



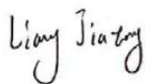
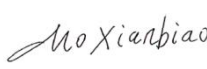
Test Report No.:
FCCSZ2024-0073-RF2

RF Test Report

FCC ID : VMIMR4KVDB
EUT : MaxRanger4K Video Doorbell
APPLICANT : Swann Communications U.S.A. Inc
Classification of Test : N/A

CVC Testing Technology (Shenzhen) Co., Ltd.



Applicant		Name : Swann Communications U.S.A. Inc Address : 12110 E. Slauson Avenue, Suite 4.Santa Fe Springs, CA, 90670,USA	
Manufacturer		Name : Shenzhen Infinova Limited Address : Infinova Building,Guan Lan High Tech Park,Huan Guan Road South. Longhua New District , Shenzhen Guangdong	
Equipment Under Test		Name :MaxRanger4K Video Doorbell Model/Type: NVW-MR4KVDB Additional Model: N/A Trade mark : swann Serial NO.:N/A Sample NO.: 4-1	
Date of Receipt.	2024.09.29	Date of Testing	2024.09.29~2025.04.17
Test Specification		Test Result	
FCC Part 15, Subpart C, Section 15.231		PASS	
Evaluation of Test Result		The equipment under test was found to comply with the requirements of the standards applied. seal of CVC Issue Date: 2025.04.17	
Compiled by:  <u>Liang Jiatong</u> Name Signature	Reviewed by:  <u>Mo Xianbiao</u> Name Signature	Approved by:  <u>Dong Sanbi</u> Name Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCCSZ2024-0073-RF2	Original release	2025.04.17



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	Conducted Emissions	PASS	See section 3.1
15.231(b) 15.209	Radiated Emissions	PASS	See section 3.2
15.231(c)	20dB bandwidth	PASS	See section 3.3
15.231 (a)	Deactivation time	PASS	See section 3.4
15.203	Antenna Requirement	PASS	See section 3.5



1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial Number	Cal. interval	Cal. Due
Antenna Port Conducted Test					
Signal&Spectrum Analyzer	Rohde&Schwarz	FSV 30	104408	1 year	2025/4/28
#3Shielding room	MORI	443	N/A	3 year	2026/5/16
Wideband radio communication tester	Rohde&Schwarz	CMW 500	168778	1 year	2025/5/24
Analog signal Generator (100kHz ~ 40GHz)	Rohde&Schwarz	SMB 100A	181934	1 year	2025/4/27
Vector signal Generator (9kHz ~ 6GHz)	Rohde&Schwarz	SGT 100A	111724	1 year	2025/4/27
RF control unit(BT/WiFi)	Tonscend	JS0806-2-8CH	20E8060261	1 year	2025/4/28
10db attenuator	JUNKE	SMA-10-18-N	250312743	1 year	2026/1/16
Temperature and humidity meter	/	C193561457	C193561457	1 year	2025/4/27
RSE Test - 3M Chamber					
Signal&Spectrum Analyzer	Rohde&Schwarz	FSV 40	101898	1 year	2025/4/28
EMI Test Receiver	Rohde&Schwarz	ESR3	102693	1 year	2025/4/28
Antenna(30MHz~1001MHz)	SCHWARZBECK	VULB 9168	1133	1 year	2025/2/20
Horn antenna(1GHz-18GHz)	ETS	3117	227611	1 year	2025/2/4
Horn antenna(18GHz-40GHz)	QMS	QMS-00880	22051	1 year	2025/3/24
3m anechoic chamber	MORI	966	CS0300011	3 year	2026/5/18
Filter group(RSE-BT/WiFi)	Rohde&Schwarz	WiFi /BT Variant 1	100820	1 year	2025/4/28
Filter group(RSE-Cellular)	Rohde&Schwarz	Cellular Variant 1	100768	1 year	2025/4/28
Preamplifier(10kHz-1GHz)	Rohde&Schwarz	SCU-01F	100299	1 year	2025/4/28
Preamplifier(1GHz-18GHz)	Rohde&Schwarz	SCU-18F	100799	1 year	2025/4/28
Preamplifier(1GHz-18GHz)	Rohde&Schwarz	SCU-18F	100801	1 year	2025/4/28
Preamplifier(18Gz-40GHz)	Rohde&Schwarz	SCU-40A	101209	1 year	2025/4/28
Temperature and humidity meter	/	C193561517	C193561517	1 year	2025/4/27



1.2 MEASUREMENT UNCERTAINTY

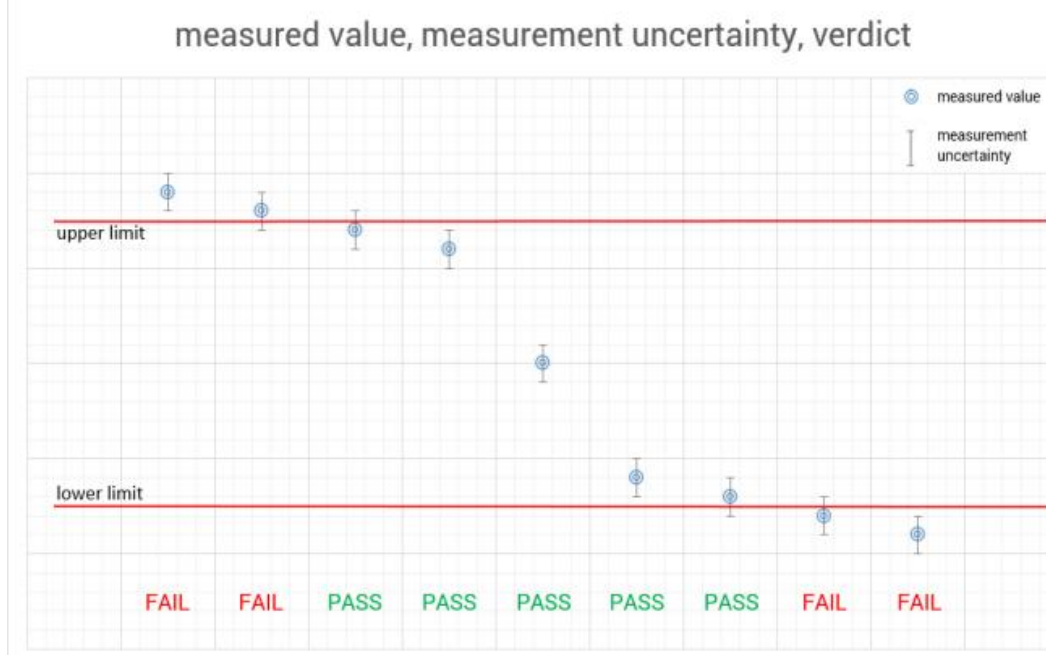
Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

No.	Item	Measurement Uncertainty
1	RF output power, conducted	± 0.9 dB
2	Radiated emissions(30MHz-1GHz)	± 5.0 dB
3	Radiated emissions(1GHz-18GHz)	± 4.8 dB
4	Radiated emissions(18GHz-40GHz)	± 5.1 dB
5	Temperature	± 0.73 °C
6	Humidity	$\pm 3.9\%$
7	Supply voltages(DC)	$\pm 0.37\%$
8	Supply voltages(AC)	$\pm 1.20\%$
9	Radio frequency	$\pm 5.4 \times 10^{-8}$
10	Occupied Channel Bandwidth	$\pm 1.86\%$
11	Radiated emission 9kHz-30MHz	± 5.6 dB
12	Time	$\pm 0.27\%$
Remark: 95% Confidence Levels, k=2.		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed.

The measurement uncertainty is mentioned in this test report, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong.





1.3 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology (Shenzhen) Co., Ltd.

Lab Address: No. 1301-14&16, Guanguang Road, Xinlan Community, Guanlan Subdistrict, Longhua District, Shenzhen, Guangdong, China

Post Code: 518110 Tel: 0755-23763060-8805

Fax: 0755-23763060 E-mail: sz-kf@cvc.org.cn

FCC(Test firm designation number: CN1363)

IC(Test firm CAB identifier number: CN0137)

CNAS(Test firm designation number: L16091)



2 GENERAL INFORMATION

2.1 GENERAL PRODUCT INFORMATION

PRODUCT	MaxRanger4K Video Doorbell
BRAND	swann
MODEL	NVW-MR4KVDB
ADDITIONAL MODEL	N/A
HVIN	NVW-MR4KVDB
POWER SUPPLY	DC 3.7V from Li-ion battery or DC 5V from USB host unit
MODULATIONTECHNOLOGY	DTS
OPERATING FREQUENCY	433.92MHz
NUMBER OF CHANNEL	1
OPERATING TEMPERATURE RANGE	-20° C~60° C
ANTENNA TYPE (Remark 4)	FPC Antenna, 0.98dBi Gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A
Remark: - For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. - For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. - EUT photo refer to the report (Report NO.: FCCSZ2023-0073-EUT). - Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion. - The EUT have SISO function, provides 1 completed transmitter and 1 receiver.	

2.2 DESCRIPTION OF ACCESSORIES

N/A

2.3 OTHER INFORMATION

Operating frequency of each channel

Channel	Frequency (MHz)
1	433.92

- The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.
- By means of test software which provided by manufacture, the power levels during the tests were set

FOR SRD 433.92	
CHANNEL	POWER SETTING
1	default

2.4 Test Mode Applicability and tested channel detail

EUT CONFIGURE MODE	APPLICABLE TO					DESCRIPTION
	RE ≥ 1G	RE < 1G	PLC	EB	DT	
-	√	√	-	√	√	Power by New Battery

Where **RE ≥ 1G**: Radiated Emission above 1GHz
PLC: Power Line Conducted Emission
DT: Deactivation Time measurement

RE < 1G: Radiated Emission below 1GHz
EB: 20dB Bandwidth measurement

RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
1	1	FSK

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
1	1	FSK



EMISSION BANDWIDTH MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
1	1	FSK

DEACTIVATION TIME MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
1	1	FSK



2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC PART 15, SUBPART C. SECTION 15.231
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards

2.6 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support Equipment							
NO	Description	Brand		Model No.	Serial Number	Supplied by	
1	Laptop	Lenovo		V14	PFNXB1628023	Lab	
2	10db attenuator	JUNKE		SMA-10-18-N	250312743	Lab	
3	Network bridge	SWANN		900M-PNR	26347	Client	
4	Adapter	HUAWEI		HW-200325CP0	N/A	Lab	
Support Cable							
NO	Description	Quantity (Number)	Length (cm)	Detachable (Yes/ No)	Shielded (Yes/ No)	Cores (Number)	Supplied by
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION

3.1.1 Limits Of Conducted Emission

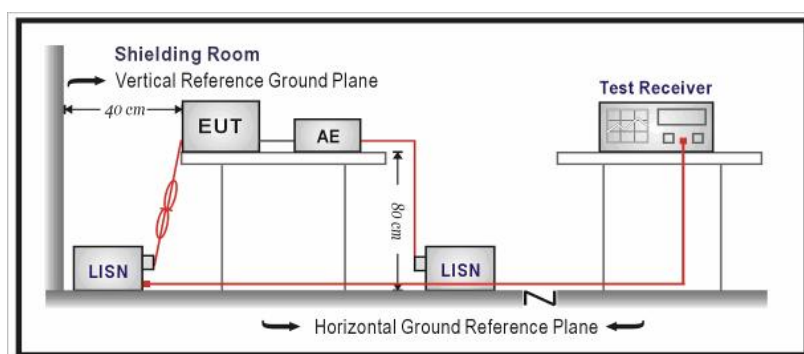
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
NOTE: 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.1.2 Measurement procedure

- The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the Test photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The equipment under test shall be placed on a support of non-metallic material, the height of which shall be 1.5m above the ground,
- The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

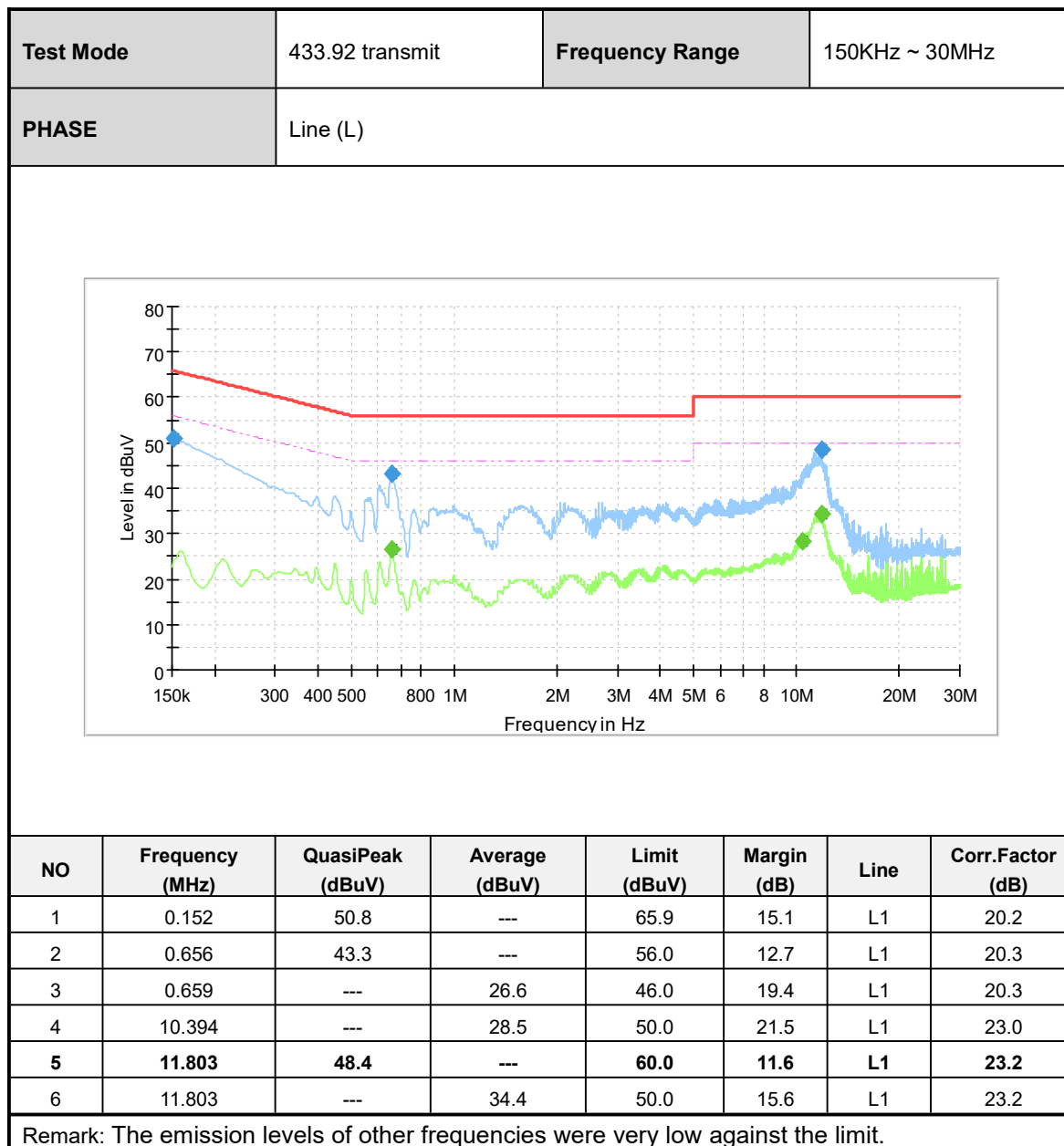
3.1.3 Test setup

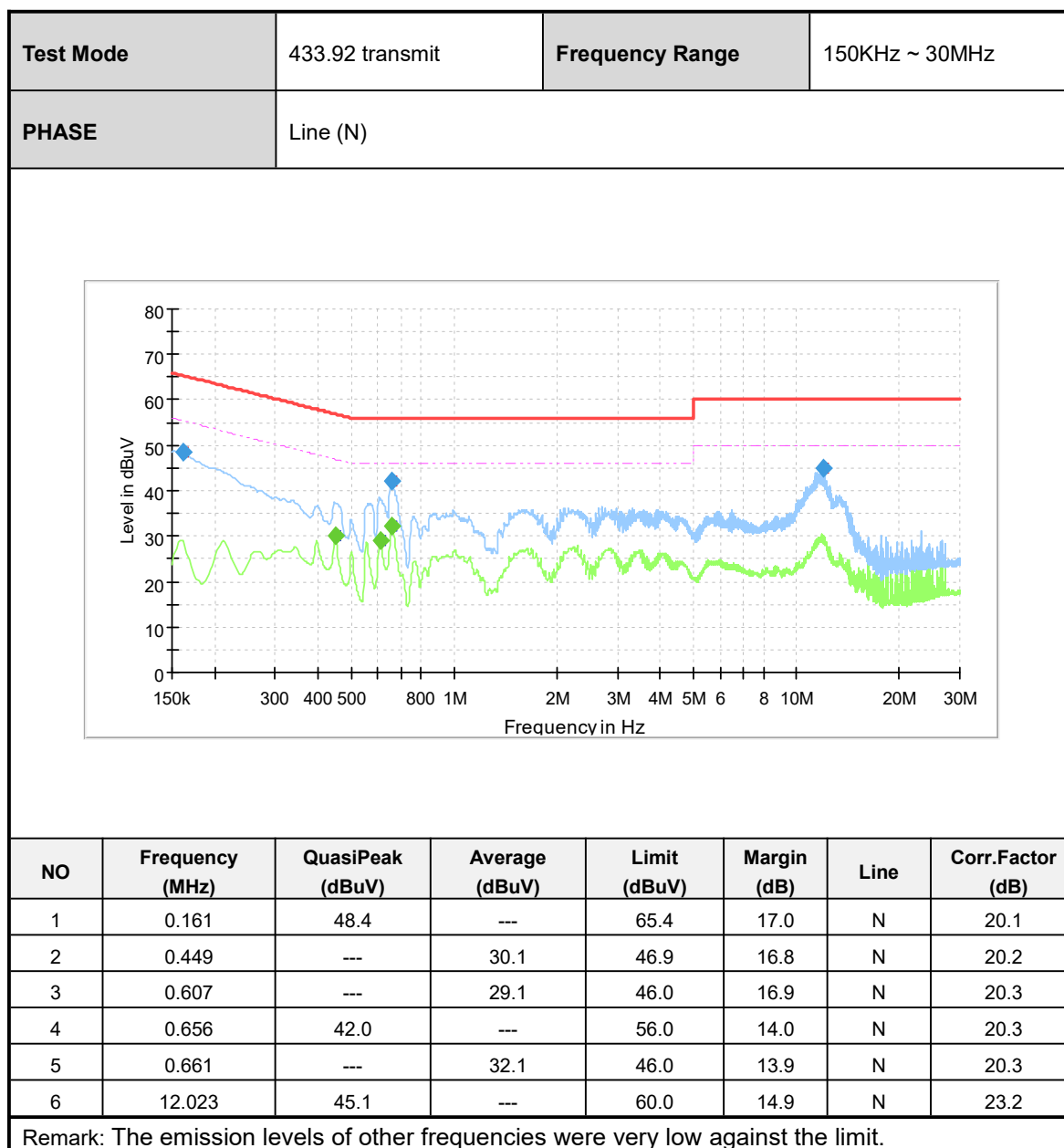




3.1.4 Test Results

CONDUCTED WORST-CASE DATA:







3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

FREQUENCIES (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

According to §15.231(b), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission (microvolts/meter)
40.66–40.70	2,250	225
70–130	1,250	125
130–174	¹ 1,250 to 3,750	¹ 125 to 375
174–260	3,750	375
260–470	¹ 3,750 to 12,500	¹ 375 to 1,250
Above 470	12,500	1,250

NOTE:

- ¹ Linear interpolations.
- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



3.2.2 TEST PROCEDURES

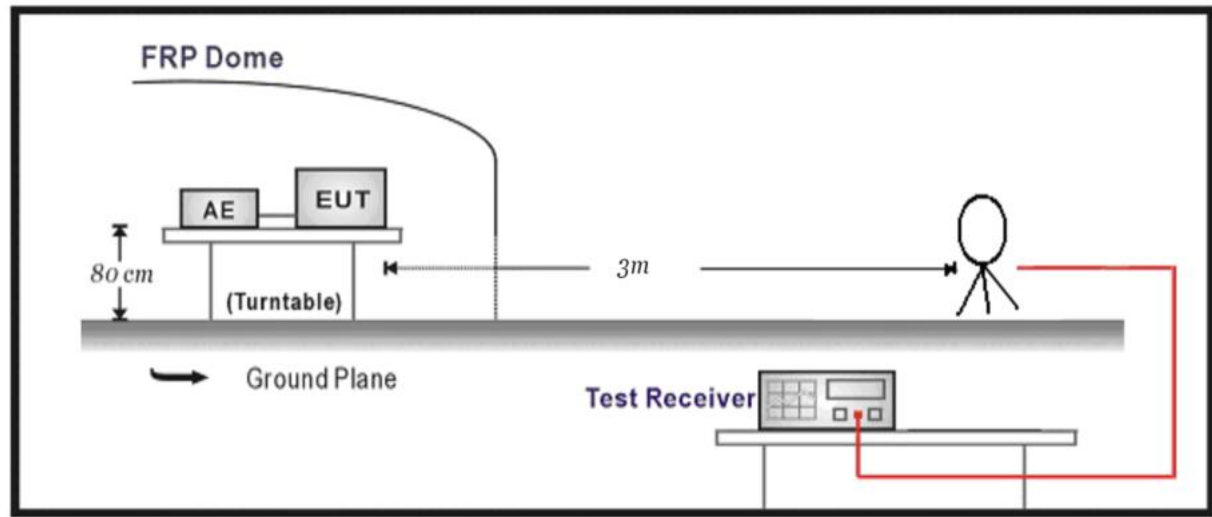
- a. The EUT was placed on the top of a rotating table 1.5 meters (above 1GHz) and 0.8 meters (below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position Y, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using new battery. The turntable was rotated to maximize the emission level.
- h. For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.

NOTE:

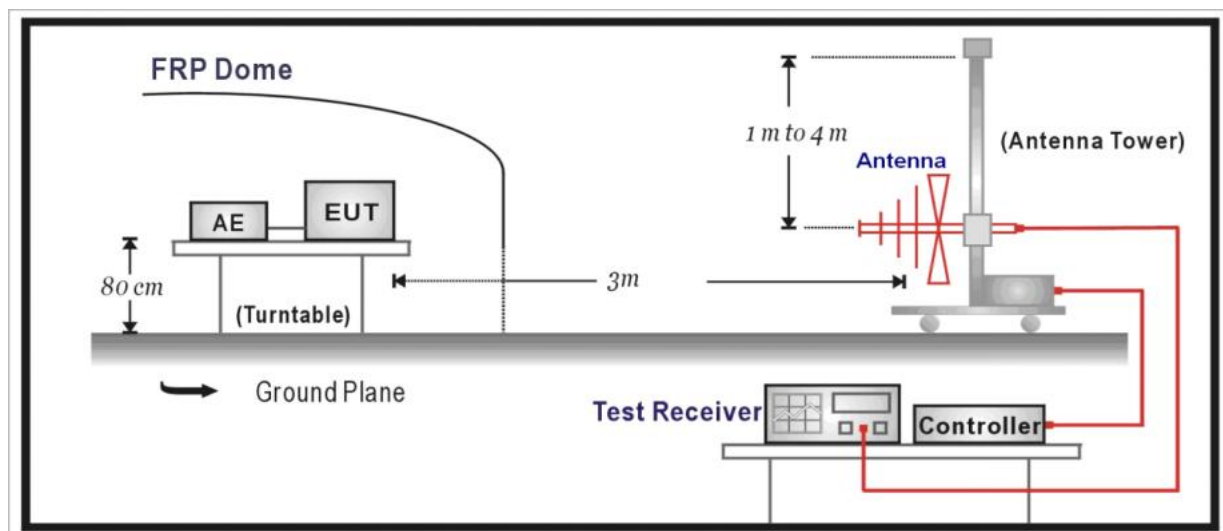
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. $\text{Emission level(dBuV/m)} = \text{Raw Value(dBuV)} + \text{Correction Factor(dB/m)}$
4. $\text{Correction Factor(dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)}$
5. $\text{Margin value} = \text{Emission level} - \text{Limit value.}$
6. $\text{Fundamental AV value} = \text{PK Emission} + \text{AV Factor.}$

3.2.3 TEST SETUP

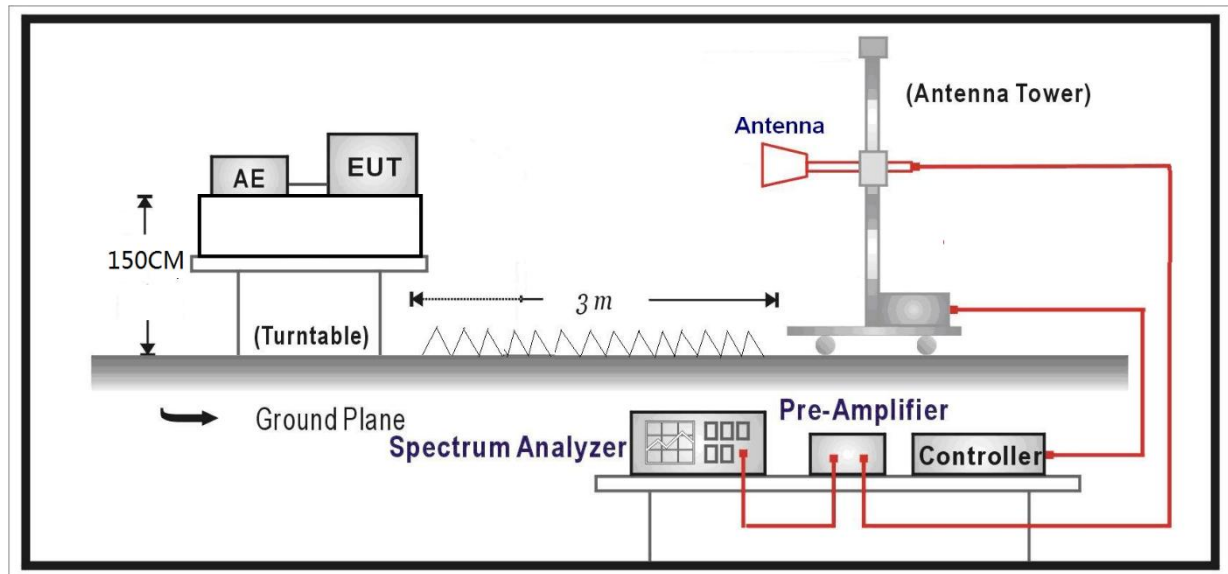
Below 30MHz test setup



Below 1GHz test setup



Note: For the actual test configuration, please refer to the attached file (Test Setup Photo).

Above 1GHz test setup

Note: For the actual test configuration, please refer to the attached file (Test Setup Photo).

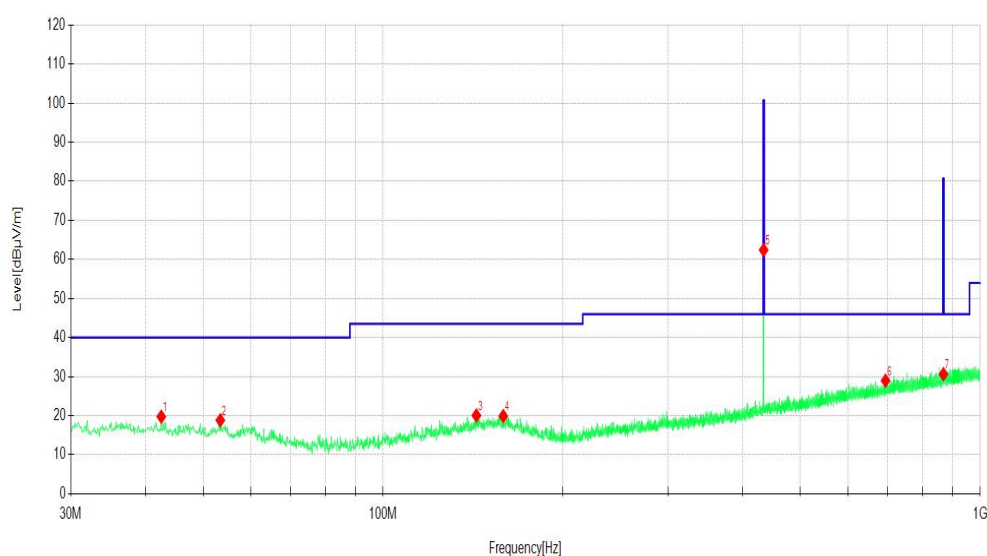


3.2.4 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

Test Mode:	433.92 transmit	Frequency Range	9kHz-1000MHz
Test Voltage	See section 2.1	Detector Function	PK
Environmental Conditions	24.2deg. C,57% RH	Tested By	Nie Wei

Horizontal



NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB/m]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]
1	42.51	0.06	19.69	19.75	40.00	20.25	100	54
2	53.38	-0.53	19.36	18.83	40.00	21.17	100	139
3	143.31	-0.39	20.46	20.07	43.50	23.43	100	126
4	158.93	-0.94	20.83	19.89	43.50	23.61	100	287
#5	433.85 PK	38.83	23.58	62.41	100.68	38.27	100	317
6	433.85 AV	/	/	62.41	80.68	18.27	100	317
7	694.13	0.74	28.24	28.98	46.00	17.02	100	291
8	867.87 PK	0.22	30.41	30.63	80.68	50.05	100	279
9	867.87 AV	/	/	30.63	60.68	30.05	100	279

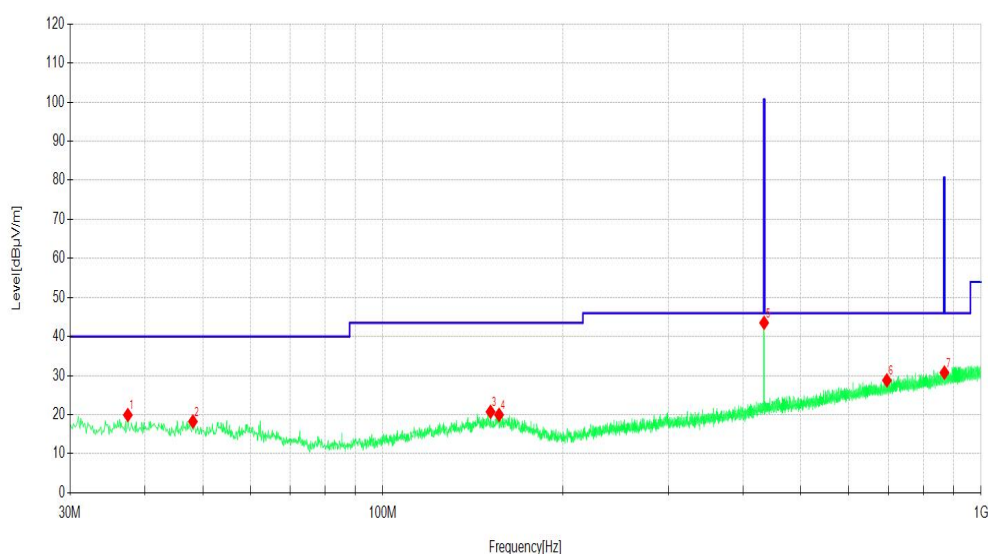
Remark:

1. The emission levels of other frequencies were greater than 20dB margin.
2. 9KHz~30MHz have been test and test data more than 20dB margin.
3. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
4. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
5. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]
6. # mean fundamental frequency.
7. Fundamental AV value =PK Emission +20*log(duty cycle)Where the duty factor is calculated from following formula:20 log (Duty cycle) = 20Log(100%)=0dB, Please see page 23 for plotted duty.



Test Mode:	433.92 transmit	Frequency Range	9kHz-1000MHz
Test Voltage	See section 2.1	Detector Function	PK
Environmental Conditions	24.2deg. C,57% RH	Tested By	Nie Wei

Vertical



NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]
1	37.47	0.23	19.69	19.92	40.00	20.08	100	60
2	48.14	-1.29	19.54	18.25	40.00	21.75	100	85
3	151.36	-0.15	20.89	20.74	43.50	22.76	100	81
4	156.40	-0.94	20.91	19.97	43.50	23.53	100	320
#5	433.85 PK	19.94	23.58	43.52	100.68	57.16	100	307
6	433.85 AV	/	/	43.52	80.68	37.16	100	307
7	695.87	0.54	28.26	28.80	46.00	17.20	100	234
8	868.45 PK	0.36	30.42	30.78	80.68	49.90	100	157
9	868.45 AV	/	/	30.78	60.68	29.90	100	157

Remark:

1. The emission levels of other frequencies were greater than 20dB margin.
2. 9KHz~30MHz have been test and test data more than 20dB margin.
3. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
4. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
5. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]
6. # mean fundamental frequency.
7. Fundamental AV value =PK Emission +20*log(duty cycle)Where the duty factor is calculated from following formula:20 log (Duty cycle) = 20Log(100%)=0dB, Please see page 23 for plotted duty.

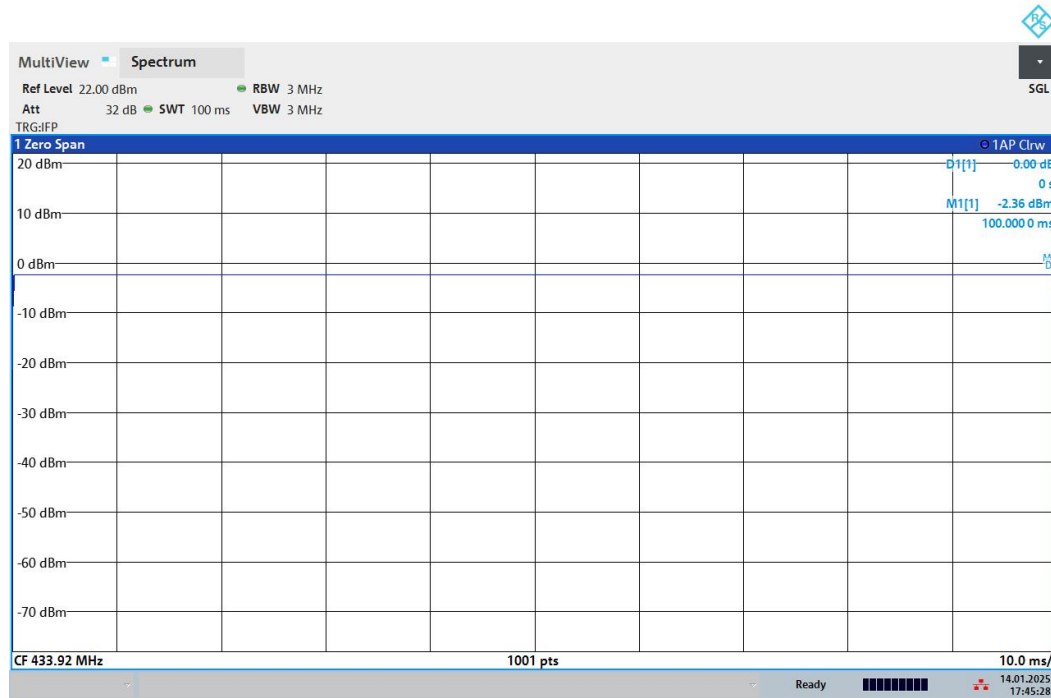


ABOVE 1GHz WORST-CASE DATA:

Channel		CH 0			Frequency		433.92MHz		
Frequency Range		1GHz~6G			Detector Function		PK/AV		
Horizontal									
NO	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	1301.76	47.14	2.93	50.07	54.00	23.93	200	189	PK
2	1301.76	40.61	2.93	43.54	74.00	10.46	200	33	AV
3	1735.68	43.55	5.03	48.58	74.00	5.42	400	21	AV
4	1735.68	43.12	5.03	48.15	54.00	25.85	300	319	PK
5	2169.60	43.79	8.18	51.97	54.00	22.03	100	39	PK
6	2169.60	36.88	8.18	45.06	74.00	8.94	200	10	AV
Vertical									
NO	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	1301.76	46.67	2.93	49.60	54.00	24.40	300	358	PK
2	1301.76	42.24	2.93	45.17	74.00	8.83	200	227	AV
3	1735.68	45.77	5.03	50.80	74.00	23.20	100	213	PK
4	1735.68	40.45	5.03	45.48	54.00	8.52	200	32	AV
5	2169.60	43.96	8.18	52.14	54.00	21.86	300	143	PK
6	2169.60	37.48	8.18	45.66	74.00	8.34	300	44	AV
Remark:									
1. The emission levels of other frequencies were greater than 20dB margin.									
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).									
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).									
4. Margin(dB) = Limit(dBuV/m) - Level (dBuV/m)									
5. AV value =PK Emission +20*log(duty cycle)Where the duty factor is calculated from following formula:20 log (Duty cycle) =20Log(100%)=0dB, Please see page 23 for plotted duty.									



Duty Cycle:



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3.3 20dB BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF 20dB BANDWIDTH MEASUREMENT

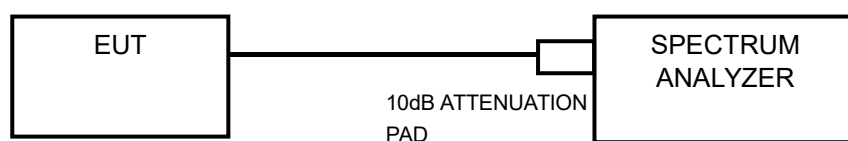
According to FCC 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

$$\text{Limit} = \text{Fundamental Frequency} \times 0.25\% = 433.92\text{MHz} \times 0.25\% = 1084.75 \text{ kHz}$$

3.3.2 TEST PROCEDURE

The spectrum analyzer was receiving the maximum emission level. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

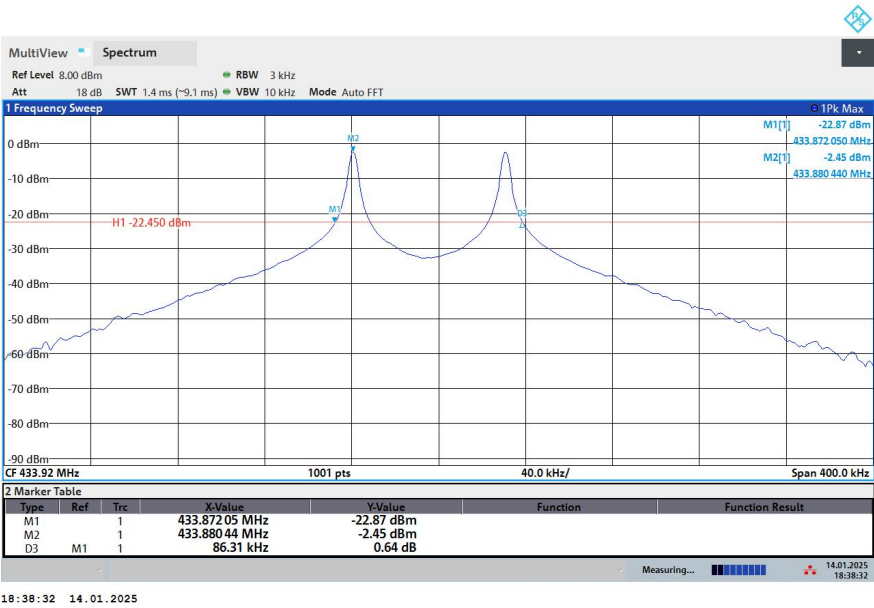
3.3.3 TEST SETUP



3.3.4 TEST RESULTS

FREQUENCY (MHz)	20dB BANDWIDTH (kHz)	MAXIMUM LIMIT (kHz)	PASS/FAIL
433.92	86.31	1084.75	PASS

Test Data:





3.4 ANTENNA REQUIREMENT

3.4.1 Limits of frequency stability

For intentional device, according to FCC 47 CFR 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. And according to FCC 47 CFR Section 15.247 (b) , if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.4.2 Antenna Anti-Replacement Construction

The antenna used for this product is FPC antenna and that no antenna other than that furnished by the responsible party shall be used with the device.

3.4.3 Antenna Gain

The maximum peak gain of the transmit antenna is 0.98 dBi.

3.5 DEACTIVATION TIME measurement

3.5.1 LIMITS OF DEACTIVATION TIME measurement

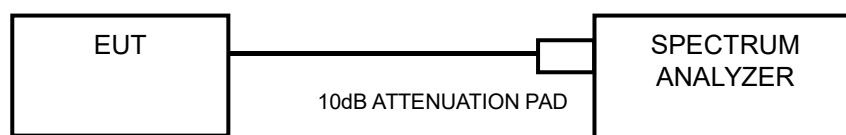
15.231 (a)(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

15.231 (a)(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

3.5.2 TEST PROCEDURE

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer set the center frequency, than set the spectrum analyzer to Zero Span for the release time reading. During the testing, the transmission duration was measured and recorded.

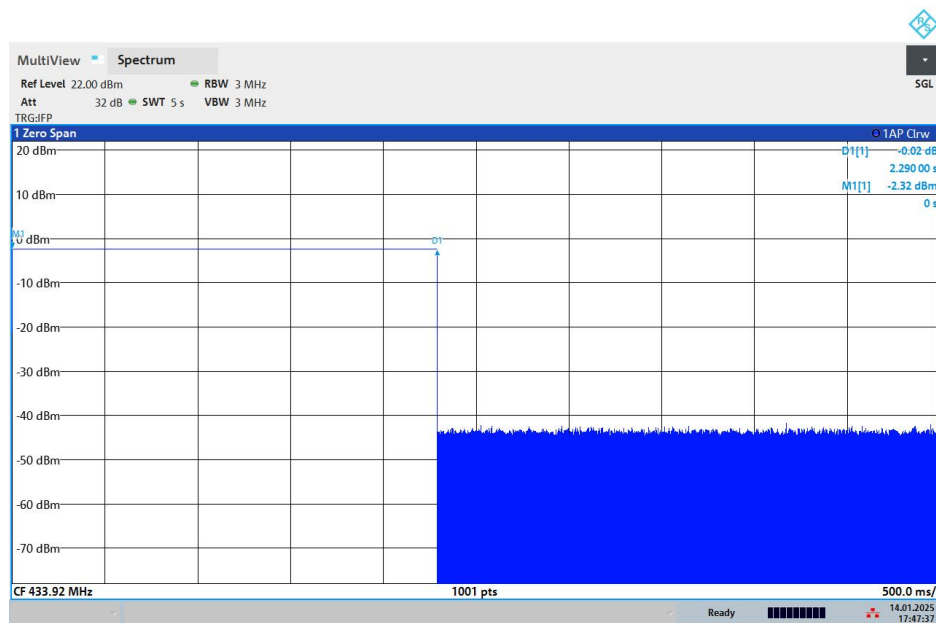
3.5.3 TEST SETUP



3.5.4 TEST RESULTS

FREQUENCY (MHz)	MEASUREMENT RESULT (sec)	MAXIMUM LIMIT (sec)	PASS/FAIL
433.92	2.29	5	PASS

The plots of test results are attached as below.



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4 PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Setup Photo).



5 PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos report and Internal Photos).

----- End of the Report -----



Important

- (1) The test report is invalid without the official stamp of CVC;
- (2) Any part photocopies of the test report are forbidden without the written permission from CVC;
- (3) The test report is invalid without the signatures of Approval and Reviewer;
- (4) The test report is invalid if altered;
- (5) Objections to the test report must be submitted to CVC within 15 days.
- (6) Generally, commission test is responsible for the tested samples only.
- (7) As for the test result “-” or “N” means “not applicable”, “/” means “not test”, “P” means “pass” and “F” means “fail”

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