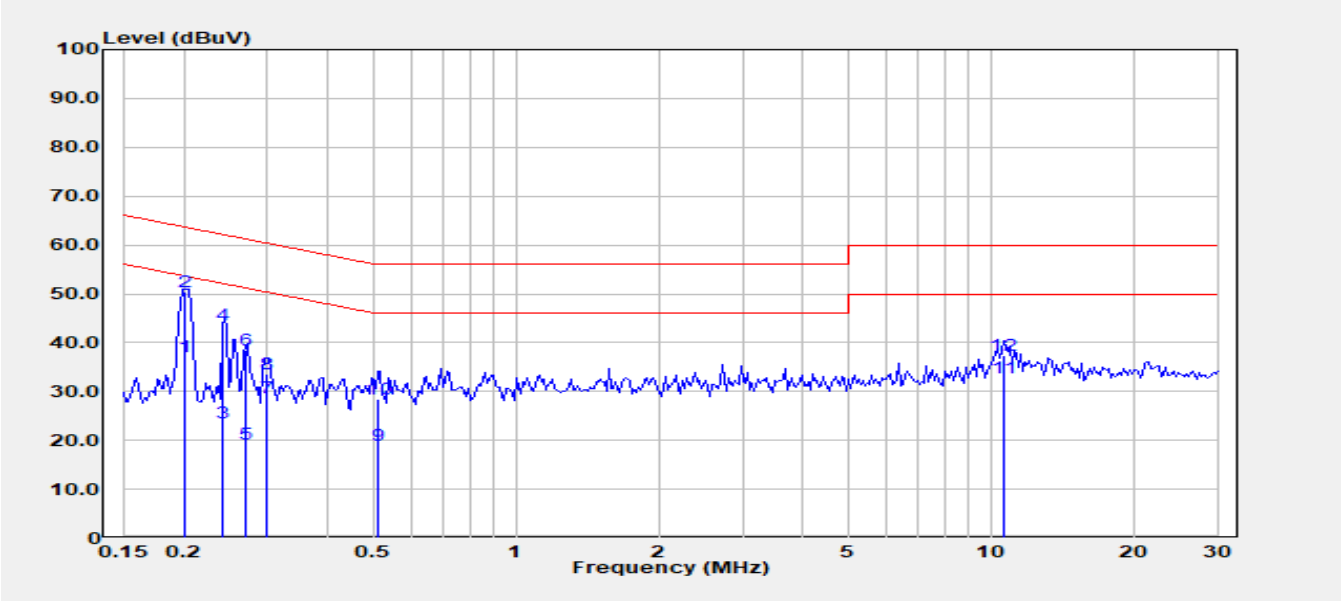
Remark: Level=Read Level+ Cable Loss+ LISN Factor

Test Mode: 10; Line: Live line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1998	19.25	20.05	39.30	53.62	-14.32	Average
2	0.1998	35.67	20.05	55.72	63.62	-7.90	QP
3	0.2204	8.20	20.06	28.26	52.80	-24.54	Average
4	0.2204	32.09	20.06	52.15	62.80	-10.65	QP
5	0.2296	6.33	20.06	26.39	52.47	-26.08	Average
6	0.2296	30.67	20.06	50.73	62.47	-11.74	QP
7	0.2783	6.58	20.07	26.65	50.87	-24.22	Average
8	0.2783	22.27	20.07	42.34	60.87	-18.53	QP
9	10.6420	2.40	19.86	22.26	50.00	-27.74	Average
10	10.6420	19.11	19.86	38.97	60.00	-21.03	QP
11	21.3590	1.05	19.76	20.81	50.00	-29.19	Average
12	21.3590	11.20	19.76	30.96	60.00	-29.04	QP

Test Mode: 10; Line: Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2015	17.07	20.11	37.18	53.55	-16.37	Average
2	0.2015	30.40	20.11	50.51	63.55	-13.04	QP
3	0.2422	3.39	20.10	23.49	52.02	-28.53	Average
4	0.2422	23.59	20.10	43.69	62.02	-18.33	QP
5	0.2704	-0.96	20.09	19.13	51.11	-31.98	Average
6	0.2704	18.30	20.09	38.39	61.11	-22.72	QP
7	0.2995	8.78	20.08	28.86	50.26	-21.40	Average
8	0.2995	13.51	20.08	33.59	60.26	-26.67	QP
9	0.5141	-0.84	19.92	19.08	46.00	-26.92	Average
10	0.5141	8.55	19.92	28.47	56.00	-27.53	QP
11	10.6050	13.08	19.84	32.92	50.00	-17.08	Average
12	10.6050	17.48	19.84	37.32	60.00	-22.68	QP

7.2 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.231(c)
Test Method: ANSI C63.10 (2013) Section 6.9
Measurement Distance: 3m

Limit:

Frequency range(MHz)	Limit
70-900	No wider than 0.25% of the center frequency
Above 900	No wider than 0.5% of the center frequency

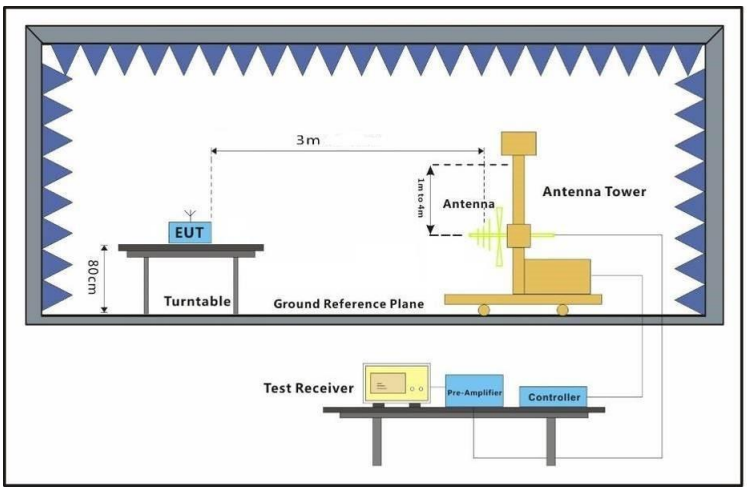
7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.3 Dwell Time (15.231(a1))

Test Requirement 47 CFR Part 15, Subpart C 15.231(e)
Test Method: ANSI C63.10 (2013) Section 7.8.4
Measurement Distance: 3m

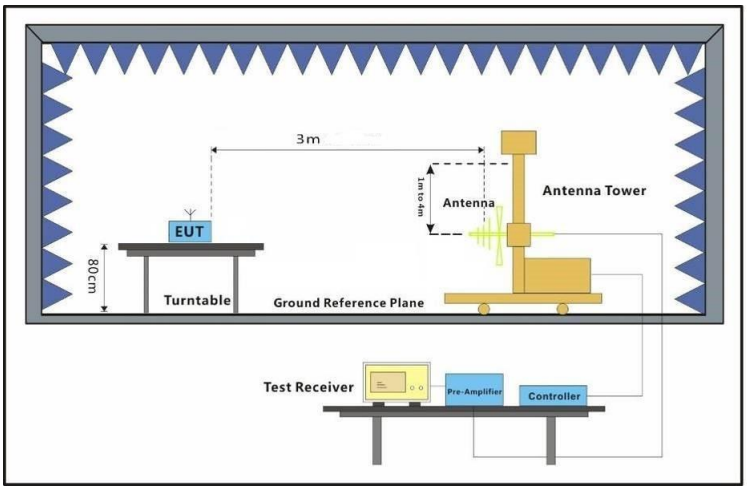
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.4 Radiated Emissions below 1GHz

Test Requirement 47 CFR Part 15C Section 15.231(b) and 15.209
Test Method: ANSI C63.10 (2013) Section 6.4&6.5
Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength(microvolts/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
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

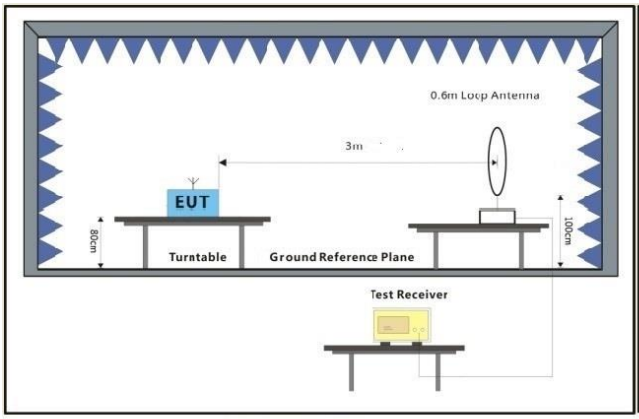
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

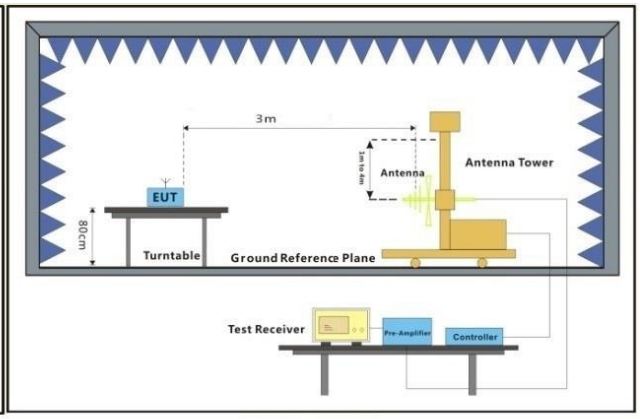
7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode

7.4.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

7.4.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) Scan from 9kHz to 1GHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

Please Refer to Appendix for Details

7.5 Field Strength of the Fundamental Signal (15.231(b))

Test Requirement 47 CFR Part 15, Subpart C 15.231(b)
Test Method: ANSI C63.10 (2013) Section 6.5
Measurement Distance: 3m

Limit:

Fundamental frequency(MHz)	Field strength of fundamental(microvolts/meter)	Field strength of spurious emissions(microvolts/meter)
40.66-40.70	2250	225
70-130	1250	125
130-174	1250 to 3750	125 to 375
174-260	3750	375
260-470	3750 to 12500	375 to 1250
Above 470	12500	1250
Remark: the emission limit is based on measurement instrumentation employing an average detector at a distance of 3 meters. The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

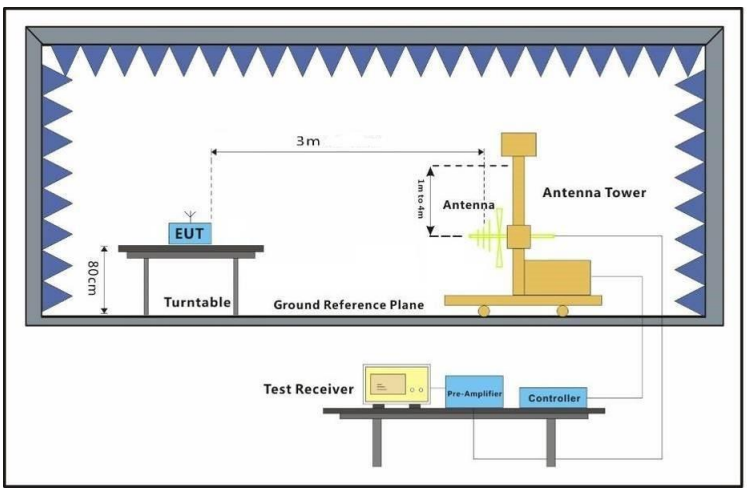
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Please Refer to Appendix for Details

7.6 Radiated Emissions above 1GHz

Test Requirement 47 CFR Part 15C Section 15.231(b) and 15.209
Test Method: ANSI C63.10 (2013) Section 6.6
Measurement Distance: 3m

Limit:

For Restricted bands

Frequency(MHz)	Field strength(microvolts/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
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

For Other bands

Fundamental Frequency MHz	Field Strength of Fundamental (dBµV/m @ 3 m)	Field Strength of Hasrmonics and Spurious Emissions (dBµV/m @ 3 m)
40.66 to 40.70	67.04	47.04
70 to 130	61.94	41.94
130 to 174	**61.94 to 71.48	41.94 to 51.48
174 to 260	71.48	51.48
260 to 470	**71.48 to 81.94	51.48 to 61.94
Above 470	81.94	61.94
Detector:	Peak for pre-scan	
	QP for 30MHz to1000 MHz:120 kHz resolution bandwidth Peak for Above 1 GHz: 1 MHz resolution bandwidth	

** linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows:

for the band 130-174 MHz, uV/m at 3 meters = 56.81818(F) - 6136.3636;

for the band 260-470 MHz, uV/m at 3 meters = 41.6667(F) - 7083.3333.

The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

The fundamental frequency of the EUT is 433.17 MHz

The limit for average or QP field strength dBuv/m for the fundamental emission= 80.80 dBµV/m

No fundamental is allowed in the restricted bands.

The limit for average field strength dBuv/m for the spurious emission=60.80 dBuV/m. Spurious in the restricted bands must be less than 60.80 dBuV/m or 15.209, whichever limit permits a higher field strength.

7.6.1 E.U.T. Operation

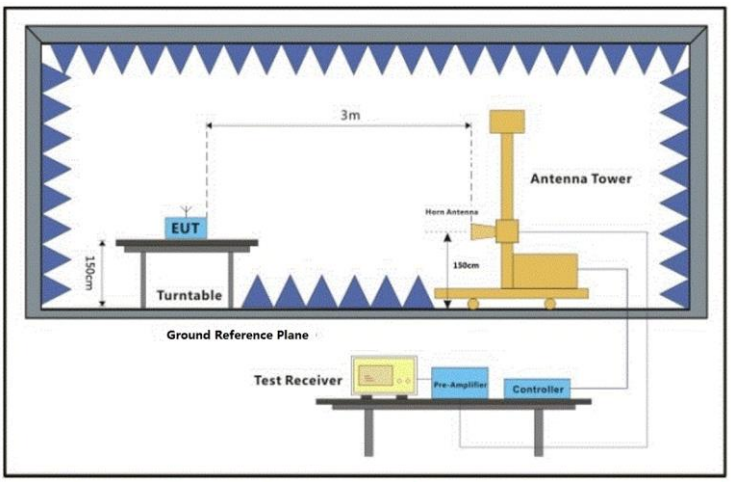
Operating Environment:

Temperature: 20.2 °C Humidity: 48.5 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode_Keep the EUT in transmitting mode

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2412002626AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2412002626AT

10 Appendix

11 Spurious Emissions

11.1 Field Strength of the Fundamental Signal

Test channel	Freq. (MHz)	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
Channel 1	433.17	49.18	80.80	-31.62	Peak	Vertical
		48.24	80.80	-32.56	Peak	Horizontal

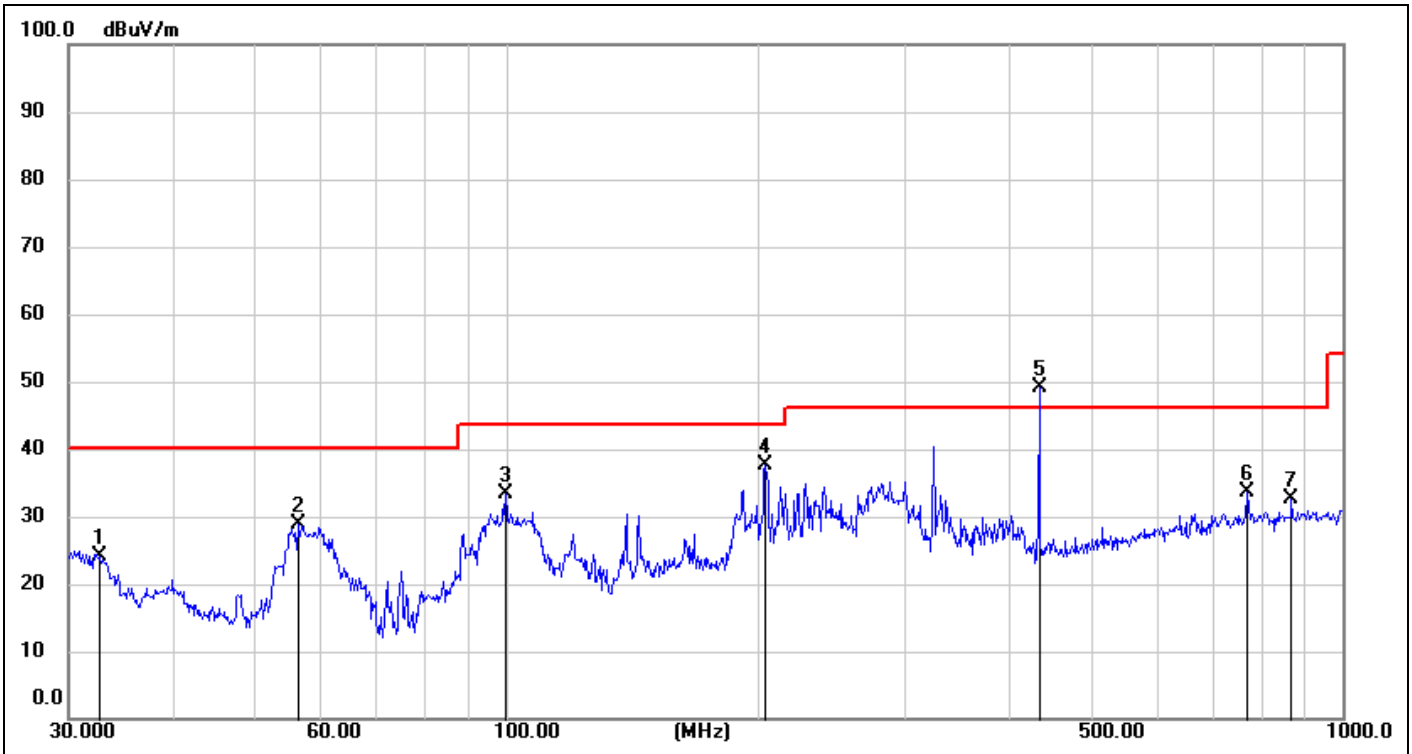
Remark: If the Peak value below the AV Limit, the AV test doesnt perform for this submission.

11.2 Spurious Emissions

Below 1GHz:

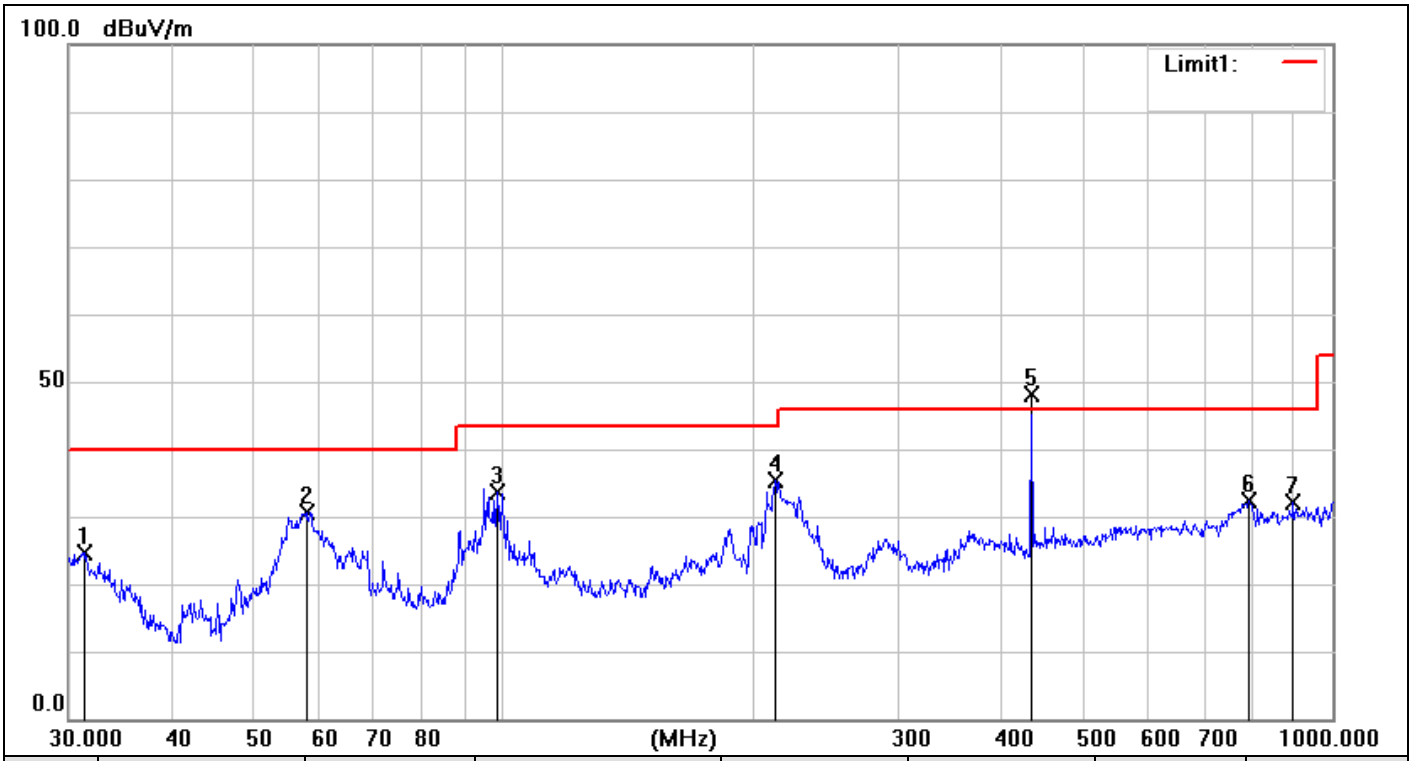
433.175MHz:

Vertical:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	32.7486	6.67	17.49	24.16	40.00	-15.84	QP
2	56.3947	22.39	6.44	28.83	40.00	-11.17	QP
3	99.8777	20.43	12.88	33.31	43.50	-10.19	QP
4	204.2375	26.04	11.61	37.65	43.50	-5.85	QP
5	433.1700	27.51	18.82	49.18	Fundamental signal		
6	768.7481	31.32	2.34	33.66	46.00	-12.34	QP
7	869.1300	30.30	2.29	32.59	46.00	-13.41	QP

Horizontal:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	31.3992	6.35	18.23	24.58	40.00	-15.42	QP
2	58.2030	24.58	6.03	30.61	40.00	-9.39	QP
3	98.4865	21.16	12.42	33.58	43.50	-9.92	QP
4	213.0150	22.97	12.43	35.40	43.50	-8.10	QP
5	433.1700	29.42	18.82	48.24	Fundamental signal		
6	793.3960	30.02	2.25	32.27	46.00	-13.73	QP
7	896.9963	29.67	2.50	32.17	46.00	-13.83	QP

Above 1GHz

433.17MHz:

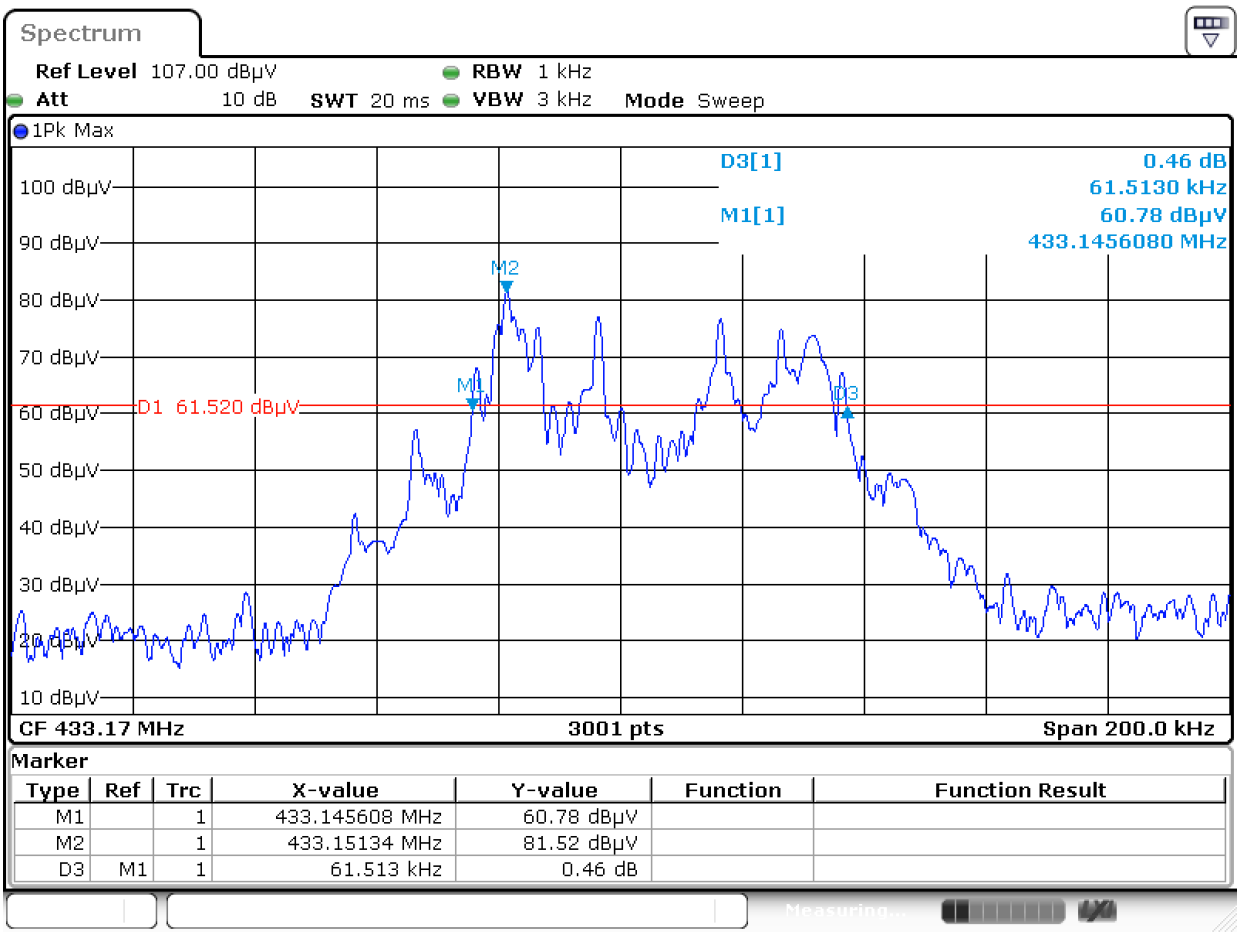
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	polarization
1	2485.000	59.75	-24.26	35.49	54.00	-18.51	peak	Vertical
2	3465.000	68.89	-22.00	46.89	54.00	-7.11	peak	Vertical
3	4710.000	58.79	-18.62	40.17	54.00	-13.83	peak	Vertical
4	2600.000	60.49	-23.74	36.75	54.00	-17.25	peak	Horizontal
5	3465.000	73.83	-22.00	51.83	54.00	-2.17	peak	Horizontal
6	4030.000	61.92	-20.17	41.75	54.00	-12.25	peak	Horizontal

11.3 20dB Bandwidth

Measurement Data:

Frequency (MHz)	20dB bandwidth (kHz)	Limit (kHz)	Results
433.17	61.513	1082.9	Pass

Test plot as follows:

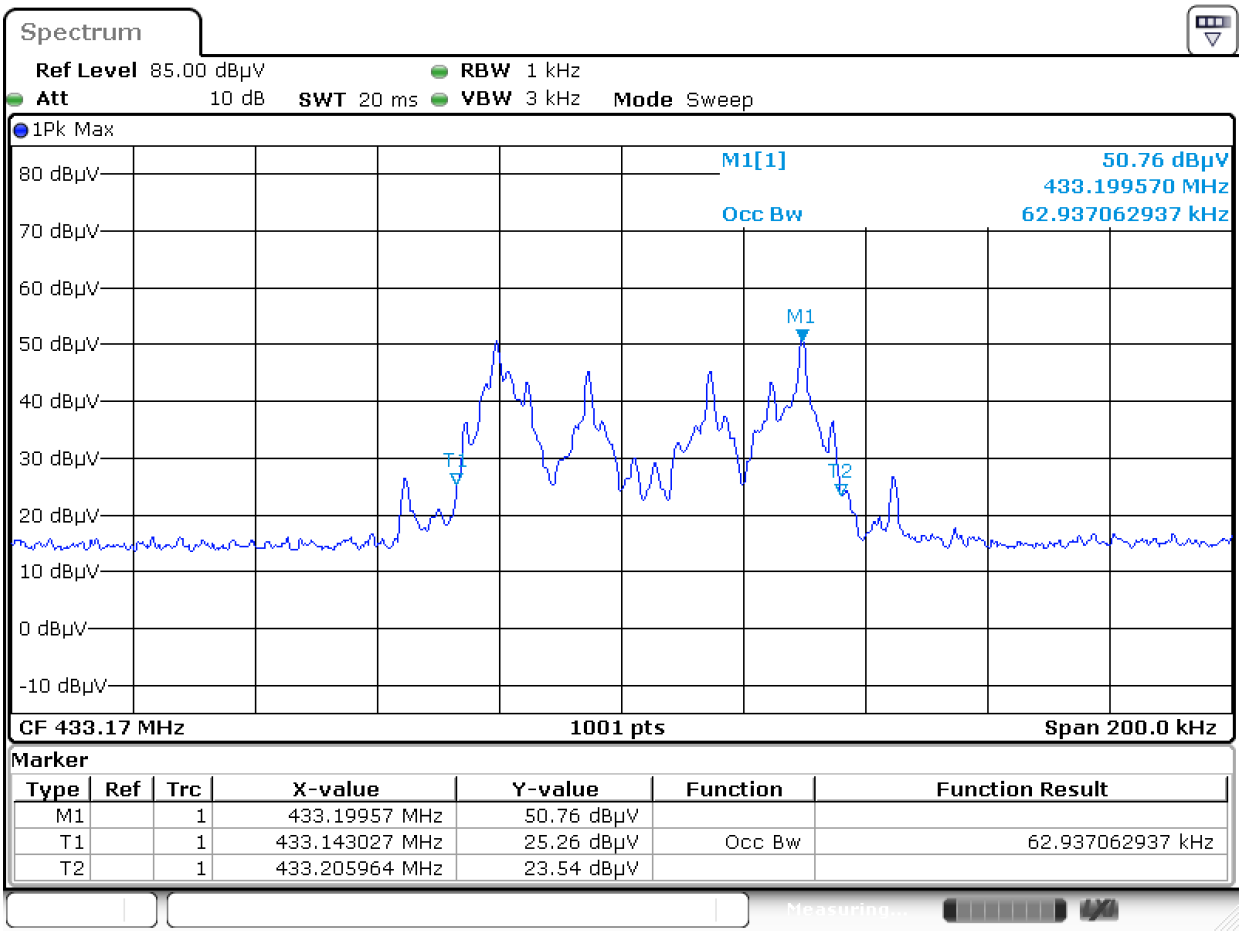


11.4 99% Bandwidth

Measurement Data:

99% bandwidth (kHz)	FL (MHz)	FH (MHz)	Limit(MHz)	Result
62.94	433.1462	433.2068	260-470	Pass

Test plot as follows:

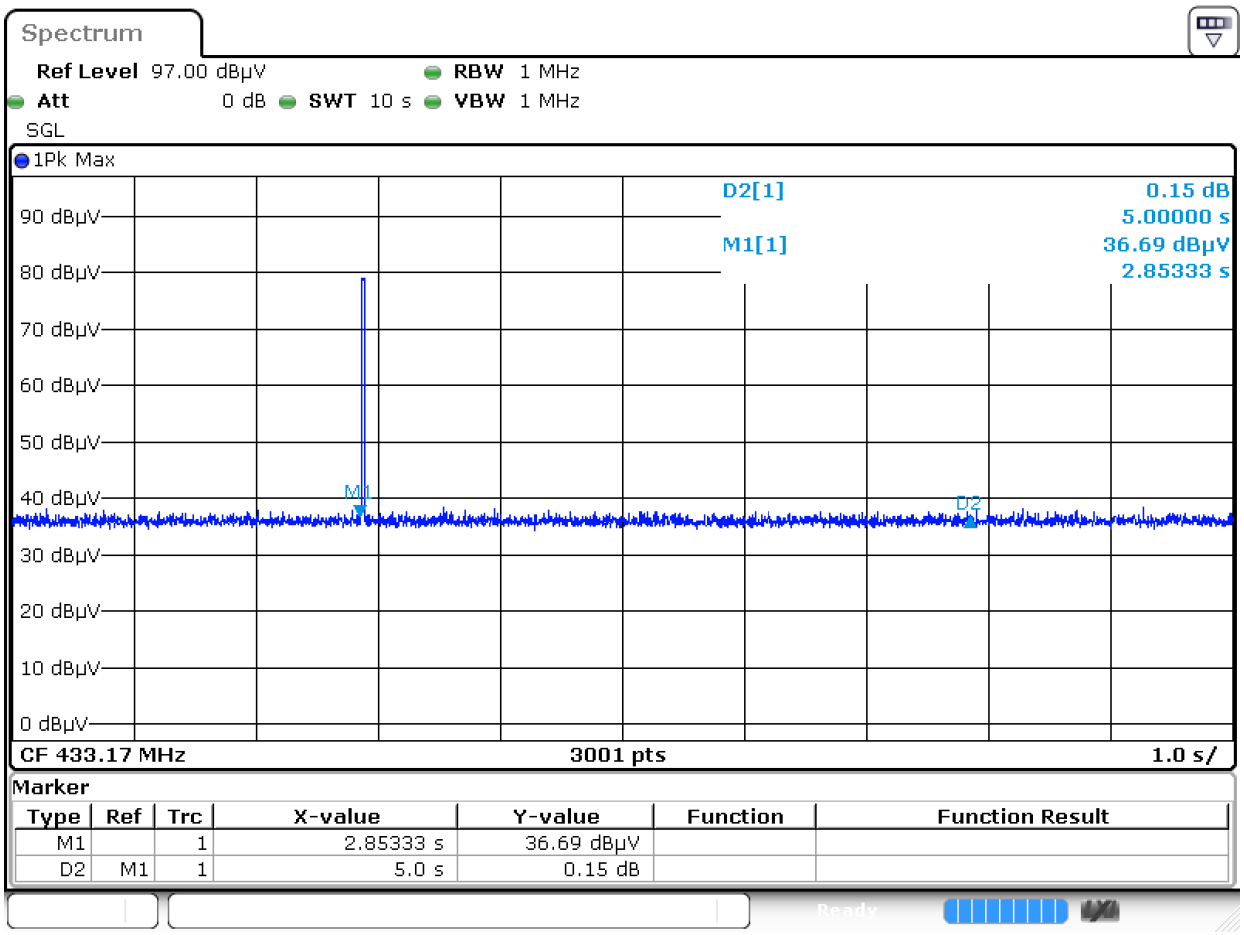


11.5 Dwell Time

Measurement Data:

Test item	Limit (s)	Results
Transmission Duration	≤5s	Pass

Test plot as follows:



- End of the Report -