


# FCC PART 95 MEASUREMENT AND TEST REPORT

For

Guangdong Samzuk Technology Development Co,Ltd

High-Tech Zone Xingong Avenue East Heyuan China

**FCC ID:2AIOQ-FWCN30A**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Walkie Talkie
<b>Report Number:</b> RSC190708004	
<b>Date of Report Issue:</b> 2019-07-16	
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## GENERAL INFORMATION

### Product Description for Equipment Under Test (EUT)

Applicant	Guangdong Samzuk Technology Development Co.,Ltd
Product	Walkie Talkie
Tested Model	FWCN30A
Multiple Models#	FWCN30A1, FWCN30A2, FWCN30A3, FWCN30A4, FWCN30A5, FWCN30A6, FWCN30A7
Voltage	DC 3.7V rechargeable Li-ion battery or DC 5V charging from adapter
Measure approximately	275 mm (L) x 50 mm (W) x 35 mm (H)
Frequency Range	462.5500 MHz-467.7125 MHz
Modulation Mode	FM
Channel Spacing	12.5 kHz
Emission Designator	11K0F3E
Sample serial number	190708004/01 (assigned by the BACL, Chengdu)
Received date	2019-07-08
Sample/EUT Status	Good condition
Adapter information (Only charging)	Manufacturer: ShenZhen KunXing Technology Co.,Ltd Model: CLV-15 Input: AC 100-240V~50/60Hz Output: DC 5V~1A

Note: EUT conformed to test requirements and all measurement and test data in this report was gathered from final production sample. It may have deviation from any other sample.

### Objective

This report is prepared on behalf of **Guangdong Samzuk Technology Development Co.,Ltd** in accordance with Part 2 and Part 95, Subpart A & Subpart B of the Federal Communication Commissions rules.

### Related Submittal(s)/Grant(s)

No related submittal(s).

## Measurement Uncertainty

	Item	Measurement Uncertainty
1	RF Frequency	$\pm 0.082 \times 10^{-6}$
2	RF output power, conducted	$\pm 0.65\text{dB}$
3	Occupied Bandwidth	$\pm 5\%$
4	Spurious emissions, radiated	$\pm 6\text{dB}$
5	Humidity	$\pm 5\%$
6	Temperature	$\pm 1^{\circ}\text{C}$
7	Voltage(DC)	$\pm 1\%$
8	Time	$\pm 2\%$

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

## Test Methodology

All tests and measurements indicated in this document were performed in accordance with Part 95 Subpart B of the Federal Communication Commissions rules with TIA-603-D, Land Mobile FM or PM-Communications Equipment-Measurement and Performance Standards.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Chengdu). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Chengdu) to collect test data is located No.5040, Huilongwan Plaza, No. 1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Bay Area Compliance Laboratories Corp. (Chengdu) lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4324.01) and the FCC designation No. CN1186 under the FCC KDB 974614 D01. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

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

The device is a FRS device operated in the frequency range: 462.5500 MHz-467.7125 MHz.

The device uses 22 FRS channels as below:

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	462.5625	12	467.6625
2	462.5875	13	467.6875
3	462.6125	14	467.7125
4	462.6375	15	462.5500
5	462.6625	16	462.5750
6	462.6875	17	462.6000
7	462.7125	18	462.6250
8	467.5625	19	462.6500
9	467.5875	20	462.6750
10	467.6125	21	462.7000
11	467.6375	22	462.7250

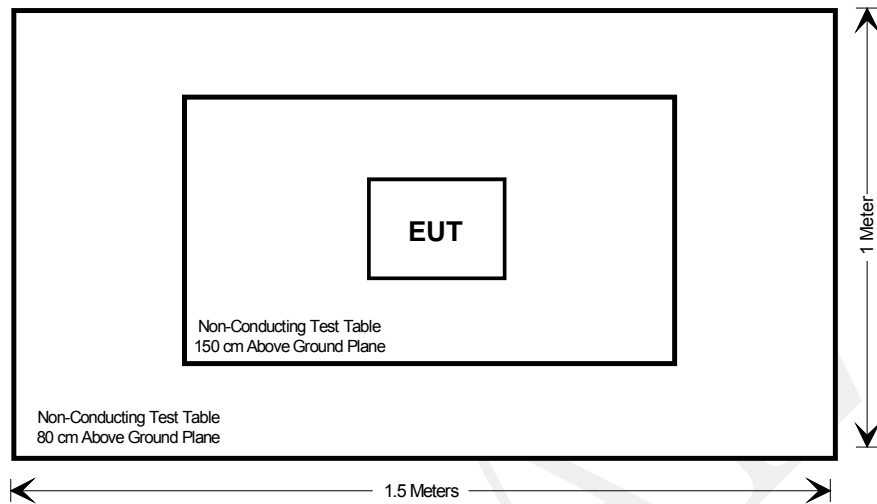
### Equipment Modifications

No modification was made to the EUT tested.

### External I/O Cable

Cable Description	Length (m)	From	To
-	-	-	-

## Block Diagram of Test Setup



## Test Equipments List

Manufacturer	Description	Model Number	Serial Number	Calibration Date	Calibration Due Date
<b>Radiated Emissions Test</b>					
EMCT	Semi-Anechoic Chamber	966	001	2017-05-18	2020-05-17
SONOMA INSTRUMENT	Amplifier	310 N	186684	2018-08-24	2019-08-23
A.H. Systems, Inc	Amplifier	PAM-0118P	467	2018-10-19	2019-10-18
SUNOL SCIENCES	Broadband Antenna	JB3	A121808	2017-05-19	2020-05-18
INMET	Attenuator	18N-6dB	N/A	2018-11-27	2019-11-26
COM-POWER	Adjustable Dipole Antenna	AD-100	41000	2018-11-27	2019-11-26
EMCO	Horn Antenna	3115	2192	2017-05-19	2020-05-18
ETS	Horn Antenna	3115	003-6076	2017-05-19	2020-05-18
Rohde & Schwarz	EMI Test Receiver	ESR3	102456	2019-04-15	2020-04-14
Rohde & Schwarz	Spectrum Analyzer	FSU26	200835	2019-04-15	2020-04-14
Agilent	MXG X-Series RF Vector Signal Generator	N5182B	MY51350391	2019-01-16	2020-01-15
Mini-Circuits	High Pass Filter	NHP-700+	RUU25401618	2018-12-25	2019-12-24
Mini-Circuits	High Pass Filter	VHF-1320+	31526	2018-12-25	2019-12-24
Unknown	RF Cable (below 1GHz)	L-E005	000005	2018-11-27	2019-11-26
Unknown	RF Cable (below 1GHz)	T-E128	000128	2018-11-27	2019-11-26
Unknown	RF Cable (below 1GHz)	T-E129	000129	2018-11-27	2019-11-26
Unknown	RF Cable (above 1GHz)	T-E069	000069	2018-11-27	2019-11-26

Manufacturer	Description	Model Number	Serial Number	Calibration Date	Calibration Due Date
<b>RF Conducted Test</b>					
HP	RF Communications Test Set	8920B	Unknown	2018-05-09	2020-05-08
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2019-04-15	2020-04-14
WEINSCHL ENGINEERING	Attenuator	1A 10dB	AA4135	2018-11-10	2019-11-09
E-Microwave	DC Block	EMDCB-00036	OE01304225	2018-11-27	2019-11-26
Unknown	RF Coaxial Cable	T-E130	000130	2018-12-09	2019-12-08
Unknown	RF Coaxial Cable	LE-001-4	N/A	2018-12-09	2019-12-08
<b>Frequency Stability Test</b>					
Shenzhen BACL	High Temperature Test Chamber	BTH-150	30024	2019-04-15	2020-04-14
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2019-04-15	2020-04-14
WEINSCHL ENGINEERING	Attenuator	1A 10dB	AA4135	2018-11-10	2019-11-09
FLUKE	Multimeter	FLUKE 1587	27870099	2019-05-07	2020-05-06
Unknown	RF Coaxial Cable	T-E130	000130	2018-12-09	2019-12-08

**Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).



## SUMMARY OF TEST RESULTS

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FCC Rules	Description of Test	Results
§2.1093	RF Exposure Evaluation	Compliance
§95.587(b)	Antenna Requirement	Compliance
§2.1046, §95.567	RF Output Power	Compliance
§2.1047 & §95.575	Modulation Characteristic	Compliance
§2.1049, §95.573, §95.579	Authorized Bandwidth & Emission Mask	Compliance
§2.1053 & §95.579	Spurious Radiated Emissions	Compliance
§2.1055 (d), §95.565	Frequency Stability	Compliance

## **FCC §95.587(b) - ANTENNA REQUIREMENT**

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### **Applicable Standard**

According to FCC §95.587(b) requirement, 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.

### **Antenna Connector Construction**

The EUT has one integral external antenna and antenna gain is 1.0 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

## **FCC §2.1093 - RF EXPOSURE EVALUATION**

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### **Applicable Standard**

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

### **Test Result**

Please refer to SAR Report Number: RSC190708004-20.

FINAL

## FCC §2.1046, §95.567 - RF OUTPUT POWER

### Applicable Standard

According to FCC §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.

### Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the emissions were measured by the substitution.

### Test Data

#### Environmental Conditions

Temperature:	26 °C
Relative Humidity:	69 %
ATM Pressure:	95.2 kPa

The testing was performed by Tom Tang on 2019-07-12.

Test Mode: Transmitting

ERP:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd)	Cable Loss (dB)			
Frequency: 462.6875 MHz								
462.6875	V	106.97	27.0	0.0	0.4	26.6	33.0	6.4
462.6875	H	98.23	15.7	0.0	0.4	15.3	33.0	17.7
Frequency: 467.6375 MHz								
467.6375	V	100.30	20.3	0.0	0.4	19.9	27.0	7.1
467.6375	H	91.45	9.1	0.0	0.4	8.7	27.0	18.3

Note:

- 1) Absolute Level = SG Level - Cable loss + Antenna Gain
- 2) Margin = Limit - Absolute Level
- 3) It was done without pre-amplifier

## **FCC §2.1047 & §95.575 - MODULATION CHARACTERISTIC**

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### **Applicable Standard**

Per FCC §2.1047 and §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.

### **Test Procedure**

Test Method: TIA/EIA-603-D

### **Test Data**

#### **Environmental Conditions**

<b>Temperature:</b>	26 °C
<b>Relative Humidity:</b>	69 %
<b>ATM Pressure:</b>	95.2 kPa

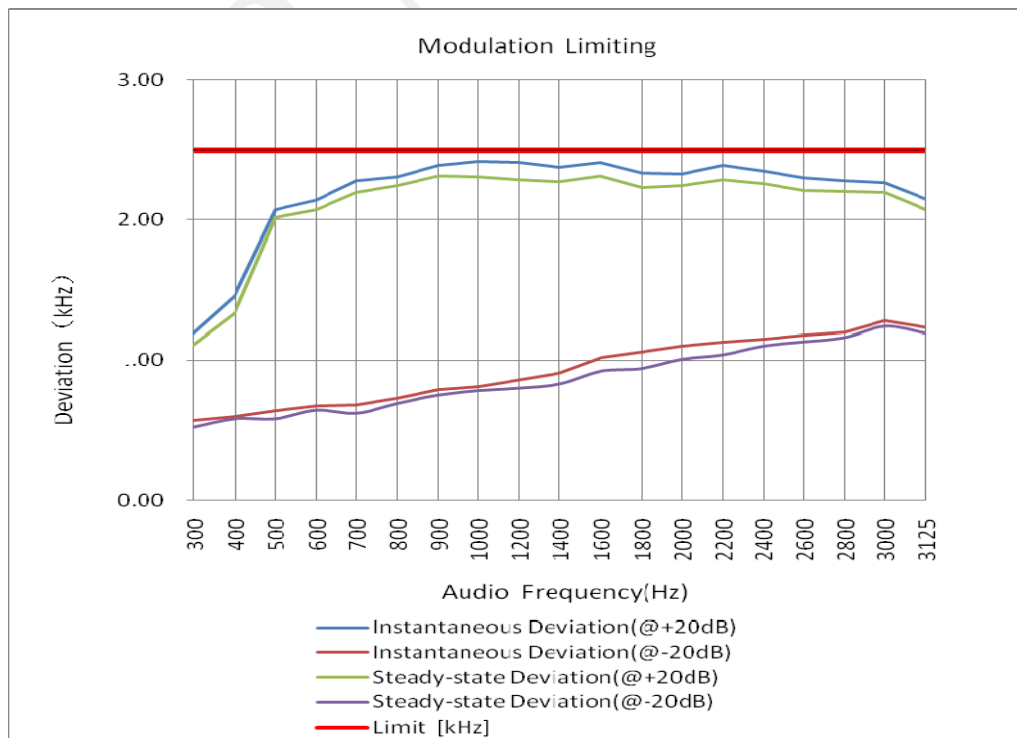
The testing was performed by Tom Tang on 2019-07-12.

Test Mode: Transmitting

Please refer to the following tables and plots.

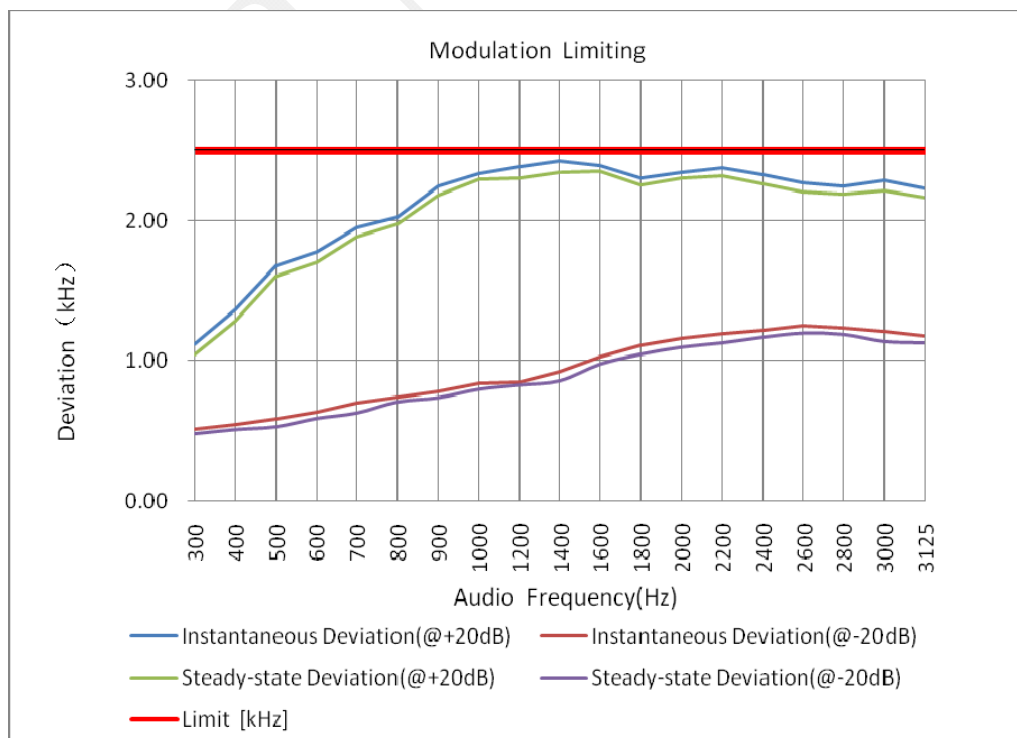
**Modulation Limiting**  
462.6875 MHz

Audio Frequency (Hz)	Instantaneous		Steady-state		Limit (kHz)
	Deviation (@+20dB) (kHz)	Deviation (@-20dB) (kHz)	Deviation (@+20dB) (kHz)	Deviation (@-20dB) (kHz)	
300	1.19	0.57	1.11	0.52	2.5
400	1.46	0.60	1.34	0.58	2.5
500	2.07	0.64	2.01	0.58	2.5
600	2.14	0.67	2.07	0.64	2.5
700	2.28	0.68	2.19	0.62	2.5
800	2.31	0.73	2.24	0.69	2.5
900	2.39	0.79	2.31	0.75	2.5
1000	2.42	0.81	2.30	0.78	2.5
1200	2.41	0.86	2.28	0.80	2.5
1400	2.38	0.91	2.27	0.83	2.5
1600	2.41	1.02	2.31	0.92	2.5
1800	2.34	1.06	2.23	0.94	2.5
2000	2.33	1.10	2.24	1.01	2.5
2200	2.39	1.13	2.28	1.04	2.5
2400	2.35	1.15	2.25	1.10	2.5
2600	2.30	1.18	2.21	1.13	2.5
2800	2.28	1.20	2.20	1.16	2.5
3000	2.27	1.28	2.19	1.24	2.5
3125	2.15	1.23	2.07	1.19	2.5



467.6375 MHz

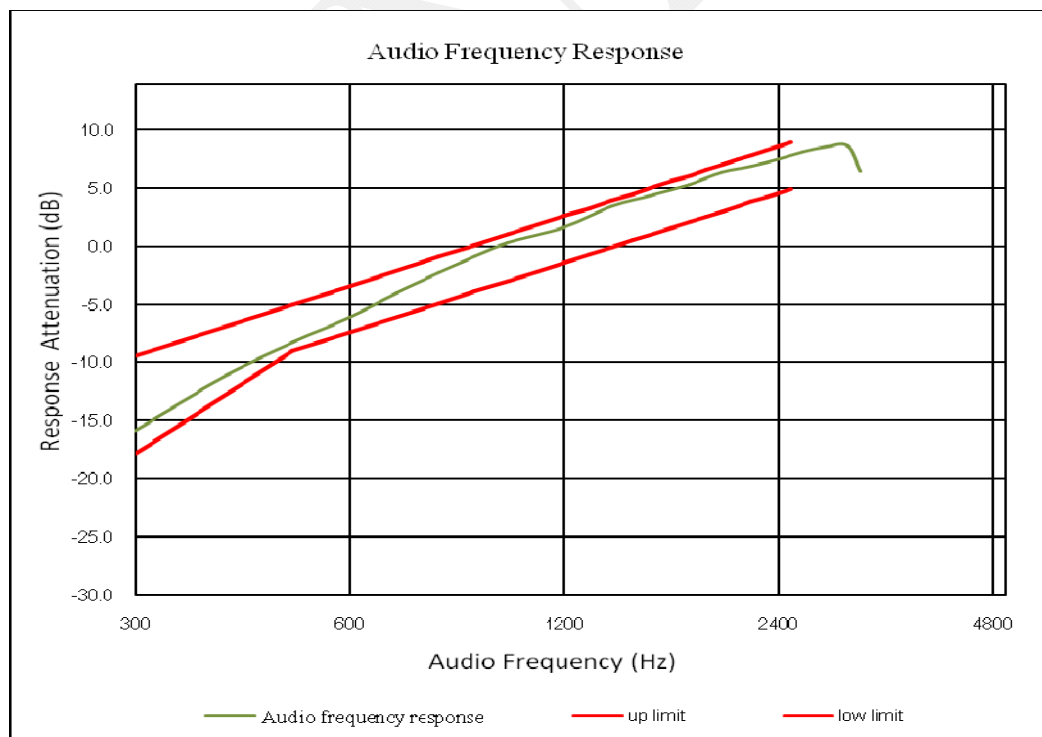
Audio Frequency (Hz)	Instantaneous		Steady-state		Limit (kHz)
	Deviation (@+20dB) (kHz)	Deviation (@-20dB) (kHz)	Deviation (@+20dB) (kHz)	Deviation (@-20dB) (kHz)	
300	1.12	0.51	1.05	0.48	2.5
400	1.37	0.54	1.29	0.51	2.5
500	1.68	0.58	1.61	0.53	2.5
600	1.78	0.63	1.70	0.59	2.5
700	1.95	0.70	1.88	0.63	2.5
800	2.03	0.74	1.97	0.71	2.5
900	2.25	0.78	2.18	0.74	2.5
1000	2.34	0.84	2.29	0.80	2.5
1200	2.39	0.85	2.30	0.83	2.5
1400	2.43	0.92	2.34	0.86	2.5
1600	2.40	1.03	2.35	0.98	2.5
1800	2.31	1.11	2.25	1.05	2.5
2000	2.35	1.16	2.30	1.10	2.5
2200	2.38	1.19	2.32	1.13	2.5
2400	2.33	1.22	2.26	1.17	2.5
2600	2.27	1.25	2.20	1.20	2.5
2800	2.25	1.23	2.19	1.19	2.5
3000	2.29	1.21	2.21	1.14	2.5
3125	2.23	1.18	2.16	1.13	2.5



### Audio Frequency Response

462.6875 MHz

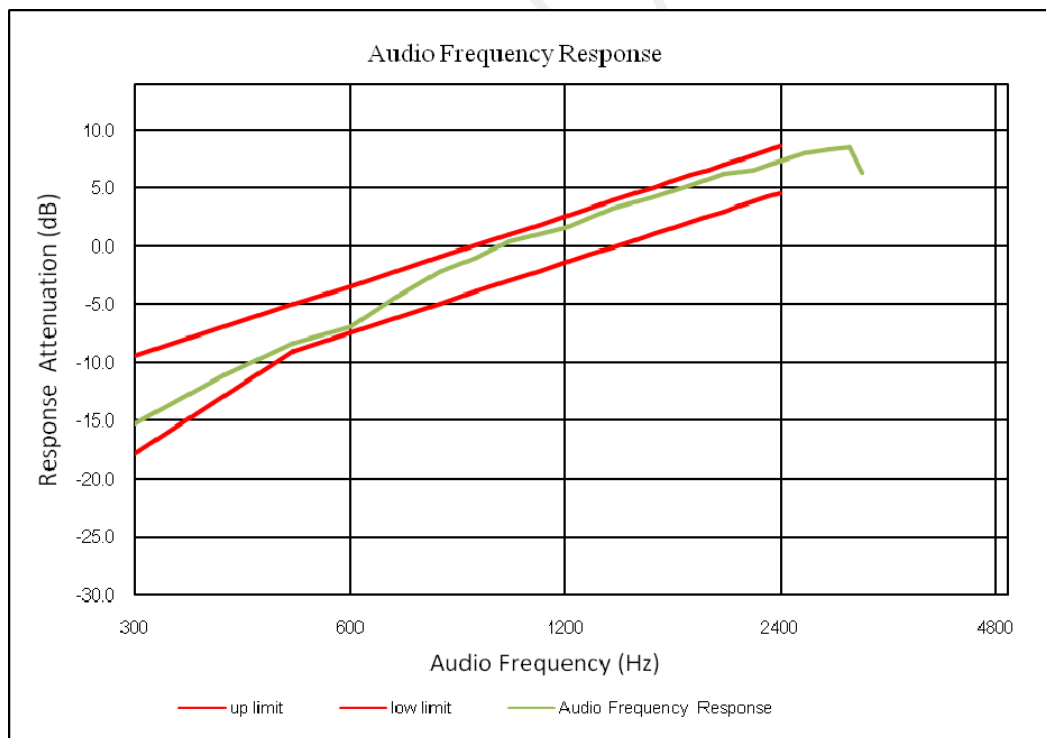
Audio Frequency (Hz)	Response Attenuation (dB)
300	-15.86
400	-11.22
500	-8.22
600	-6.15
700	-3.98
800	-2.26
900	-0.87
1000	0.28
1200	1.65
1400	3.44
1600	4.40
1800	5.34
2000	6.38
2200	6.85
2400	7.47
2600	8.12
2800	8.57
3000	8.64
3125	6.45





467.6375 MHz

Audio Frequency (Hz)	Response Attenuation (dB)
300	-15.24
400	-11.07
500	-8.35
600	-6.89
700	-4.24
800	-2.16
900	-1.01
1000	0.35
1200	1.54
1400	3.31
1600	4.23
1800	5.26
2000	6.21
2200	6.49
2400	7.31
2600	8.02
2800	8.29
3000	8.55
3125	6.34



## **FCC §2.1049, §95.573, §95.579 - AUTHORIZED BANDWIDTH AND EMISSION MASK**

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### **Applicable Standard**

According to §95.573

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

According to §95.579

Each FRS transmitter type must be designed to satisfy the applicable unwanted emissions limits in this paragraph.

(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.

### **Test Procedure**

TIA-603-D, section 2.2.11

## Test Data

### Environmental Conditions

Temperature:	26 °C
Relative Humidity:	69 %
ATM Pressure:	95.2 kPa

The testing was performed by Tom Tang on 2019-07-12.

Test Mode: Transmitting

Modulation Mode	fc	99% Occupied Bandwidth	20 dB Bandwidth	Limit
	MHz	kHz	kHz	kHz
FM	462.6875	9.218	10.822	12.5
FM	467.6375	9.218	10.621	12.5

Note: Emission designator is base on calculation instead of measurement.

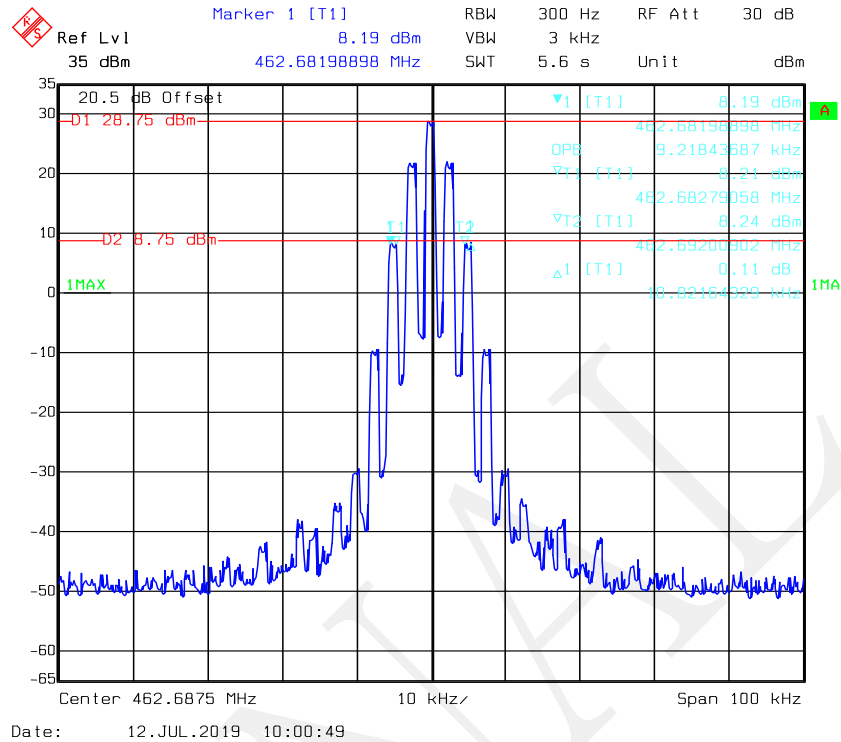
Emission Designator Per CFR 47 §2.201& §2.202&,  $B_n = 2M + 2D$

### For FM Mode (Channel Spacing: 12.5 kHz)

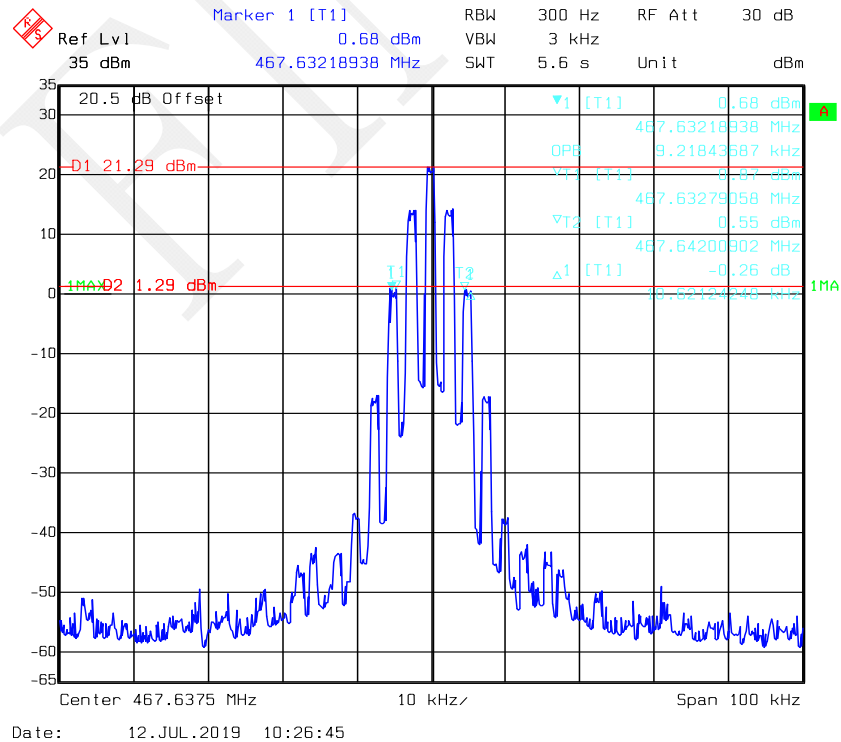
Emission Designator 11K0F3E In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation.  $BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} \rightarrow 11K0 \text{ F3E}$  portion of the designator represents an FM voice transmission. Therefore, the entire designator for 12.5 kHz channel spacing FM mode is 11K0F3E.

## 20dB Bandwidth & 99% Occupied Bandwidth

462.6875 MHz

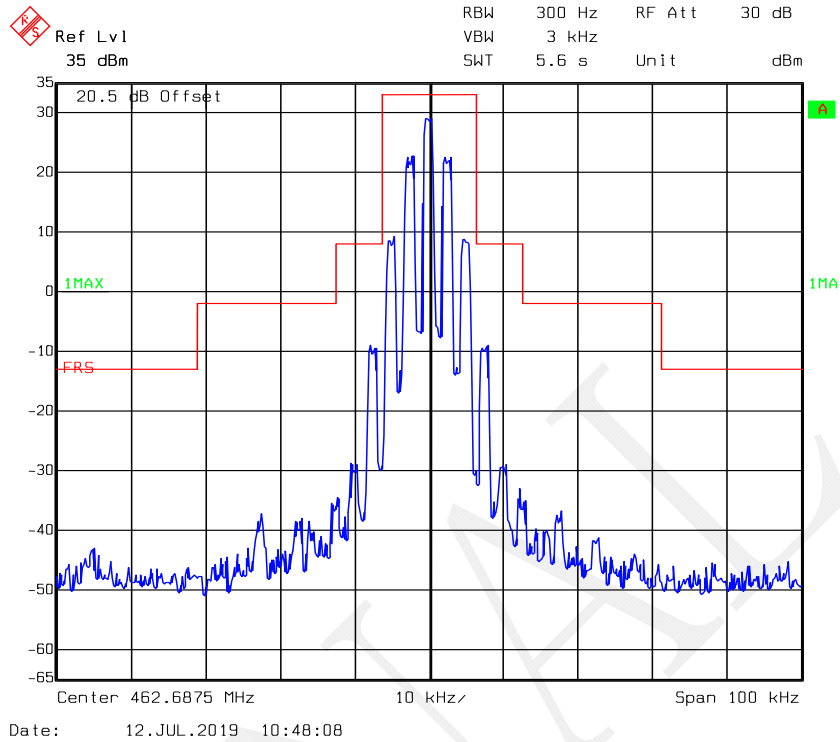


467.6375 MHz

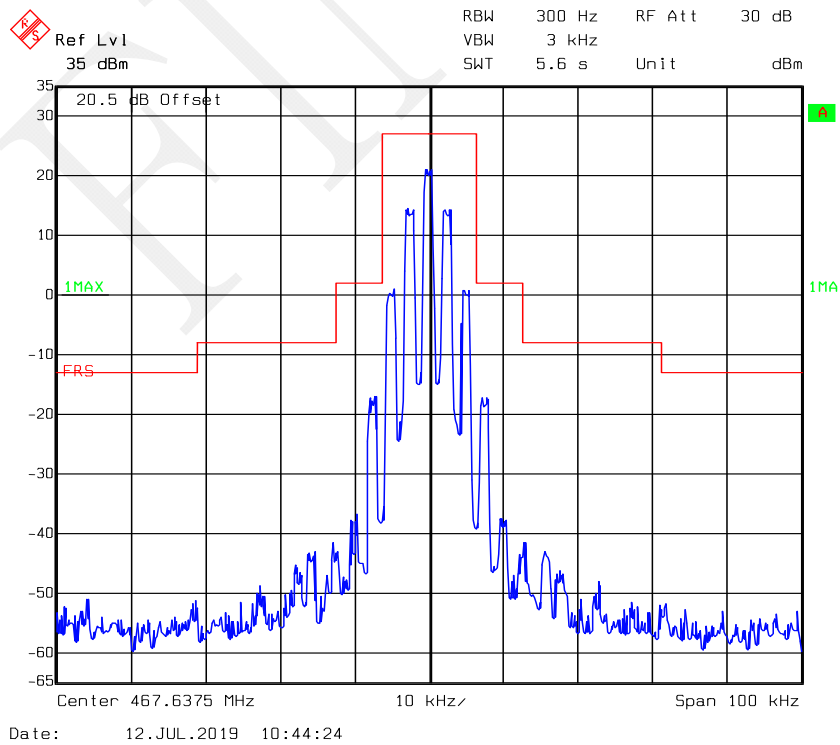


## EMISSION MASK

462.6875 MHz



467.6375 MHz



## **FCC §2.1053 & §95.579 - RADIATED SPURIOUS EMISSION**

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### **Applicable Standard**

FCC §2.1053 and §95.579

### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001)-the absolute level  
Spurious attenuation limit in dB = 43+10 Log<sub>10</sub> (power out in Watts)

### **Test Data**

#### **Environmental Conditions**

<b>Temperature:</b>	28 °C
<b>Relative Humidity:</b>	67 %
<b>ATM Pressure:</b>	95.4 kPa

The testing was performed by Tom Tang on 2019-07-12.

Test Mode: Transmitting

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Frequency: 462.6875 MHz								
925.3750	H	70.60	-33.8	0.0	0.7	-34.5	-13.0	21.5
925.3750	V	71.64	-28.1	0.0	0.7	-28.8	-13.0	15.8
1388.0625	H	83.83	-33.0	7.9	1.2	-26.3	-13.0	13.3
1388.0625	V	80.69	-35.7	7.9	1.2	-29.0	-13.0	16.0
1850.750	H	77.83	-37.1	9.0	1.4	-29.5	-13.0	16.5
1850.750	V	68.66	-45	9.0	1.4	-37.4	-13.0	24.4
2313.438	H	73.24	-41.1	9.3	1.6	-33.4	-13.0	20.4
2313.438	V	75.09	-38.8	9.3	1.6	-31.1	-13.0	18.1
2776.125	H	73.84	-39.2	9.5	2.0	-31.7	-13.0	18.7
2776.125	V	66.21	-47.7	9.5	2.0	-40.2	-13.0	27.2
3238.813	H	60.50	-50.3	9.6	2.2	-42.9	-13.0	29.9
3238.813	V	59.53	-51.9	9.6	2.2	-44.5	-13.0	31.5
3701.500	H	71.16	-38.8	9.8	2.3	-31.3	-13.0	18.3
3701.500	V	65.67	-44.1	9.8	2.3	-36.6	-13.0	23.6
4164.188	H	65.27	-44.8	10.0	2.6	-37.4	-13.0	24.4
4164.188	V	67.47	-43.3	10.0	2.6	-35.9	-13.0	22.9
4626.875	H	70.32	-39.0	10.4	2.8	-31.4	-13.0	18.4
4626.875	V	67.16	-42.7	10.4	2.8	-35.1	-13.0	22.1
Frequency: 467.6375 MHz								
935.2750	H	70.43	-33.4	0.0	0.7	-34.1	-13.0	21.1
935.2750	V	66.04	-33.3	0.0	0.7	-34.0	-13.0	21.0
1402.9125	H	81.53	-35.4	8.0	1.2	-28.6	-13.0	15.6
1402.9125	V	78.76	-37.7	8.0	1.2	-30.9	-13.0	17.9
1870.550	H	78.81	-36.0	9.0	1.4	-28.4	-13.0	15.4
1870.550	V	70.92	-42.4	9.0	1.4	-34.8	-13.0	21.8
2338.188	H	74.61	-39.5	9.3	1.7	-31.9	-13.0	18.9
2338.188	V	75.26	-38.5	9.3	1.7	-30.9	-13.0	17.9
2805.825	H	70.63	-42.4	9.5	2.0	-34.9	-13.0	21.9
2805.825	V	64.55	-49.5	9.5	2.0	-42.0	-13.0	29.0
3273.463	H	60.28	-50.4	9.7	2.2	-42.9	-13.0	29.9
3273.463	V	60.12	-51.0	9.7	2.2	-43.5	-13.0	30.5
3741.100	H	62.57	-46.9	9.8	2.3	-39.4	-13.0	26.4
3741.100	V	61.16	-48.0	9.8	2.3	-40.5	-13.0	27.5
4208.738	H	62.22	-47.9	10.1	2.6	-40.4	-13.0	27.4
4208.738	V	57.75	-53.1	10.1	2.6	-45.6	-13.0	32.6
4676.375	H	59.83	-49.6	10.4	2.8	-42.0	-13.0	29.0
4676.375	V	57.97	-51.9	10.4	2.8	-44.3	-13.0	31.3

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = SG Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level
- 4) The unit of antenna gain is dBd for frequency below 1GHz and dBi for frequency above 1GHz.

FINAL



## **FCC§2.1055 (d), §95.565- FREQUENCY STABILITY**

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### **Applicable Standard**

According to FCC §2.1055(a) (1),

The frequency stability shall be measured with variation of ambient temperature from –30 °C to +50 °C, and according to FCC 2.1055(d) (2), the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point which is specified by the manufacturer.

According to FCC §95.565

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

### **Test Procedure**

Frequency Stability vs. Temperature: The equipment under test was connected to an external power supply and the RF output was connected to a Frequency Counter via feed-through attenuators. The EUT was placed inside the temperature chamber. The power leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Frequency Counter.

Frequency Stability vs. Voltage:

1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.

The output frequency was recorded for each voltage.

## Test Data

### Environmental Conditions

<b>Temperature:</b>	26 °C
<b>Relative Humidity:</b>	69 %
<b>ATM Pressure:</b>	95.2 kPa

The testing was performed by Tom Tang on 2019-07-12.

Test Mode: Transmitting

Reference Frequency:462.6875MHz				
Temperature	Voltage	Reading	Frequency Error	Limit
℃	Vdc	MHz	ppm	ppm
-30	3.7	462.6873000	-0.43	±2.5
-20		462.6870000	-1.08	
-10		462.6879000	0.86	
0		462.6869000	-1.30	
10		462.6870000	-1.08	
20		462.6873000	-0.43	
30		462.6880000	1.08	
40		462.6870000	-1.08	
50		462.6876000	0.22	
20	3.5	462.6879000	0.86	
20	4.2	462.6873000	-0.43	
Reference Frequency:467.6375MHz				
Temperature	Voltage	Reading	Frequency Error	Limit
℃	Vdc	MHz	ppm	ppm
-30	3.7	467.6374000	-0.21	±2.5
-20		467.6370000	-1.07	
-10		467.6368000	-1.50	
0		467.6379000	0.86	
10		467.6381000	1.28	
20		467.6371000	-0.86	
30		467.6369000	-1.28	
40		467.6373000	-0.43	
50		467.6378000	0.64	
20	3.5	467.6372000	-0.64	
20	4.2	467.6377000	0.43	

**END OF REPORT**