

TEST REPORT

Reference No..... : WTX21X04028736W-1
FCC ID : 2AU3A-DFMWT
Applicant : Good Sportsman Marketing, LLC
Address : 5250 Frye Rd, Irving, TX 75061, United States
Product Name : FireMax Walkie Talkie
Test Model. : GWP-DFMWT
Standards : FCC CFR47 Part 95
Date of Receipt sample : Apr. 27, 2021
Date of Test..... : Apr. 28, 2021 to May. 24, 2021
Date of Issue : May. 24, 2021
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

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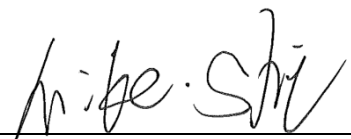
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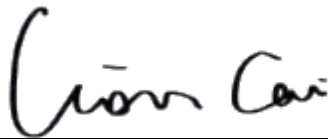
Tested by:

Reviewed By:

Approved & Authorized By:



Mike Shi / Project Engineer



Lion Cai / RF Manager



Silin Chen / Manager

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Report version

Version No.	Date of issue	Description
Rev.00	May. 24, 2021	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Good Sportsman Marketing, LLC
 Address of applicant: 5250 Frye Rd, Irving, TX 75061, United States

Manufacturer: K-Mark Industrial Limited.
 Address of manufacturer: Flat A, 7/F., Mai On Ind. Bldg 17-21 Kung Yip St., Kwai Chung Hong Kong

General Description of EUT	
Product Name:	FireMax Walkie Talkie
Trade Name	/
Model No.:	GWP-DFMWT
Adding Model(s):	/
Rated Voltage:	DC 3.7V
Power Adapter:	
Software Version:	1.3
Hardware Version:	1.0
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Frequency Range:	462.5625MHz~462.7125MHz (FRS Channel1-7) 467.5625MHz~467.7125MHz (FRS Channel 8-14) 462.5500 MHz~462.7250MHz (FRS Channel 15-22)
RF Output Power:	23.24dBm (Conducted)
Modulation:	FM
Bandwidth:	12.5kHz
Quantity of Channels:	22
Antenna Type:	Non-detachable External Antenna
Antenna Gain:	-3.5dBi

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 95: PERSONAL RADIO SERVICES

TIA/EIA 603 E March 2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.26-2015, TIA/EIA 603 E March 2016. The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory 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. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition , and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	FRS	462.6375MHz
TM2	FRS	467.6375MHz
TM3	FRS	462.6500MHz

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~55 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number

1.6 Measurement Uncertainty

Measurement uncertainty			
Parameter	Conditions	Uncertainty	
RF Output Power	Conducted	±0.42dB	
Occupied Bandwidth	Conducted	±1.5%	
Conducted Spurious Emission	Conducted	±2.17dB	
Conducted Emissions	Conducted	9-150kHz ±3.74dB	
		0.15-30MHz ±3.34dB	
		30-200MHz ±4.52dB	
Transmitter Spurious Emissions	Radiated	0.2-1GHz ±5.56dB	
		1-6GHz ±3.84dB	
		6-26GHz ±3.92dB	

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
SEMT-1075	Communication Tester	Rohde & Schwarz	CMW500	148650	2021-03-27	2022-03-26
SEMT-1063	GSM Tester	Rohde & Schwarz	CMU200	114403	2021-03-27	2022-03-26
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2021-03-27	2022-03-26
SEMT-1079	Spectrum Analyzer	Agilent	N9020A	US47140102	2021-03-27	2022-03-26
SEMT-1080	Signal Generator	Agilent	83752A	3610A01453	2021-03-27	2022-03-26
SEMT-1081	Vector Signal Generator	Agilent	N5182A	MY47070202	2021-03-27	2022-03-26
SEMT-1028	Power Divider	Weinschel	1506A	PM204	2021-03-27	2022-03-26
SEMT-1082	Power Divider	RF-Lambda	RFLT4W5M18G	14110400027	2021-03-27	2022-03-26
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2021-03-27	2022-03-26
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2021-03-27	2022-03-26
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2021-04-12	2022-04-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2021-04-12	2022-04-11
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-19	2023-03-18
SEMT-1068	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-19	2023-03-18
SEMT-1042	Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2021-04-27	2023-04-26
SEMT-1169	Pre-amplifier	Direction Systems Inc.	PAP-2640	14145-14153	2021-04-27	2022-04-26
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2021-03-27	2022-03-26
SEMT-1166	Power Limiter	Agilent	N9356B	MY45450376	2021-03-27	2022-03-26
SEMT-1076	RF Switcher	Top Precision	RCS03-A2	/	2021-03-19	2023-03-18
SEMT-1058	Communication Tester	HP	8921A	/	2021-04-12	2022-04-11
SEMT-C001	Cable	Zheng DI	LL142-07-07-10M(A)	/	/	/
SEMT-C002	Cable	Zheng DI	ZT40-2.92J-2.92J-6M	/	/	/
SEMT-C003	Cable	Zheng DI	ZT40-2.92J-2.92J-2.5M	/	/	/
SEMT-C004	Cable	Zheng DI	2M0RFC	/	/	/
SEMT-C005	Cable	Zheng DI	1M0RFC	/	/	/
SEMT-C006	Cable	Zheng DI	1M0RFC	/	/	/

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
Part 95.567 Part 2.1046(a)	Carrier Output Power(ERP)	Compliant
Part 95.573 Part 2.1049	99% Occupied Bandwidth & 26dB bandwidth	Compliant
Part 95.1779(a) Part 2.1049	Emission Mask	Compliant
Part 95.575 Part 2.1047(b)	Modulation Limit	Compliant
Part 95.1765 Part 2.1055	FRS frequency accuracy	Compliant
Part 95.579 Part 2.1053	Transmit Radiated Spurious Emission	Compliant

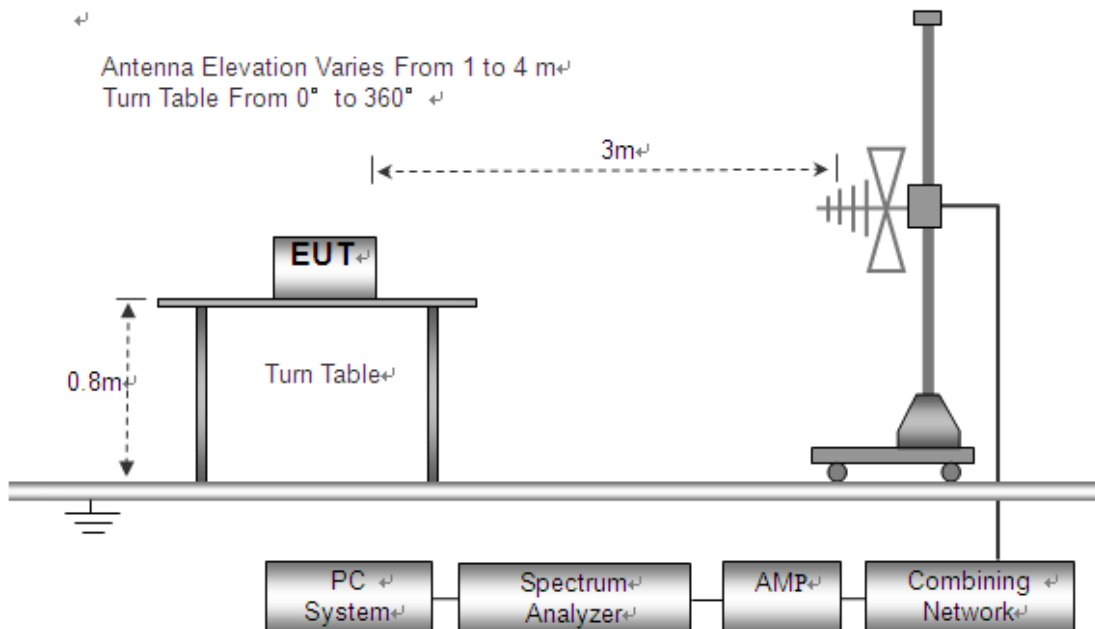
N/A: Not applicable

3. Carrier Output Power(ERP)

3.1 Standard Applicable

According to 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. According to Part 95.1767(a)(1), The transmitter output power of mobile, repeater and base stations must not exceed 50 Watts, and (a)(4), 462 MHz interstitial channels. The effective radiated power (ERP) of mobile, hand-held portable and base stations transmitting on the 462 MHz interstitial channels must not exceed 5 Watts.

3.2 Test Setup Block Diagram



3.3 Test Procedure

According to FCC Part 2 Section 2.1053 Rules, the system was tested 9KHz to 6000MHz.

30MHz ~ 1GHz	
Start Frequency.....	30 MHz
Stop Frequency.....	1000MHz
Sweep Speed.....	Auto
IF Bandwidth	120 KHz
Video Bandwidth	300KHz

Quasi-Peak Adapter Bandwidth120 KHz

Quasi-Peak Adapter ModeNormal

Resolution Bandwidth100KHz

1. Place the transmitter to be tested on the turntable in the standard test site. The transmitter is Transmitting into a non-radiating load, which is placed on the turntable.
2. The output of the antenna was connected to the measuring receiver and a peak detector was used for the measurement as indicated on the report.
3. The transmitter was switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
4. The test antenna shall be raised and Lowed through the specified range of height until the measuring receiver detects a maximum signal level.
5. The transmitter shall than be rotated through 360o in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
6. The test antenna shall be raised and Lowed again through the specified range of height until the measuring receiver detects a maximum signal level.
7. The maximum signal level detected by the measuring receiver shall be noted.
8. The measurement shall be repeated with the test antenna set to horizontal polarization.
9. Replace the antenna with a proper antenna (substitution antenna).
10. The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
11. The substitution antenna shall be connected to a calibrated signal generator.
12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and Lowed through the specified range of the height to ensure that the maximum signal is received.
14. The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
15. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16. The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
17. The radiation emission was tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.
18. The EUT was under working mode during the final qualification test and the configuration was used to represent the worst case results.

3.4 Summary of Test Results/Plots

Modulation Type	Test Channel (MHz)	Measured power (dBm)	Measured power (W)	Limit(W)	Result
FM	462.6375	23.24	0.211	≤ 5	Pass
FM	467.6375	23.15	0.207	≤ 0.5	Pass
FM	462.6500	23.24	0.211	≤ 50	Pass

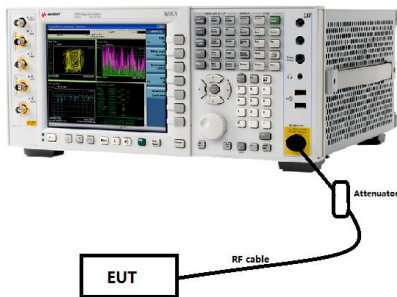
4. Occupied Bandwidth of Emission

4.1 Standard Applicable

(a) Main channels. The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz main channels (see §95.1763(a)) or any of the 467 MHz main channels (see §95.1763(c)).

(b) Interstitial channels. The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz interstitial channels (see §95.1763(b)) and is 12.5 kHz for GMRS transmitters operating on any of the 467 MHz interstitial channels (see §95.1763(d)). Each FRS transmitter type must be designed such that the occupied bandwidth does not exceed 12.5 kHz.

4.2 Test Setup Block Diagram

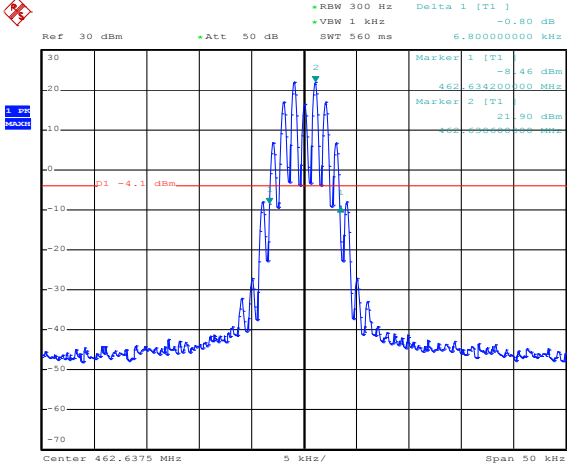
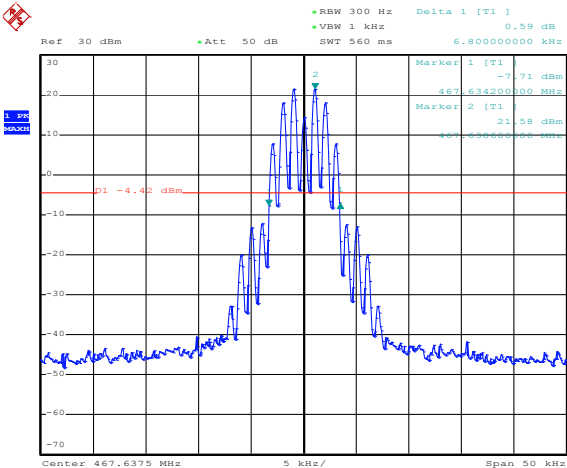
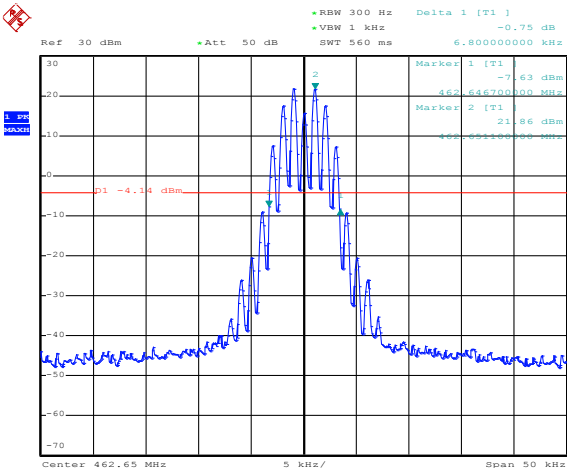


4.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and set it to any one convenient frequency within its operating range.

4.4 Summary of Test Results/Plots

Modulation Type	Test Channel (MHz)	99% Occupied Bandwidth (kHz)	26dB Down Bandwidth (kHz)	99% Limit (kHz)	Result
FM	462.6375	6.10	6.80	≤ 12.5	Pass
FM	467.6375	6.10	6.80	≤ 12.5	Pass
FM	462.6500	6.10	6.80	≤ 12.5	Pass

26dB Down Bandwidth									
462.6375MHz	 <p>Ref 30 dBm Att 50 dB RBW 300 Hz Delta 1 [T1] -0.80 dB VBW 1 kHz SWT 560 ms 6.800000000 kHz</p> <table border="1"><tr><td>Marker 1 [T1]</td><td>-2.46 dBm</td></tr><tr><td>462.634200000 MHz</td><td></td></tr><tr><td>Marker 2 [T1]</td><td>21.90 dBm</td></tr><tr><td>462.638800000 MHz</td><td></td></tr></table> <p>D1 -4.1 dBm</p> <p>Center 462.6375 MHz 5 kHz/ Span 50 kHz</p> <p>Date: 20.MAY.2021 17:33:09</p>	Marker 1 [T1]	-2.46 dBm	462.634200000 MHz		Marker 2 [T1]	21.90 dBm	462.638800000 MHz	
Marker 1 [T1]	-2.46 dBm								
462.634200000 MHz									
Marker 2 [T1]	21.90 dBm								
462.638800000 MHz									
467.6375MHz	 <p>Ref 30 dBm Att 50 dB RBW 300 Hz Delta 1 [T1] 0.59 dB VBW 1 kHz SWT 560 ms 6.800000000 kHz</p> <table border="1"><tr><td>Marker 1 [T1]</td><td>-7.71 dBm</td></tr><tr><td>467.634200000 MHz</td><td></td></tr><tr><td>Marker 2 [T1]</td><td>21.58 dBm</td></tr><tr><td>467.638800000 MHz</td><td></td></tr></table> <p>D1 -4.42 dBm</p> <p>Center 467.6375 MHz 5 kHz/ Span 50 kHz</p> <p>Date: 20.MAY.2021 17:30:09</p>	Marker 1 [T1]	-7.71 dBm	467.634200000 MHz		Marker 2 [T1]	21.58 dBm	467.638800000 MHz	
Marker 1 [T1]	-7.71 dBm								
467.634200000 MHz									
Marker 2 [T1]	21.58 dBm								
467.638800000 MHz									
462.6500MHz	 <p>Ref 30 dBm Att 50 dB RBW 300 Hz Delta 1 [T1] -0.75 dB VBW 1 kHz SWT 560 ms 6.800000000 kHz</p> <table border="1"><tr><td>Marker 1 [T1]</td><td>-7.63 dBm</td></tr><tr><td>462.646700000 MHz</td><td></td></tr><tr><td>Marker 2 [T1]</td><td>21.86 dBm</td></tr><tr><td>462.651300000 MHz</td><td></td></tr></table> <p>D1 -4.34 dBm</p> <p>Center 462.65 MHz 5 kHz/ Span 50 kHz</p> <p>Date: 20.MAY.2021 17:28:11</p>	Marker 1 [T1]	-7.63 dBm	462.646700000 MHz		Marker 2 [T1]	21.86 dBm	462.651300000 MHz	
Marker 1 [T1]	-7.63 dBm								
462.646700000 MHz									
Marker 2 [T1]	21.86 dBm								
462.651300000 MHz									

99%Occupied Bandwidth	
462.6375MHz	<p>Ref 30 dBm Att 50 dB RBW 300 Hz VBW 1 kHz Marker 1 [T1] 21.88 dBm Center 462.6375 MHz Span 50 kHz</p> <p>Date: 20.MAY.2021 17:23:52</p>
467.6375MHz	<p>Ref 30 dBm Att 50 dB RBW 300 Hz VBW 1 kHz Marker 1 [T1] 21.75 dBm Center 467.6375 MHz Span 50 kHz</p> <p>Date: 20.MAY.2021 17:24:59</p>
462.6500MHz	<p>Ref 30 dBm Att 50 dB RBW 300 Hz VBW 1 kHz Marker 1 [T1] 21.89 dBm Center 462.65 MHz Span 50 kHz</p> <p>Date: 20.MAY.2021 17:25:52</p>

5. Emission Mask Spurious

5.1 Standard Applicable

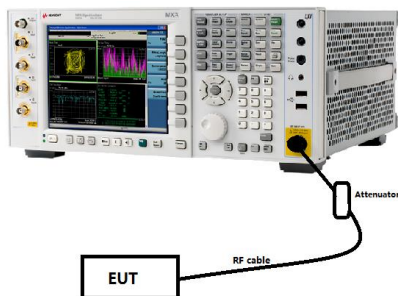
GMRS: Per § 95.1775 (b) Attenuation requirements. The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

- (1) 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.
- (2) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.
- (7) $43 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

FRS: Per § 95.579 (a) 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 Test Setup Block Diagram



5.3 Test Procedure

1. Connect the equipment as illustrated.
2. Spectrum set as follow:
Centre frequency = fundamental frequency, span=120kHz, RBW=100Hz, VBW=1000Hz, Sweep = auto,
Detector function = peak, Trace = max hold
3. Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line. This is the 0dB reference for the measurement.
4. Measure and record the results in the test report.

5.4 Summary of Test Results/Plots

<p>462.6375MHz</p>	
<p>467.6375MHz</p>	
<p>462.6500MHz</p>	

6. Emissions Modulation Limit

6.1 Standard Applicable

Each GMRS transmitter type must be designed to satisfy the modulation requirements in this section. Operation of GMRS stations must also be in compliance with these requirements.

(a) Main channels. The peak frequency deviation for emissions to be transmitted on the main channels must not exceed ± 5 kHz.

(b) 462 MHz interstitial channels. The peak frequency deviation for emissions to be transmitted on the 462 MHz interstitial channels must not exceed ± 5 kHz.

(c) 467 MHz interstitial channels. The peak frequency deviation for emissions to be transmitted on the 467 MHz interstitial channels must not exceed ± 2.5 kHz, and the highest audio frequency contributing substantially to modulation must not exceed 3.125 kHz.

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.

6.2 Test Procedure

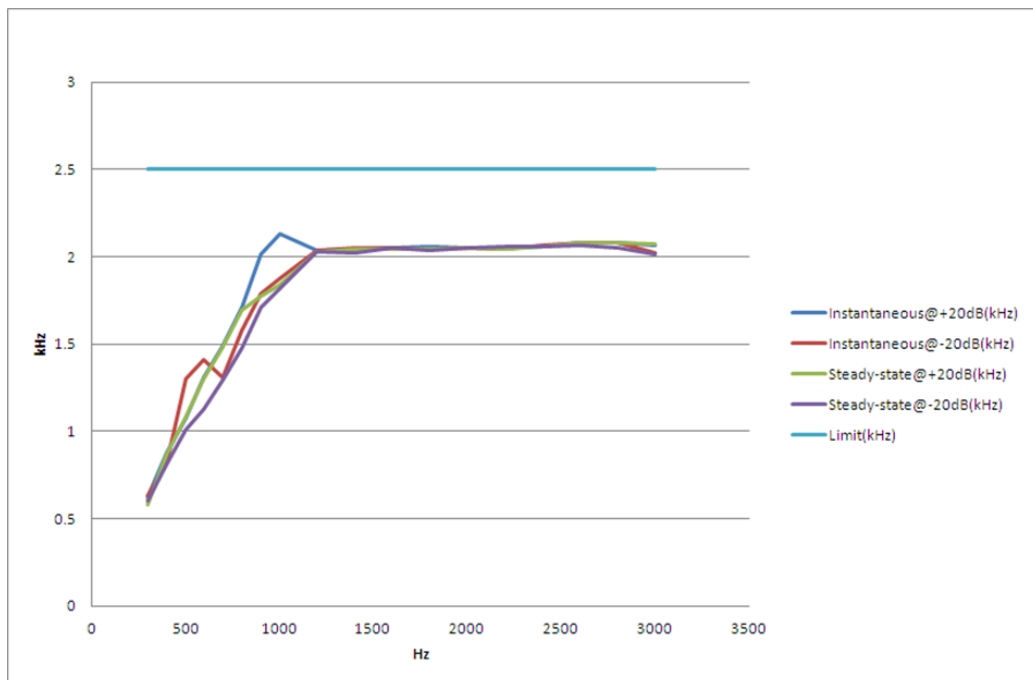
1. Connect the equipment as illustrated.
2. Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
3. Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤ 0.25 Hz to $\geq 15,000$ Hz. Turn the de-emphasis function off.
4. Apply Input Modulation Signal to EUT according to Section 3.4 and vary the input level from -20 to $+20$ dB.
5. Measure both the instantaneous and steady-state deviation at and after the time of increasing the audio input level
6. Repeat step 4-5 with input frequency changing to 300Hz, 1004Hz, 1500Hz and 2500Hz in sequence.

6.3 Summary of Test Results/Plots

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

Test Channel: 467.6735MHz

Audio Frequency (Hz)	Instantaneous		Steady-state		Limit(kHz)
	Deviation (@+20dB)(kHz)	Deviation (@-20dB)(kHz)	Deviation (@+20dB)(kHz)	Deviation (@-20dB)(kHz)	
300	0.621	0.629	0.582	0.601	2.5
400	0.876	0.823	0.870	0.810	2.5
500	1.075	1.299	1.083	1.008	2.5
600	1.311	1.407	1.301	1.127	2.5
700	1.493	1.311	1.481	1.296	2.5
800	1.710	1.577	1.695	1.475	2.5
900	2.011	1.786	1.776	1.705	2.5
1000	2.131	1.875	1.839	1.819	2.5
1200	2.038	2.035	2.032	2.032	2.5
1400	2.045	2.050	2.044	2.023	2.5
1600	2.053	2.050	2.046	2.050	2.5
1800	2.055	2.044	2.041	2.033	2.5
2000	2.050	2.049	2.047	2.053	2.5
2200	2.051	2.041	2.045	2.055	2.5
2400	2.060	2.066	2.061	2.056	2.5
2600	2.080	2.078	2.076	2.065	2.5
2800	2.082	2.077	2.076	2.054	2.5
3000	2.065	2.023	2.075	2.014	2.5



7. Field Strength of Spurious Emissions

7.1 Standard Applicable

$43 + 10 \log (P_{\text{watts}})$ Calculation: Limit (dBm) = EL-43-10log10 (TP)

Notes: EL is the emission level of the Output Power expressed in dBm, In this application, the EL is P(dBm).

Limit (dBm) = P(dBm)-43-10 log (Pwatts) = -13 dBm

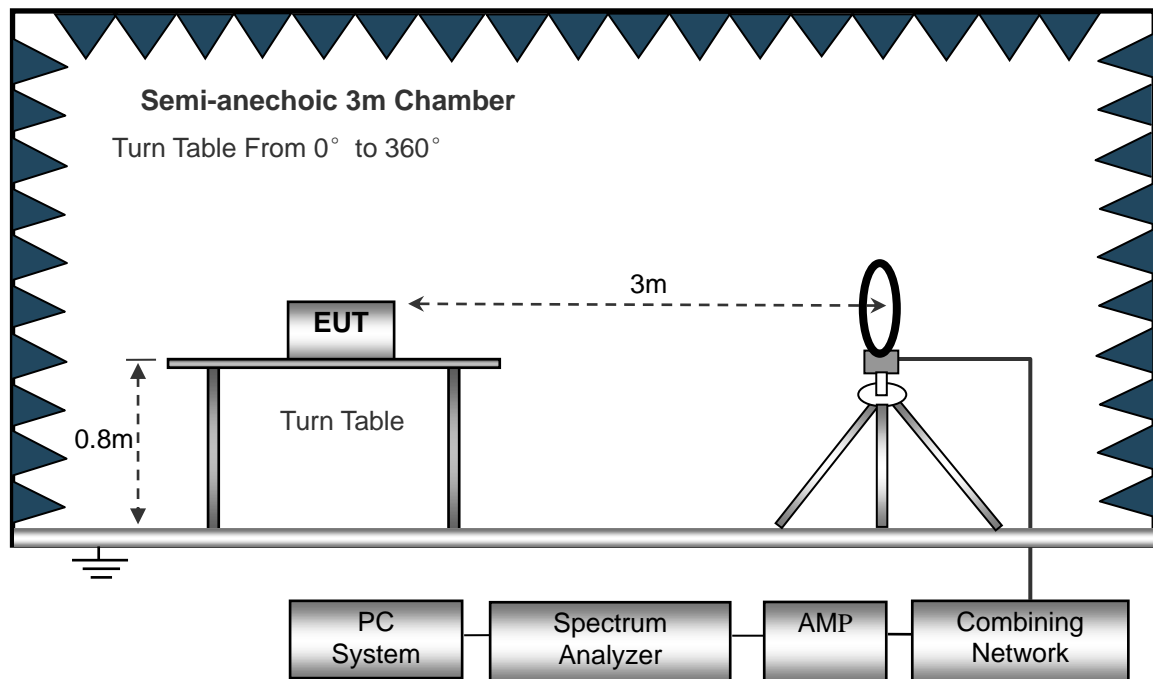
7.2 Test Procedure

The setup of EUT is according with per ANSI C63.4 measurement procedure.

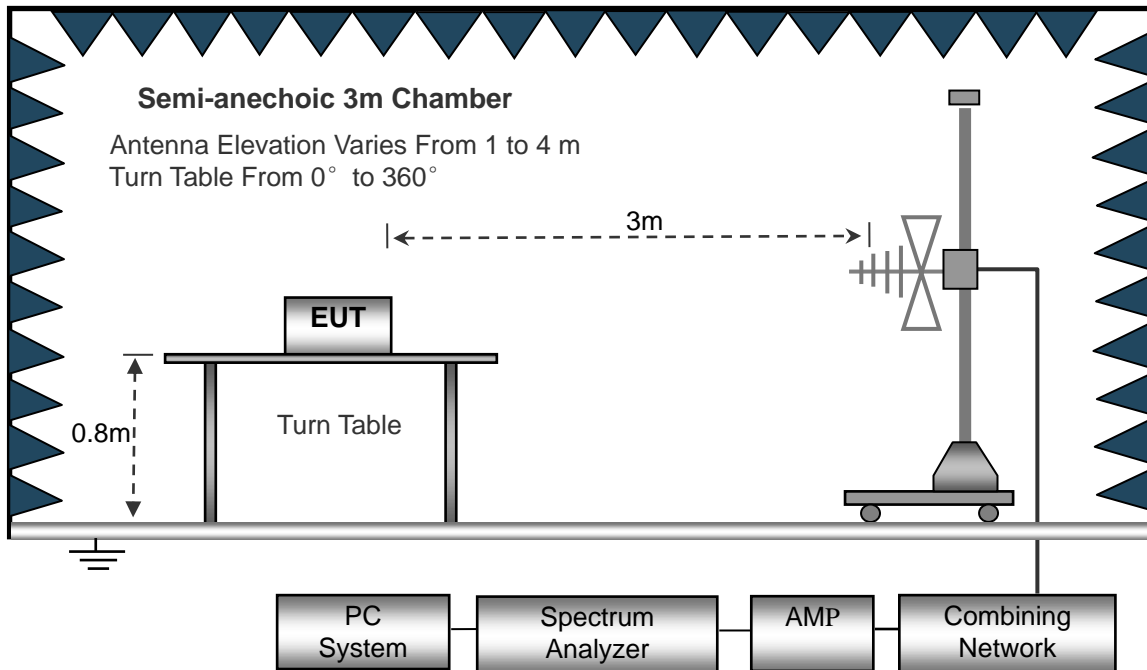
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

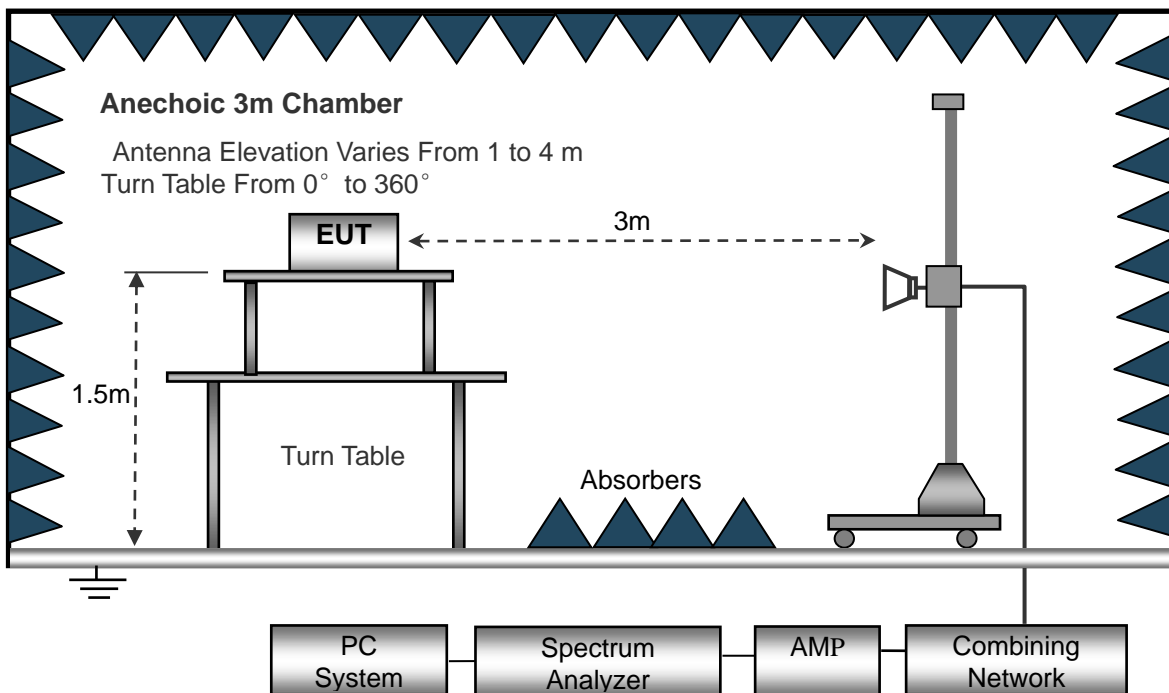
The test setup for emission measurement below 30MHz..



The test setup for emission measurement from 30 MHz to 1 GHz..



The test setup for emission measurement above 1 GHz..



Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

7.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

7.4 Summary of Test Results/Plots

Test Frequency: 9kHz ~ 30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency: 30MHz ~ 5GHz

462.6375MHz

Frequency	Detector	Ant.	Emission Level	Limit	Margin
(MHz)		Polar	(dBm)	(dBm)	(dB)
925.2750	Peak	H	-30.59	-13.00	-17.59
925.2750	Peak	V	-32.91	-13.00	-19.91
1387.9125	Peak	H	-26.20	-13.00	-13.20
1387.9125	Peak	V	-27.89	-13.00	-14.89
1850.5500	Peak	H	-27.54	-13.00	-14.54
1850.5500	Peak	V	-30.47	-13.00	-17.47
2313.1875	Peak	H	-25.02	-13.00	-12.02
2313.1875	Peak	V	-22.28	-13.00	-9.28

467.6375MHz

Frequency	Detector	Ant.	Emission Level	Limit	Margin
(MHz)		Polar	(dBm)	(dBm)	(dB)
935.2750	Peak	H	-28.23	-13.00	-15.23
935.2750	Peak	V	-28.24	-13.00	-15.24
1402.9125	Peak	H	-21.74	-13.00	-8.74
1402.9125	Peak	V	-27.87	-13.00	-14.87
1870.5500	Peak	H	-24.99	-13.00	-11.99
1870.5500	Peak	V	-26.44	-13.00	-13.44
2338.1875	Peak	H	-19.55	-13.00	-6.55
2338.1875	Peak	V	-16.63	-13.00	-3.63

462.6500MHz

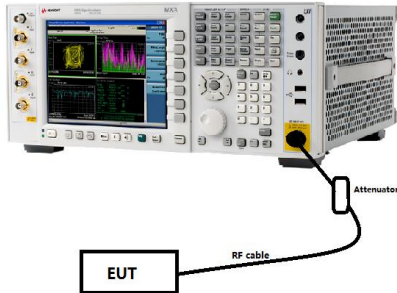
Frequency	Detector	Ant.	Emission Level	Limit	Margin
(MHz)		Polar	(dBm)	(dBm)	(dB)
925.3000	Peak	H	-30.83	-13.00	-17.83
925.3000	Peak	V	-32.84	-13.00	-19.84
1387.9500	Peak	H	-26.50	-13.00	-13.50
1387.9500	Peak	V	-27.67	-13.00	-14.67
1850.6000	Peak	H	-28.37	-13.00	-15.37
1850.6000	Peak	V	-29.13	-13.00	-16.13
2313.2500	Peak	H	-25.08	-13.00	-12.08
2313.2500	Peak	V	-37.32	-13.00	-24.32

8. FRS frequency accuracy

8.1 Standard Applicable

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.

8.2 Test Setup Block Diagram



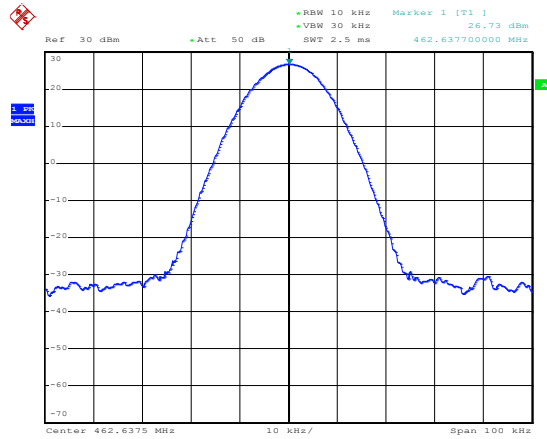
8.3 Test Procedure

1. Connect the equipment as illustrated.
2. Spectrum set as follow:
Centre frequency = fundamental frequency, span=100kHz, RBW=10kHz, VBW=30kHz, Sweep = auto,
Detector function = peak, Trace = max hold
3. Measure and record the results in the test report.

8.4 Summary of Test Results/Plots

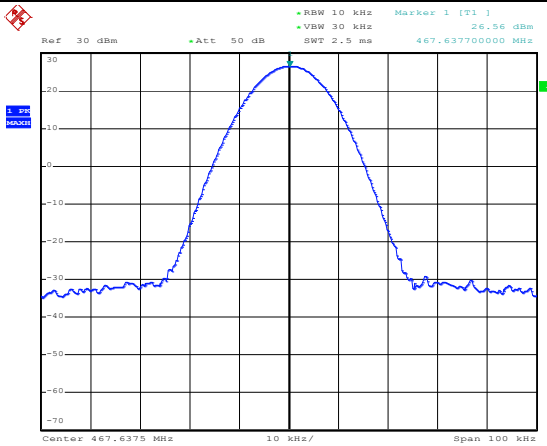
Test CH.	Frequency (MHz)	Reading Value (MHz)	Tolerance (ppm)	Limit (ppm)	Result
4	462.6375	462.6377	0.43	± 2.5	Pass
11	467.6375	467.6377	0.43	± 2.5	Pass
19	462.6500	462.6502	0.43	± 2.5	Pass

462.6375MHz



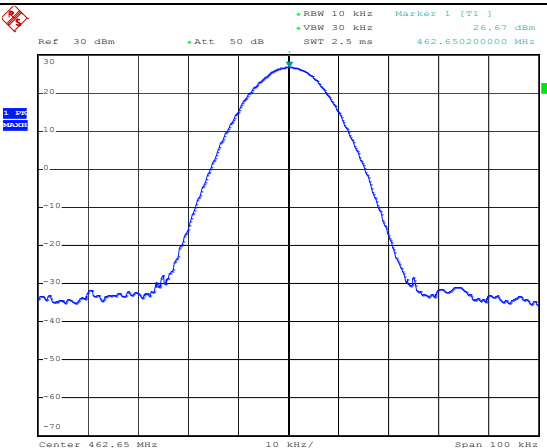
Date: 20.MAY.2021 17:11:51

467.6375MHz



Date: 20.MAY.2021 17:12:44

462.6500MHz



Date: 20.MAY.2021 17:13:33

***** END OF REPORT *****