

TEST REPORT

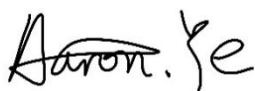
Product Name : TWO WAY RADIO
Brand Name : RETEVIS
Model : RT21H
Series Model : RT21
Applicant : Shenzhen Retevis Technology Co., Ltd.
7/F, 13-C, Zhonghaixin Science&Technology Park, No.12
Address : Ganli 6th Road, Jihua Street, Longgang District, Shenzhen,
China
Manufacturer : Shenzhen Retevis Technology Co., Ltd.
7/F, 13-C, Zhonghaixin Science&Technology Park, No.12
Address : Ganli 6th Road, Jihua Street, Longgang District, Shenzhen,
China
Standard(s) : **FCC CFR 47 PART 95**
Date of Receipt : October 29, 2025
Date of Test : October 29, 2025 ~ November 13, 2025
Issued Date : November 13, 2025

Issued By:**Guangdong Asia Hongke Test Technology Limited**

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Reviewed by:

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Allen Wang



Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

Guangdong Asia Hongke Test Technology Limited

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China.



Report Revise Record

Report Version	Issued Date	Notes
M1	November 13, 2025	Initial Release



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1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	: TWO WAY RADIO
Test Model	: RT21H
Additional Model No.	: RT21
Model Declaration	: PCB board, structure and internal of these models are same except for with or without built -in screen.
Ratings	: Input: DC 5V, 1000mA DC 3.7V by Rechargeable Li-ion Battery, 1200mAh
Hardware Version	: 01V01C
Software Version	: V1.0
FRS	:
Frequency Range	: 462.5500MHz~462.7250MHz (2.0W)
Channel Number	: 15 Channels
Test Channel	: Channel 1, 2, 4, 12
Channel Spacing	: 12.5KHz
Modulation Type	: FM
Emission Type	: F3E
Rate Power	: It was fixed by the manufacturer, any individual can't arbitrarily change it
Antenna Description	: External Antenna, 1.40dBi(Max.)

Note: For a more detailed antenna description, please refer to the antenna specifications or the antenna report provided by the customer. *The manufacturer's Minimum rated output power is 0.5W.*

1.2. Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate
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1.3. External I/O Cable

I/O Port Description	Quantity	Cable
Type-C USB Port	1	N/A
Headphone Port	1	N/A

1.4. Description of Test Facility

Test Laboratory:

Guangdong Asia Hongke Test Technology Limited

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

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

FCC-Registration No.: 251906 Designation Number: CN1376

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165

The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

The sites are constructed in conformance with the requirements of ANSI C63.4 (2014) and CISPR Publication 22.

1.5. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4

“Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the Guangdong Asia Hongke quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6. Measurement Uncertainty

Test Item	Uncertainty	Note
Frequency error	30 Hz	(1)
Transmitter power conducted	0.62 dB	(1)
Transmitter power Radiated	2.67 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.88 dB	(1)
Conducted Emission 9KHz-30MHz	1.63 dB	(1)
Radiated spurious emission 30~1000MHz	4.65 dB	(1)
Radiated spurious emission 1~18GHz	3.89 dB	(1)
Radiated spurious emission 18-40GHz	3.90 dB	(1)
Occupied Bandwidth	N/A	N/A
Emission Mask	N/A	N/A
Modulation Characteristic	N/A	N/A
Transmitter Frequency Behavior	N/A	N/A

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

1.7. Description of Test Modes

The EUT has been tested under typical operating condition. As, test modes selected as below by the technical parameters of the EUT:

Operation Mode	Modulation	Channel Separation	Condition
TM1	FM	12.5KHz	TX

Frequency list:

Channel	Frequency(MHz)	Type	Power
1	462.5625	FRS	2.0W
2	462.5875	FRS	
3	462.6125	FRS	
4	462.6375	FRS	
5	462.6625	FRS	
6	462.6875	FRS	
7	462.7125	FRS	
8	462.5500	FRS	2.0W
9	462.5750	FRS	
10	462.6000	FRS	
11	462.6250	FRS	
12	462.6500	FRS	
13	462.6750	FRS	
14	462.7000	FRS	
15	462.7250	FRS	

Note1: In section 15.31(m), regards to the operating frequency range less than 1MHz, only one point centered in the frequency range of operation selected to measure.

Note2: The line display in grey was the channel selected for test 462.6375MHz and 462.6500MHz. The tests for frequencies 462.5625MHz and 462.5875MHz are manufacturer's requirements.

2. TEST METHODOLOGY

2.1. TEST STANDARDS

The tests were performed according to following standards:

[FCC Rules Part 95](#): PERSONAL RADIO SERVICES.

[ANSI/TIA-603-E-2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[FCC Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

[ANSI C63.26: 2015](#): American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

[ANSI C63.4: 2014](#): American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

2.2. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.3. EUT Exercise

The EUT has been tested under typical operating condition and The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.4. General Test Procedures

2.4.1 Conducted Emissions

N/A

2.4.2 Radiated Emissions

The EUT is placed on a turntable, which is directly placed on the ground. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10-2013

2.5. Test Sample

The application provides 1 samples to meet requirement;

Sample Number	Description
Sample 1	continuous transmit

3. SYSTEM TEST CONFIGURATION

3.1. Justification

The system was configured for testing in a continuous transmits condition.

3.2. EUT Exercise Software

N/ A

3.3. Special Accessories

N/ A

3.4. Block Diagram/Schematics

Please refer to the related document

3.5. Equipment Modifications

Guangdong Asia Hongke Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6. Test Setup

Please refer to the test setup photo.

4. SUMMARY OF TEST RESULTS

Applied Standard: FCC Part 95				
FCC Rules	Description of Test	Test Sample	Result	Remark
FCC Part 2.1046 FCC Part 95.567	Maximum Transmitter Power	Sample 1	Compliant	Note 1
FCC Part 2.1047 FCC Part 95.575	Modulation Characteristic	Sample 1	Compliant	Note 1
FCC Part 2.1049 FCC Part 95.573 FCC Part 95.579	Occupied Bandwidth and Emission Mask	Sample 1	Compliant	Note 1
FCC Part 2.1053 FCC Part 95.579	Radiated Spurious Emission	Sample 1	Compliant	Note 1
FCC Part 2.1055 (d) FCC Part 95.565	Frequency Stability	Sample 1	Compliant	Note 1
FCC Part 2.1093	RF Exposure	Sample 1	Compliant	Note 2
FCC Part 95.587	Antenna Requirements	Sample 1	Compliant	Note 1

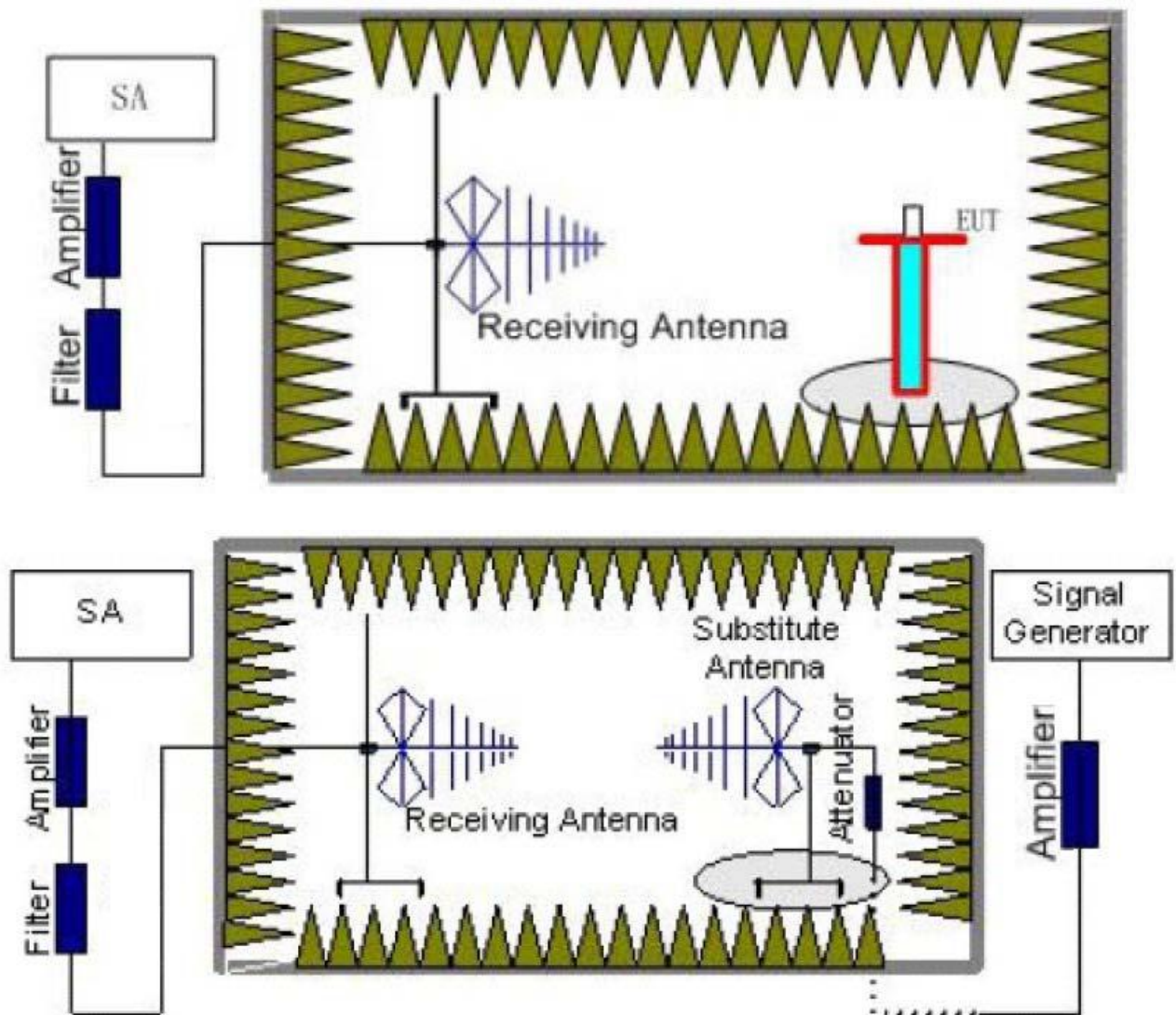
Remark:

1. Note 1 – Test results inside test report;
2. Note 2 – Test results in other test report (SAR Report);

5. MEASUREMENT RESULTS

5.1. Maximum Transmitter Power

5.1.1 Block Diagram of Test Setup



5.1.2 Limit

According to FCC Part 95.567:

Each FRS transmitter type must be designed such that the effective radiated power (ERP) on channels 8 through 14 does not exceed 0.5 Watts and the ERP on channels 1 through 7 and 15 through 22 does not exceed 2.0 Watts.

5.1.3 Test Procedure

1. EUT was placed on a 1.5meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all test transmit frequencies were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, and the maximum value of the receiver

should be recorded as (P_r).

4. The EUT shall be replaced by a substitution antenna. In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier may be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test.
The measurement results are obtained as described below:
 $\text{Power (EIRP)} = P_{Mea} + P_{Ag} - P_{cl} + G_a$
6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$.

5.1.4 Test Results

Temperature	23.5°C	Humidity	53.7%
Test Engineer	Aalen Ye	Test Voltage	Normal Voltage

Test Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain (dBi)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	ERP (W)	Polarization	Limit (W)
462.5625	-8.01	2.08	7.69	2.15	34.59	32.19	1.6558	V	2.0
462.5625	-8.10	2.08	7.69	2.15	34.59	32.1	1.6218	H	2.0
462.5875	-8.97	2.08	7.69	2.15	34.59	31.23	1.3274	V	2.0
462.5875	-8.04	2.08	7.69	2.15	34.59	32.16	1.6444	H	2.0
462.6375	-8.08	2.08	7.69	2.15	34.59	32.12	1.6293	V	2.0
462.6375	-8.14	2.08	7.69	2.15	34.59	32.06	1.6069	H	2.0
462.6500	-8.03	2.08	7.69	2.15	34.59	32.17	1.6482	V	2.0
462.6500	-8.05	2.08	7.69	2.15	34.59	32.15	1.6406	H	2.0

Remark:

1. $\text{EIRP} = P_{Mea}(\text{dBm}) + P_{Ag}(\text{dB}) - P_{cl}(\text{dB}) + G_a(\text{dBi})$
2. $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$ as EIRP by subtracting the gain of the dipole.
3. The field strength of radiation emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The data show in this report only with the worst case setup. After exploratory measurement the worst case of Z axis and receiver antenna at vertical polarization was reported.

5.2. Occupied Bandwidth and Emission Mask

5.2.1 Limit

According to FCC 95.573:

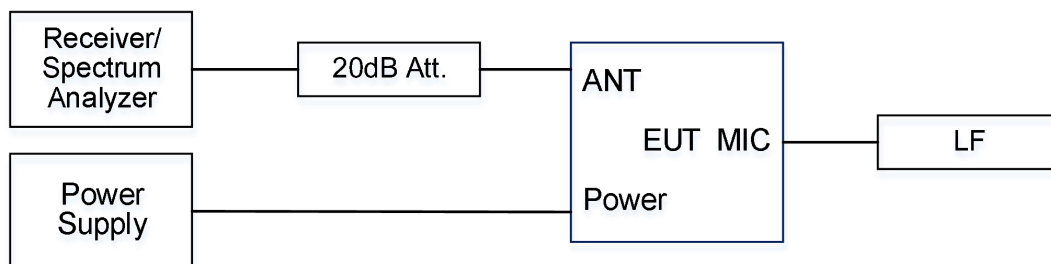
Each FRS transmitter type must be designed such that the occupied bandwidth does not exceed 12.5kHz.

According to FCC 95.579:

Attenuation requirements. The power of unwanted emissions must be attenuated below the carrier power output in Watts (P) by at least:

- (1) 25 dB (decibels) in the frequency band 6.25 kHz to 12.5 kHz removed from the channel center frequency.
- (2) 35 dB in the frequency band 12.5 kHz to 31.25 kHz removed from the channel center frequency.
- (3) $43 + 10 \log (P)$ dB in any frequency band removed from the channel center frequency by more than 31.25 kHz.

5.2.2 Block Diagram of Test Setup



5.2.3 Test Procedure

1. The EUT was modulated by 2.5 KHz Sine wave audio signal; the level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation. Rated system deviation is 2.5 kHz (12.5 kHz channel spacing) and 5 kHz (25 kHz channel spacing).
2. Set SPA Center Frequency = fundamental frequency, RBW=300Hz, VBW= 3 KHz, span =50 KHz.
3. Set SPA Max hold. Mark peak, Set 99% Occupied Bandwidth and 26dB Occupied Bandwidth.

5.2.4 Test Results

Temperature	23.5°C	Humidity	54.1%
Test Engineer	Aalen Ye	Test Voltage	Normal Voltage

Occupied Bandwidth:

Emission Type	Frequency (MHz)	99% OBW (kHz)	26dB bandwidth (kHz)	Limit (KHz)	Result
F3E	462.5625	6.720	8.945	12.5	Pass
F3E	462.5875	6.617	9.194	12.5	Pass
F3E	462.6375	6.590	8.988	12.5	Pass
F3E	462.6500	6.509	9.713	12.5	Pass

Emission Designator

Per CFR 47 §2.201& §2.202, $BW = 2M + 2D$ for FM Mode (Channel Spacing: 12.5 kHz)

Emission Designator 11K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation.

$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} = 11K0$

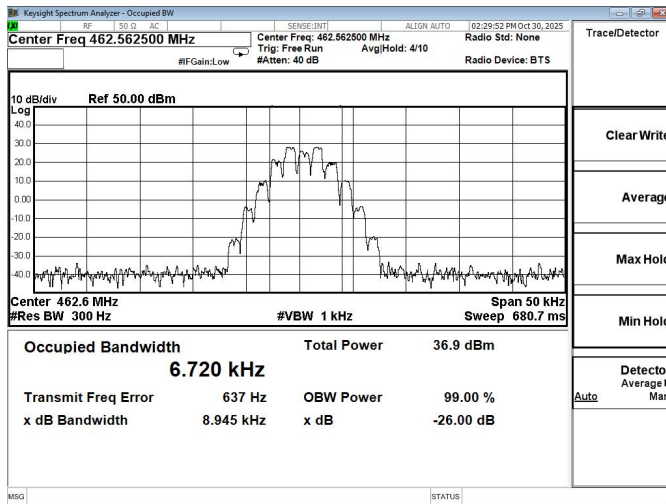
F3E portion of the designator represents an FM voice transmission

Therefore, the entire designator for 12.5 kHz channel spacing FM mode is 11K0F3E.

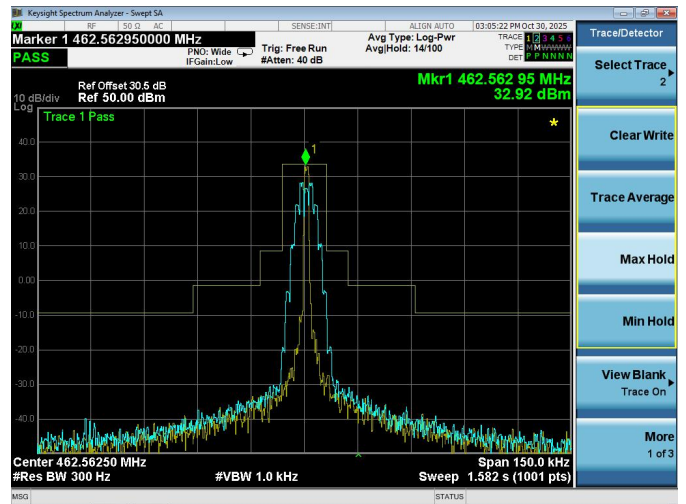
Please refer to following page.

Test Plot of Occupied Bandwidth and Emission Mask

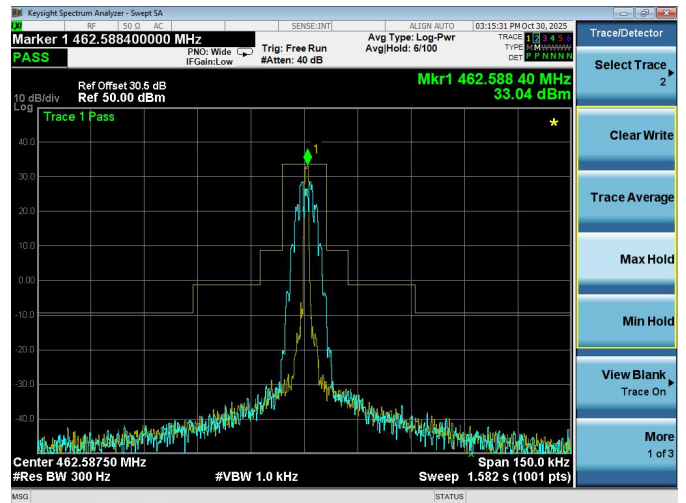
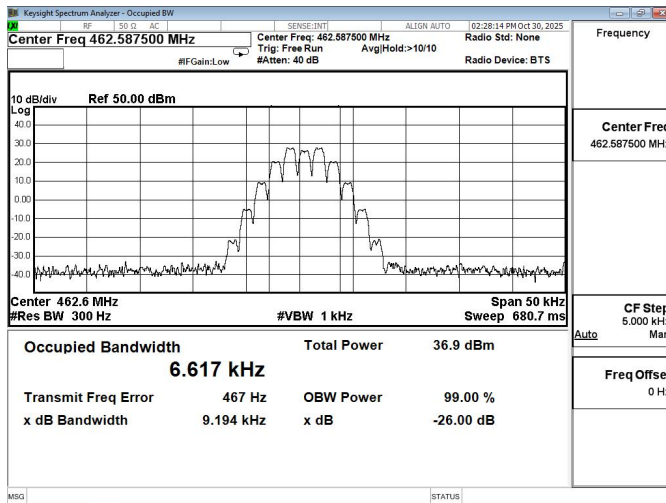
Occupied Bandwidth



Emission Mask



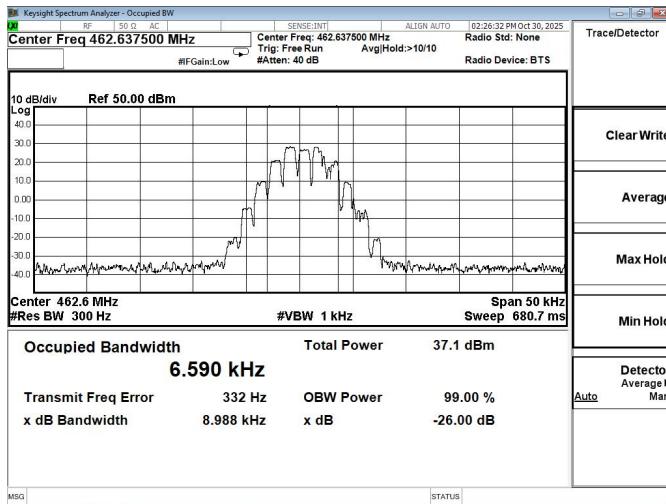
Channel 1: 462.5625MHz



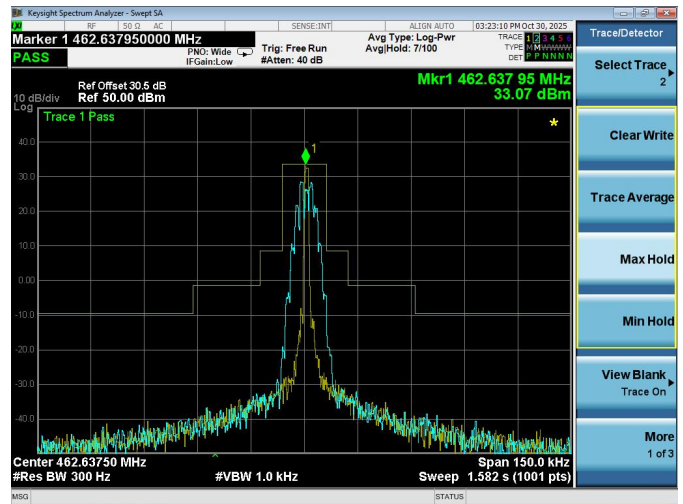
Channel 2: 462.5875MHz

Test Plot of Occupied Bandwidth and Emission Mask

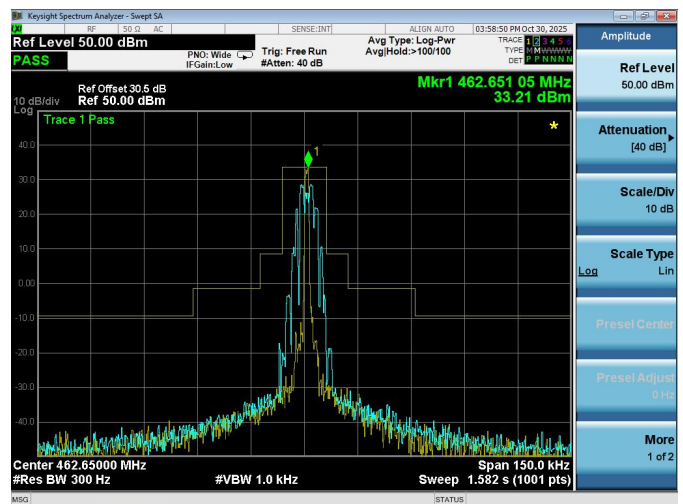
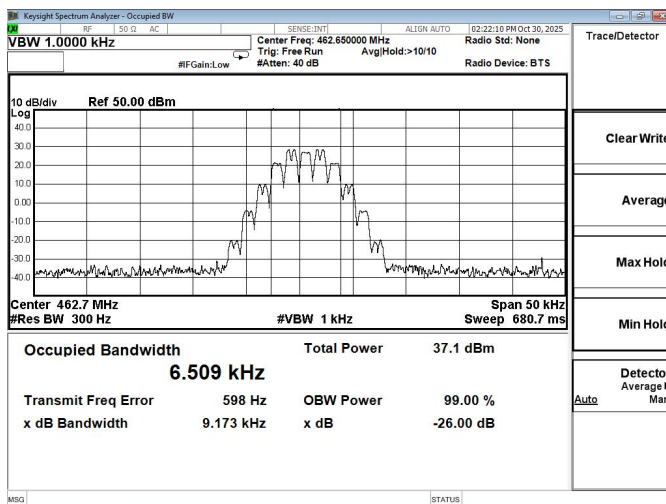
Occupied Bandwidth



Emission Mask



Channel 4: 462.6375MHz



Channel 12: 462.6500MHz

5.3. Modulation Characteristic

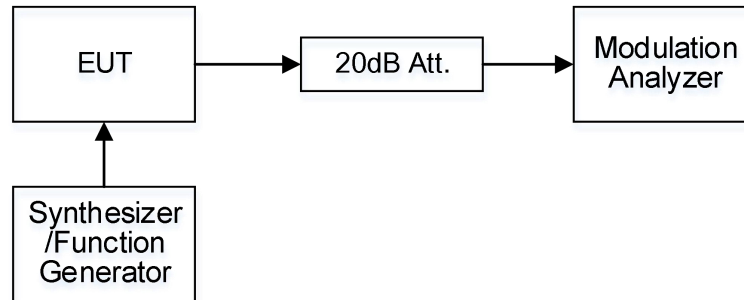
5.3.1 Limit

According to CFR47 section 2.1047(a), for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

According to FCC 95.575:

Each FRS transmitter type must be designed such that the peak frequency deviation does not exceed 2.5 kHz, and the highest audio frequency contributing substantially to modulation must not exceed 3.125 kHz.

5.3.2 Block Diagram of Test Setup



5.3.3 Test Procedure

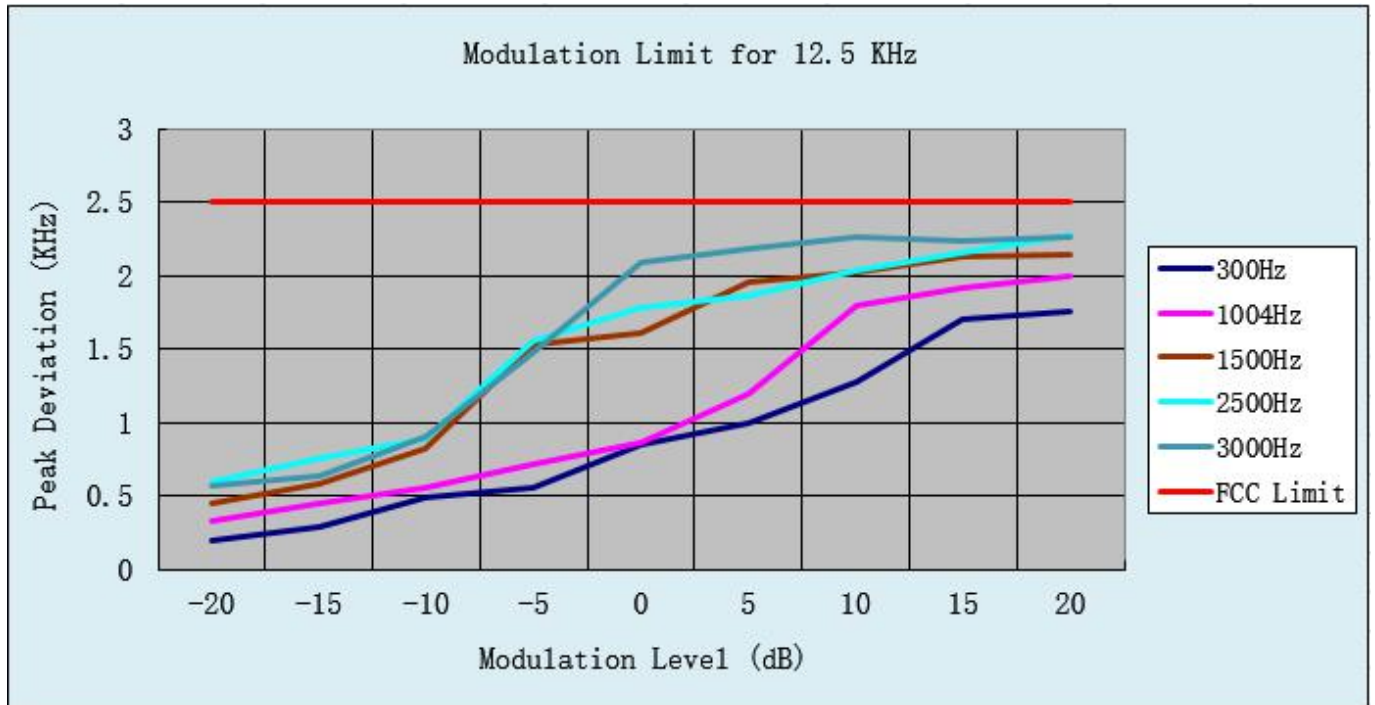
According to ANSI/TIA-603-E-2016

5.3.4 Test Results

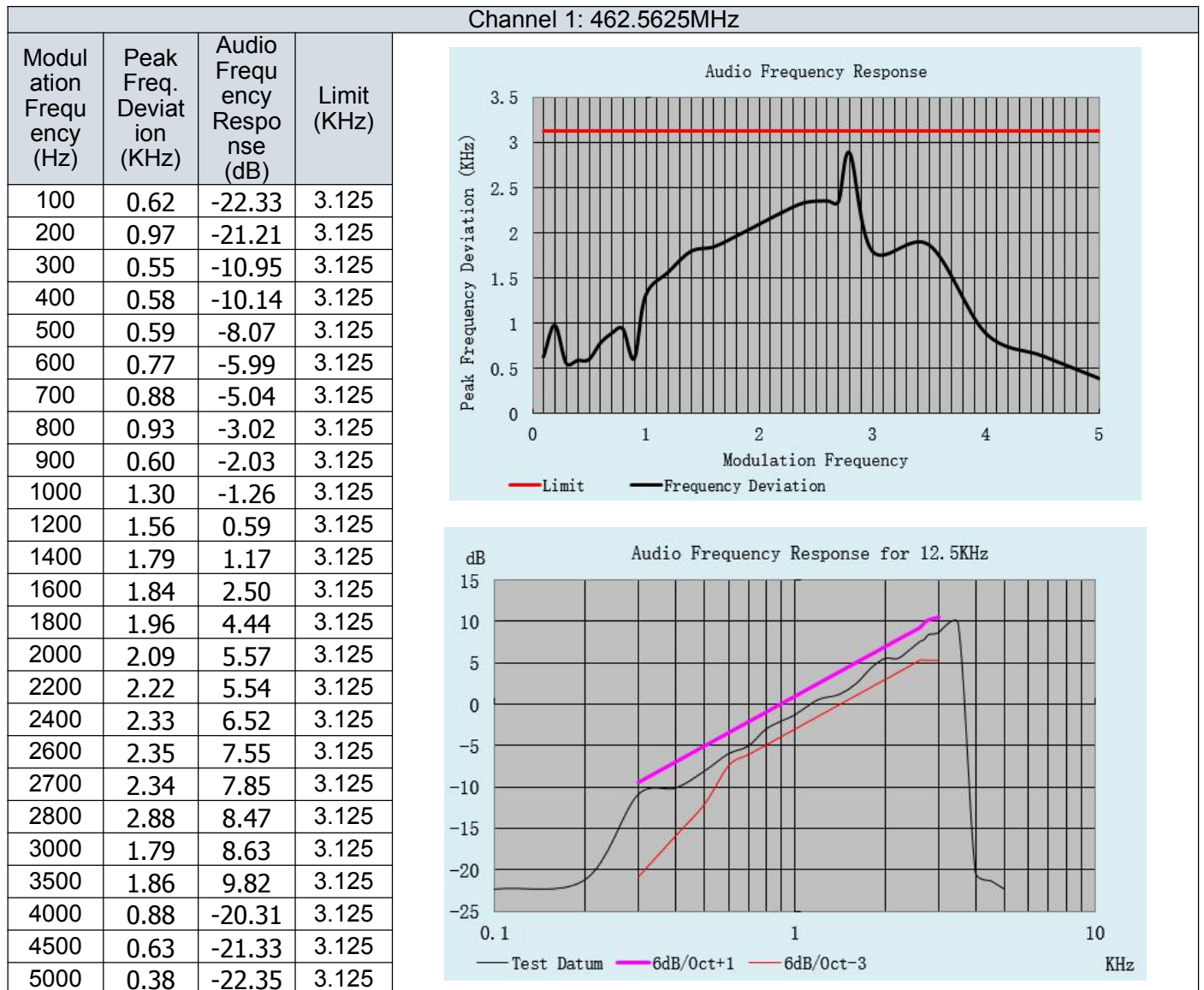
Temperature	23.3℃	Humidity	53.4%
Test Engineer	Aalen Ye	Test Voltage	Normal Voltage

Modulation Limit:

Channel 1: 462.5625MHz					
Modulation Level (dB)	Peak Freq. Deviation At 300Hz (KHz)	Peak Freq. Deviation At 1004Hz (KHz)	Peak Freq. Deviation At 1500Hz (KHz)	Peak Freq. Deviation At 2500Hz (KHz)	Peak Freq. Deviation At 3000Hz (KHz)
-20	0.20	0.33	0.45	0.60	0.57
-15	0.29	0.45	0.58	0.75	0.64
-10	0.49	0.56	0.82	0.89	0.90
-5	0.56	0.72	1.53	1.55	1.47
0	0.85	0.86	1.61	1.78	2.09
+5	0.99	1.19	1.95	1.86	2.18
+10	1.27	1.80	2.02	2.04	2.26
+15	1.70	1.92	2.13	2.16	2.23
+20	1.76	2.00	2.14	2.28	2.26



Audio Frequency Response:



Note: All the modes had been tested, but only the worst data recorded in the report.

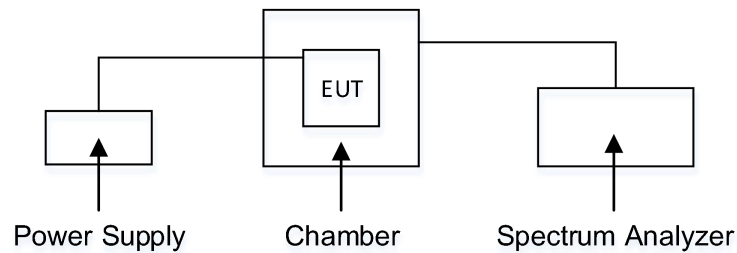
5.4. Frequency Stability

5.4.1 Limit

According to FCC 95.565

Each FRS transmitter type must be designed such that the carrier frequencies remain within ± 2.5 parts-per-million of the channel center frequencies specified in §95.563 during normal operating conditions.

5.4.2 Block Diagram of Test Setup



5.4.3 Test Procedure

The EUT was set in the climate chamber and connected to an external DC power supply. The RF output was directly connected to Spectrum Analyzer. The coupling loss of the additional cables was recorded and taken in account for all the measurements. After temperature stabilization (approx. 20 min for each stage), the frequency for the lower, the middle and the highest frequency range was recorded. For Frequency stability Vs. Voltage the EUT was connected to a DC power supply and the voltage was adjusted in the required ranges. The result was recorded.

5.4.4 Test Results

Temperature	22.6°C	Humidity	52.9%
Test Engineer	Aalen Ye	Test Voltage	Normal Voltage

Reference Frequency: 462.5625MHz					
Voltage (V)	Temperature (°C)	Frequency error (Hz)	Frequency Tolerance (%)	Limit (%)	Result
NV	-30	328	0.000071	0.00025%	Pass
	-20	425	0.000092		
	-10	442	0.000096		
	0	275	0.000059		
	10	491	0.000106		
	20	255	0.000055		
	30	300	0.000065		
	40	377	0.000081		
	50	208	0.000045		
LV	25	276	0.000060	0.00025%	Pass
HV	25	396	0.000086		

Reference Frequency: 462.5875MHz					
Voltage (V)	Temperature (°C)	Frequency error (Hz)	Frequency Tolerance (%)	Limit (%)	Result
NV	-30	321	0.000069	0.00025%	Pass
	-20	426	0.000092		
	-10	433	0.000094		
	0	280	0.000061		
	10	485	0.000105		
	20	250	0.000054		
	30	308	0.000067		
	40	378	0.000082		
	50	212	0.000046		
LV	25	287	0.000062	0.00025%	Pass
HV	25	396	0.000086		

Reference Frequency: 462.6375MHz					
Voltage (V)	Temperature (°C)	Frequency error (Hz)	Frequency Tolerance (%)	Limit (%)	Result
NV	-30	318	0.000069	0.00025%	Pass
	-20	426	0.000092		
	-10	435	0.000094		
	0	274	0.000059		
	10	489	0.000106		
	20	257	0.000056		
	30	304	0.000066		
	40	378	0.000082		
	50	215	0.000046		
LV	25	282	0.000061	0.00025%	Pass
HV	25	395	0.000085		

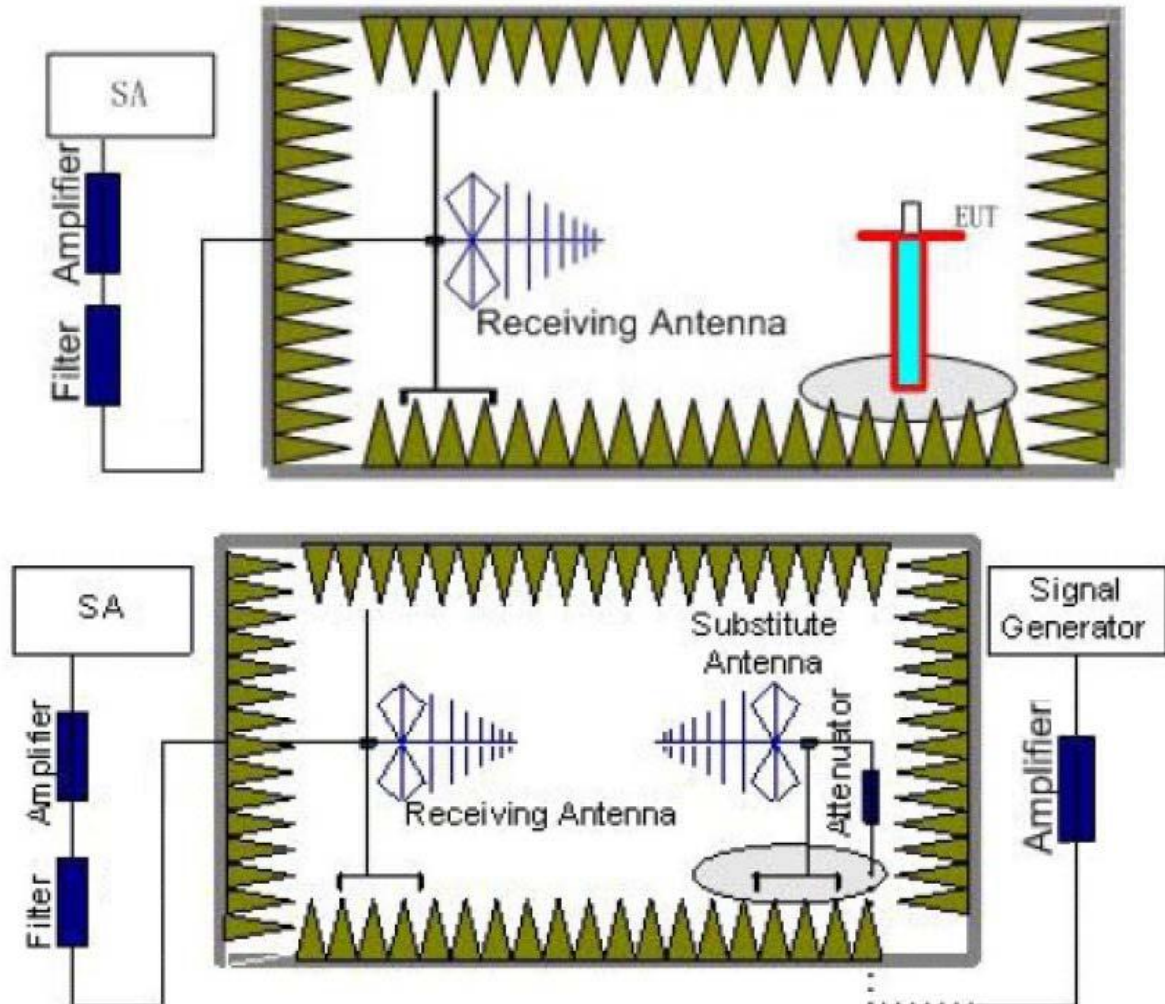
Reference Frequency: 462.6500MHz					
Voltage (V)	Temperature (°C)	Frequency error (Hz)	Frequency Tolerance (%)	Limit (%)	Result
NV	-30	322	0.000070	0.00025%	Pass
	-20	422	0.000091		
	-10	438	0.000095		
	0	281	0.000061		
	10	493	0.000107		
	20	253	0.000055		
	30	302	0.000065		
	40	373	0.000081		
	50	207	0.000045		
LV	25	272	0.000059	0.00025%	Pass
HV	25	402	0.000087		

5.5. Transmitter Radiated Spurious Emission

5.5.1 Limit

According to FCC section 95.579, At least $43 + 10 \log (\text{Transmit Power})$ dB on any frequency band removed from the channel center frequency by more than 31.25 kHz.

5.5.2 Block Diagram of Test Setup



5.5.3 Test Procedure

- EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all test transmit frequencies were measured with peak detector.
- A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum 100 kHz below 1GHz and 1MHz above 1GHz, Sweep from 30MHz to the 10th harmonic of the fundamental frequency; and recorded the level of the concerned spurious emission point as (P_r).
- The EUT then replaced by a substitution antenna. In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the

frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization. The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} - P_{cl} + G_a$$

Where;

P_{Mea} is the recorded signal generator level

P_{cl} is the cable loss connect between instruments

G_a Substitution Antenna Gain

- e. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dBi) and known input power.
- f. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.
- g. Test site anechoic chamber refer to ANSI C63.10.

5.5.4 Test Results

Temperature	24.6°C	Humidity	52.4%
Test Engineer	Aalen Ye	Test Voltage	Normal Voltage

Test Frequency (MHz)	Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Distance (m)	G_a Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Pol.
462.5625	935.34	-24.24	3.54	3.00	12.87	-14.91	-13	1.91	V
	1402.84	-34.15	4.21	3.00	15.48	-22.88	-13	9.88	V
	1870.27	-32.30	4.52	3.00	17.32	-19.50	-13	6.50	V
	2338.40	-48.15	5.24	3.00	18.76	-34.63	-13	21.63	V
462.5625	935.38	-26.35	3.54	3.00	12.87	-17.02	-13	4.02	H
	1402.81	-37.11	4.21	3.00	15.48	-25.84	-13	12.84	H
	1870.27	-39.12	4.52	3.00	17.32	-26.32	-13	13.32	H
	2338.45	-43.48	5.24	3.00	18.76	-29.96	-13	16.96	H

Test Frequency (MHz)	Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Distance (m)	G_a Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Pol.
462.6500	935.52	-24.26	3.54	3.00	12.87	-14.93	-13	1.93	V
	1402.87	-34.14	4.21	3.00	15.48	-22.87	-13	9.87	V
	1870.30	-32.28	4.52	3.00	17.32	-19.48	-13	6.48	V
	2338.39	-48.08	5.24	3.00	18.76	-34.56	-13	21.56	V
462.6500	935.46	-26.28	3.54	3.00	12.87	-16.95	-13	3.95	H
	1402.87	-37.16	4.21	3.00	15.48	-25.89	-13	12.89	H
	1870.32	-39.15	4.52	3.00	17.32	-26.35	-13	13.35	H
	2338.47	-43.45	5.24	3.00	18.76	-29.93	-13	16.93	H

Remark:

1. $EIRP = P_{Mea}(\text{dBm}) - P_{cl}(\text{dB}) + G_a(\text{dBi})$
2. $\text{Margin} = \text{Limit} - EIRP$
3. The Report only recorded the worst result (462.5625MHz and 462.6500MHz).
4. The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency, and only recorded worst spurious emissions.

5.6. Antenna Requirements

Excerpt from § 95.587 FRS additional requirements

5.6.1 Antenna Requirements

Antenna. The antenna of each FRS transmitter type must meet the following requirements.

- (1) The antenna must be a non-removable integral part of the FRS transmitter type.
- (2) The gain of the antenna must not exceed that of a half-wave dipole antenna.
- (3) The antenna must be designed such that the electric field of the emitted waves is vertically polarized when the unit is operated in the normal orientation.

5.6.2 Result

Compliant

EUT has non-removable Internal Antenna arrangement and the antenna gain is 1.40dBi(-0.74dBd), fulfill the requirement of this section. Detail refer to the EUT photo and test report.

5. SUMMARY OF TEST EQUIPMENT

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	EMI Measuring Receiver	R&S	ESR	101160	2025.09.23	2026.09.22
2	Spectrum Analyzer	R&S	FSV40	101470	2025.09.23	2026.09.22
3	Low Noise Pre Amplifier	SCHWARZBECK	BBV 9745	00282	2025.09.23	2026.09.22
4	Low Noise Pre Amplifier	CESHENG	CSKJLNA231016A	CSKJLNA231016A	2025.09.23	2026.09.22
5	Passive Loop	ETS	6512	00165355	2025.09.23	2026.09.22
6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9168	01434	2025.09.23	2026.09.22
7	Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	452	2025.09.23	2026.09.22
8	Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA9170367	2025.09.23	2026.09.22
9	6dB Attenuator	JFW	50FPE-006	4360846-949-1	2025.09.23	2026.09.22
10	EMI Test Receiver	R&S	ESPI	100771	2025.09.23	2026.09.22
11	LISN	R&S	NNLK 8129	8130179	2025.09.23	2026.09.22
12	LISN	R&S	ESH3-Z5	892785/016	2025.09.23	2026.09.22
13	Pulse Limiter	R&S	ESH3-Z2	102789	2025.09.23	2026.09.22
14	RF Automatic Test system	TST	TSTPASS	21033016	2025.09.23	2026.09.22
15	Vector Signal Generator	Agilent	N5182A	MY50143009	2025.09.23	2026.09.22
16	Analog signal generator	Agilent	E8257	MY51554256	2025.09.23	2026.09.22
17	Spectrum Analyzer	Agilent	N9020A	MY51289843	2025.09.23	2026.09.22
18	Spectrum Analyzer	Agilent	N9020A	MY53421570	2025.09.23	2026.09.22
19	Power Sensor	Agilent	8481A	MY41097697	2025.09.23	2026.09.22
20	Wideband Radio communication tester	R&S	CMW500	1201.0002K50	2025.09.23	2026.09.22
21	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	N/A	N/A
22	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A
23	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A
24	RF Software	TST	TSTPASS	Version 2.0	N/A	N/A
25	RF Software	cesheng	WCS-WCN	Version 2024.6.20	N/A	N/A
26	temporary antenna connector(Note)	NTS	R001	N/A	N/A	N/A

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.



7. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separated files for Test Setup Photos of the EUT.

8. EXTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

9. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF REPORT-----