



FCC PART 95 MEASUREMENT AND TEST REPORT

For

Quanzhou Wouxun Electronics Co., Ltd.

Jiangnan High Technology Industry Park, No.928 Nanhuan Road, Quanzhou, Fujian, China

FCC ID: WVTWOUXUN15

Report Type: Original Report	Product Type: two-way radios
Report Number: RXM190920052-00	
Report Date: 2019-10-14	
Simon Wang <i>Simon wang</i>	
Reviewed By:	RF Engineer
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA* or any agency of the Federal Government. This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “★”.

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk “*”. Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	4
SYSTEM TEST CONFIGURATION.....	5
DESCRIPTION OF TEST CONFIGURATION	5
EQUIPMENT MODIFICATIONS	5
SUPPORT EQUIPMENT LIST AND DETAILS	5
EXTERNAL I/O CABLE.....	5
BLOCK DIAGRAM OF TEST SETUP	5
SUMMARY OF TEST RESULTS	6
TEST EQUIPMENT LIST	7
FCC §1.1307(b) & §2.1093 - RF EXPOSURE.....	8
APPLICABLE STANDARD	8
FCC §2.1046, §95.2767 - RF OUTPUT POWER.....	9
APPLICABLE STANDARD	9
TEST PROCEDURE	9
TEST DATA	9
FCC §2.1049, §95.2773 & §95.2779(a) - OCCUPIED BANDWIDTH AND EMISSION MASK.....	10
APPLICABLE STANDARD	10
TEST PROCEDURE	11
TEST DATA	11
FCC §2.1051 & §95.2779 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	14
APPLICABLE STANDARD	14
TEST PROCEDURE	14
TEST DATA	14
FCC §2.1053 & §95.2779 - RADIATED SPURIOUS EMISSION	17
APPLICABLE STANDARD	17
TEST PROCEDURE	17
TEST DATA	17
FCC§2.1055 (d), §95.2765 - FREQUENCY STABILITY	19
APPLICABLE STANDARD	19
TEST PROCEDURE	19
TEST DATA	19
FCC §2.1047 & §95.2775 - MODULATION CHARACTERISTIC.....	21
APPLICABLE STANDARD	21
TEST PROCEDURE	21
TEST DATA	21

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

Product	two-way radios
Tested Model	KG-703E
Multiple Models	KG-979, KG-886, KG-866, KG-UV86, KG-DP866, KG-D905, KG-D833, KG-UV8H, KG-805, KG-639E, KG-659E, KG-833, KG-929, KG-669E, KG-679E, KG-689E, KG-699E, KG-801E, KG-879, KG-928, KG-828, KG-988, KG-998, KG-959, KG-958, KG-968, KG-978, KG-969, KG-939, KG-UV3D, KG-UV9K, KG-UV6D(PRO), KG-UV7D, KG-UV9D(Plus), KG-D3000(UV), KG-UV6D V2, KG-D828, KG-D988, ET-718, ET-728, ET-758, ET-768, ET-778, ET-788, ET-798, ET-578, ET-668, ET-559, ET-568, ET-588, ET-678, ET-688, ET-668
Frequency Range	151.820 MHz, 151.880 MHz, 151.940 MHz, 154.570 MHz, 154.600 MHz
Transmit Power (ERP)	32.20 dBm (151.88 MHz) 32.24 dBm (154.6 MHz)
Modulation Technique	FM
Antenna Specification	SMA-Female Antenna, 2.15dBi
Voltage Range	DC 7.4V from battery
Date of Test	2019/10/08~2019/10/10
Sample serial number	C3S10A0499 (Assigned by applicant)
Received date	2019/09/20
Sample/EUT Status	Good condition

Notes: This series products model: KG-979, KG-886, KG-866, KG-UV86, KG-DP866, KG-D905, KG-D833, KG-UV8H, KG-805, KG-639E, KG-659E, KG-833, KG-929, KG-669E, KG-679E, KG-689E, KG-699E, KG-801E, KG-879, KG-928, KG-828, KG-988, KG-998, KG-959, KG-958, KG-968, KG-978, KG-969, KG-939, KG-UV3D, KG-UV9K, KG-UV6D(PRO), KG-UV7D, KG-UV9D(Plus), KG-D3000(UV), KG-UV6D V2, KG-D828, KG-D988, ET-718, ET-728, ET-758, ET-768, ET-778, ET-788, ET-798, ET-578, ET-668, ET-559, ET-568, ET-588, ET-678, ET-688, ET-668 and KG-703E are electrically identical, model KG-703E was selected for fully testing, the detailed information can be referred to the declaration letter which was stated and guaranteed by the applicant.

Objective

This report is prepared on behalf of *Quanzhou Wouxun Electronics Co., Ltd.* in accordance with Part 2 and Part 95, Subpart J of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All tests and measurements indicated in this document were performed in accordance with Part 95 Subpart A, Subpart J 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 at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF Output Power with Power meter		±0.73dB
RF conducted test with spectrum		±1.6dB
Emissions, Radiated	Below 1GHz	±4.75dB
	Above 1GHz	±4.88dB
Temperature		±1 °C
Humidity		±6%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 342867, the FCC Designation No. : CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Note:

Transmitter channel frequencies are 151.820 MHz, 151.880 MHz, 151.940 MHz, 154.570 MHz and 154.600 MHz.

Equipment Modifications

No modification was made to the EUT tested.

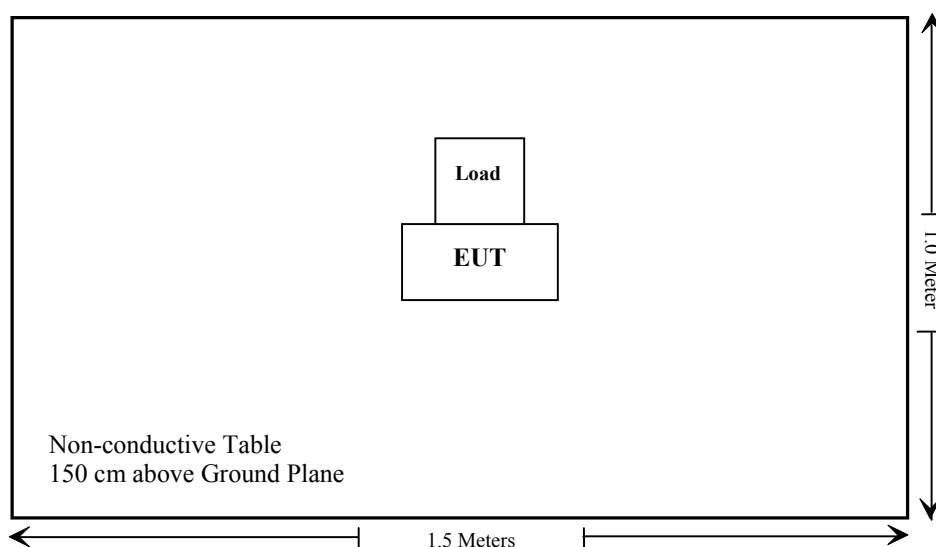
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Unknown	Load	Unknown	Unknown

External I/O Cable

Cable Description	Length (m)	From / Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§1.1307(b) & §2.1093	RF EXPOSURE	Compliance
§2.1046, §95.2767	RF Output Power	Compliance
§2.1049, §95.2773 & §95.2779(a)	Occupied Bandwidth and Emission Mask	Compliance
§2.1051 & §95.2779	Spurious Emission at Antenna Terminal	Compliance
FCC §2.1053 & §95.2779	Radiated Spurious Emission	Compliance
§2.1055 (d), §95.2765	Frequency Stability	Compliance
§2.1047 & §95.2775	Modulation Characteristic	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Sunol Sciences	Horn Antenna	DRH-118	A052604	2017-12-22	2020-12-21
Rohde & Schwarz	Signal Analyzer	FSEM	845987/005	2019-07-22	2020-07-21
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017-12-22	2020-12-21
COM-POWER	Pre-amplifier	PA-122	181919	2018-11-12	2019-11-12
Sonoma Instrument	Amplifier	310N	186238	2018-11-12	2019-11-12
Agilent	Signal Generator	N5183A	MY51040755	2018-12-03	2019-12-03
COM POWER	Dipole Antenna	AD-100	41000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2018-09-01	2021-08-31
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2019-07-09	2020-07-08
UTiFLEX MICRO-C0AX	RF Cable	UFA147A-2362-100100	MFR64639231029-003	2018-11-12	2019-11-12
Ducommun Technologies	RF Cable	104PEA	218124002	2018-11-12	2019-11-12
Ducommun technologies	RF Cable	RG-214	1	2018-11-12	2019-11-12
Ducommun technologies	RF Cable	RG-214	2	2018-11-12	2019-11-12
Ducommun Technologies	Pre-amplifier	ALN-22093530-01	991373-01	2019-08-03	2020-08-03
RF Conducted test					
HP Agilent	RF Communication Test Set	8920B	3325U00859	2019-01-15	2020-01-15
HP	Microwave frequency counter	5343A	2232A00827	2019-08-29	2022-08-29
Fluke	Digital Multimeter	287	19000011	2019-04-12	2020-04-12
ESPEC	Temperature & Humidity Chamber	EL-10KA	9107726	2019-01-05	2020-01-05
Long Wei	DC Power Supply	TPR-6420D	398363	NCR	NCR
N/A	Notch Filter	SKU 5G3	ATR0205-04-13	NCR	NCR
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2019-03-02	2020-03-01
Ducommun Technologies	RF Cable	RG-214	3	Each Time	

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307(b) & §2.1093 - RF EXPOSURE

Applicable Standard

According to FCC §1.1307(b) and §2.1093, portable device operates Part 95 should be subjected to routine environmental evaluation for RF exposure prior or equipment authorization or use.

Result: Compliance.

Please refer to SAR Report Number: RXM190920051-20

FCC §2.1046, §95.2767 - RF OUTPUT POWER**Applicable Standard**

Each MURS transmitter type must be designed such that the transmitter power output does not exceed 2 Watts under normal operating conditions

Test Procedure

Conducted RF Output Power:

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

Spectrum Analyzer Setting:

R B/W Video B/W
100 kHz 300 kHz

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Gavin Guo on 2019-10-09.

Test Mode: Transmitting

Item	Frequency (MHz)	Output Power		Limit (W)	Result
		(dBm)	(W)		
MURS	151.820	32.16	1.64	2	Pass
MURS	151.880	32.20	1.66	2	Pass
MURS	151.940	32.18	1.65	2	Pass
MURS	154.570	32.22	1.67	2	Pass
MURS	154.600	32.24	1.67	2	Pass

FCC §2.1049, §95.2773 & §95.2779(a) - OCCUPIED BANDWIDTH AND EMISSION MASK

Applicable Standard

According to §95.2773, the MURS transmitter type must be designed to meet the emission bandwidth limitations in this section:

- (a) The occupied bandwidth of emissions transmitted on the center frequencies 151.820 MHz, 151.880 MHz, and 151.940 MHz must not exceed 11.25 kHz.
- (b) The occupied bandwidth of emissions transmitted on the center frequencies 154.570 MHz and 154.600 MHz must not exceed 20.0 kHz.
- (c) The occupied bandwidth of type A3E emissions must not exceed 8.0 kHz.

According to § 95.2779(a), for transmitters designed to operate in the MURS, transmitters shall comply with the following:

Channel center frequencies (MHz)	Paragraphs
151.820, 151.880 and 151.940	(1), (2).
154.570 & 154.600, with audio filter	(3), (4), (7).
154.570 & 154.600, without audio filter	(5), (6), (7).

(1) Each MURS transmitter type that transmits F3E or G3E emissions on 154.570 MHz or 154.600 MHz and incorporates an audio filter satisfying the requirements of §95.2775 in its design may comply with the less stringent unwanted emissions attenuation requirements set forth in paragraphs (b)(3), (4), and (7) of this section.

(2) Each MURS transmitter type that transmits on 154.570 MHz or 154.600 MHz, but does not incorporate an audio filter satisfying the requirements of §95.2775 in its design, must comply with the unwanted emissions attenuation requirements set forth in paragraphs (b)(5) through (7) of this section.

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

(1) $7.27(f_d - 2.88 \text{ kHz})$ dB on any frequency removed from the channel center frequency by a displacement frequency (f_d in kHz) that is more than 5.625 kHz, but not more than 12.5 kHz.

(2) $50 + 10 \log(P)$ dB or 70 dB, whichever is the lesser attenuation, on any frequency removed from the channel center frequency by more than 12.5 kHz.

(3) 25 dB on any frequency removed from the channel center frequency by more than 10 kHz, but not more than 20 kHz.

(4) 35 dB on any frequency removed from the channel center frequency by more than 20 kHz, but not more than 50 kHz.

(5) $83 \log (fd \div 5)$ dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) that is more than 5 kHz, but not more than 10 kHz.

(6) $29 \log (fd^2 \div 11)$ dB or 50 dB, whichever is the lesser attenuation on any frequency removed from the channel center frequency by a displacement frequency (fd in kHz) that is more than 10 kHz, but not more than 50 kHz.

(7) $43 + 10 \log(P)$ dB on any frequency removed from the channel center frequency by more than 50 kHz.

(c) Measurement bandwidths. The power of unwanted emissions in the frequency bands specified in paragraphs (b)(1) and (3) through (6) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency ranges specified in paragraphs (b)(2) and (7) of this section is measured with a reference bandwidth of at least 30 kHz.

Test Procedure

TIA-603-D, section 2.2.11

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

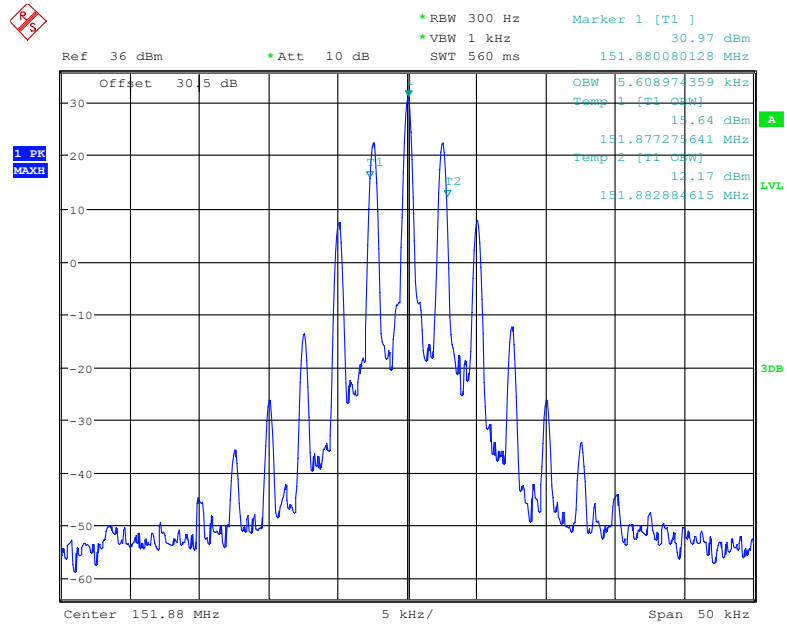
The testing was performed by Gavin Guo on 2019-10-10.

Test Mode: Transmitting

Item	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
MURS	151.88	5.609	11.25	Pass
MURS	154.60	10.417	20	Pass

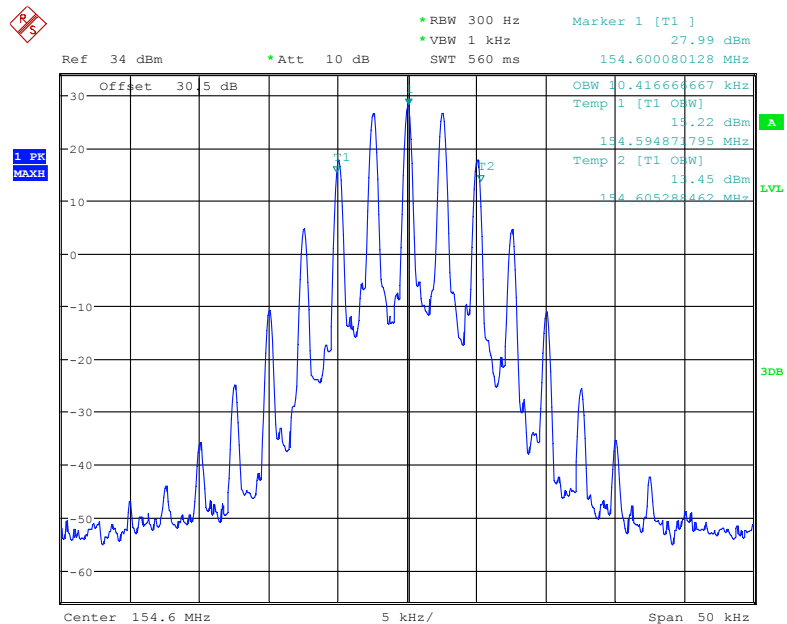
Occupied Bandwidth:

151.88 MHz



Date: 10.OCT.2019 15:25:57

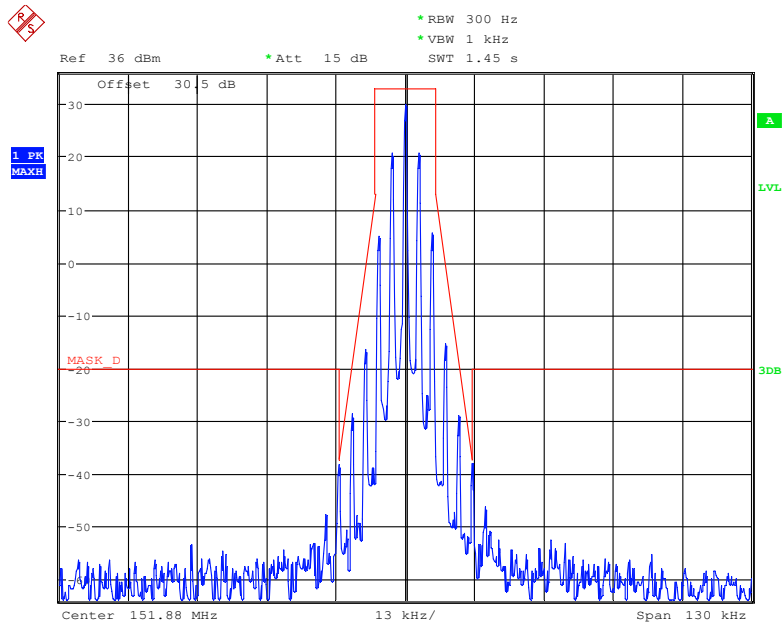
154.6 MHz



Date: 10.OCT.2019 15:22:14

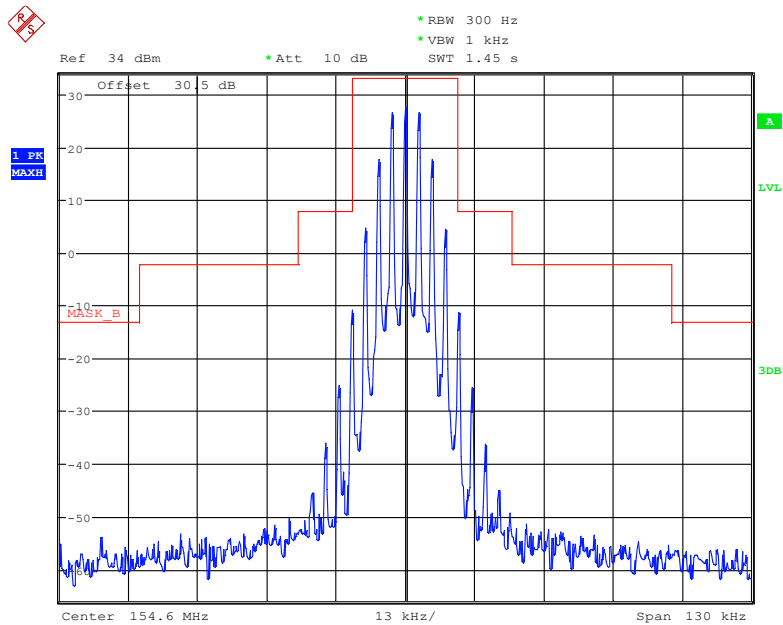
Emission Mask:

151.88 MHz



Date: 10.OCT.2019 15:41:17

154.6 MHz



Date: 10.OCT.2019 15:23:26

FCC §2.1051 & § 95.2779 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

According to §95.2779, for transmitters designed to operate in the MURS, transmitters shall comply with the following:

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001)-the absolute level

For 151.820 MHz, 151.880 MHz and 151.940 MHz:

Spurious attenuation limit in dB = 50+10 Log₁₀ (power out in Watts)

For 154.570 MHz and 154.600 MHz:

Spurious attenuation limit in dB = 43+10 Log₁₀ (power out in Watts)

Test Procedure

The RF output of the EUT was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz for below 1GHz, and 1MHz for above 1GHz. sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Test Data

Environmental Conditions

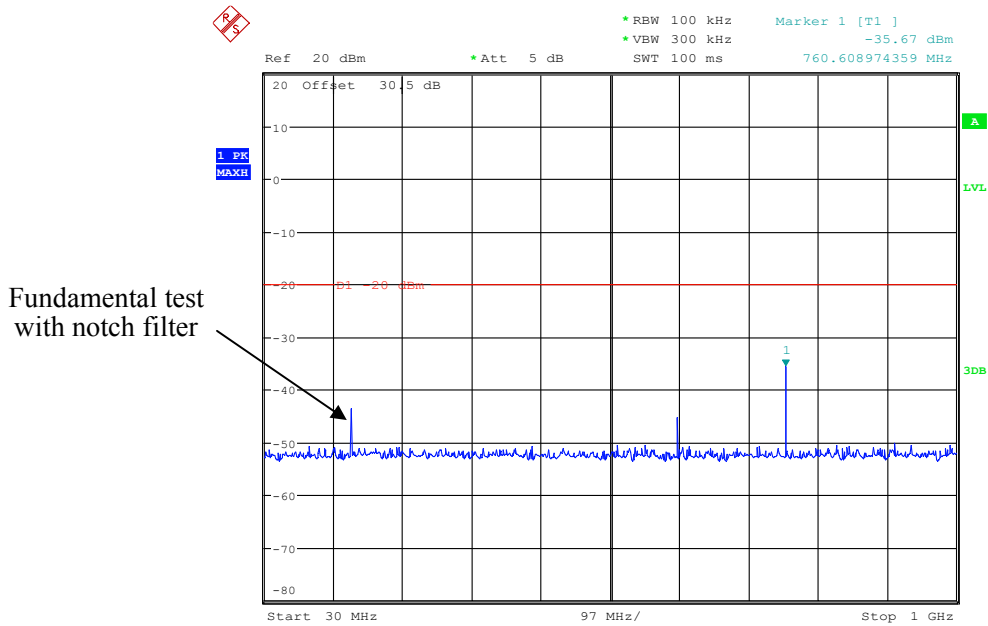
Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Gavin Guo on 2019-10-09.

Test Mode: Transmitting

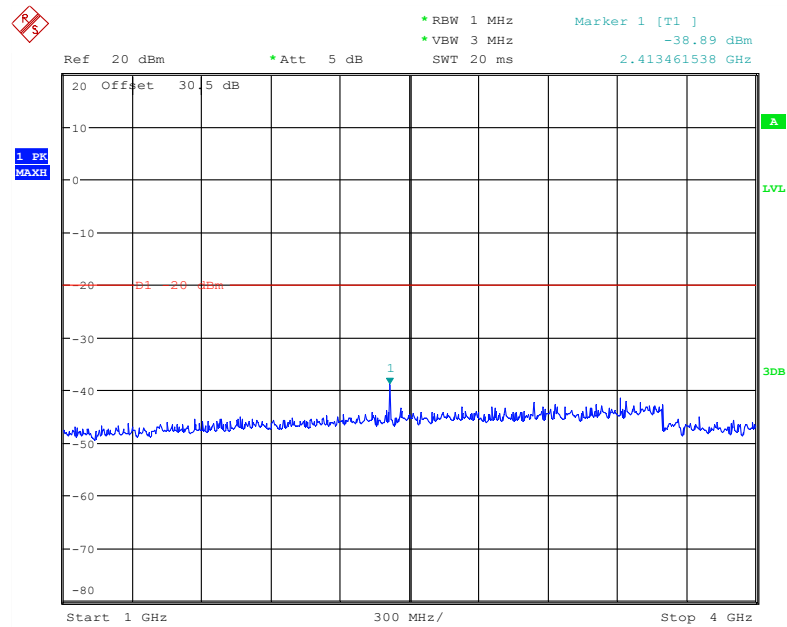
Please refer to the following plots.

30 MHz – 1 GHz, 151.88 MHz



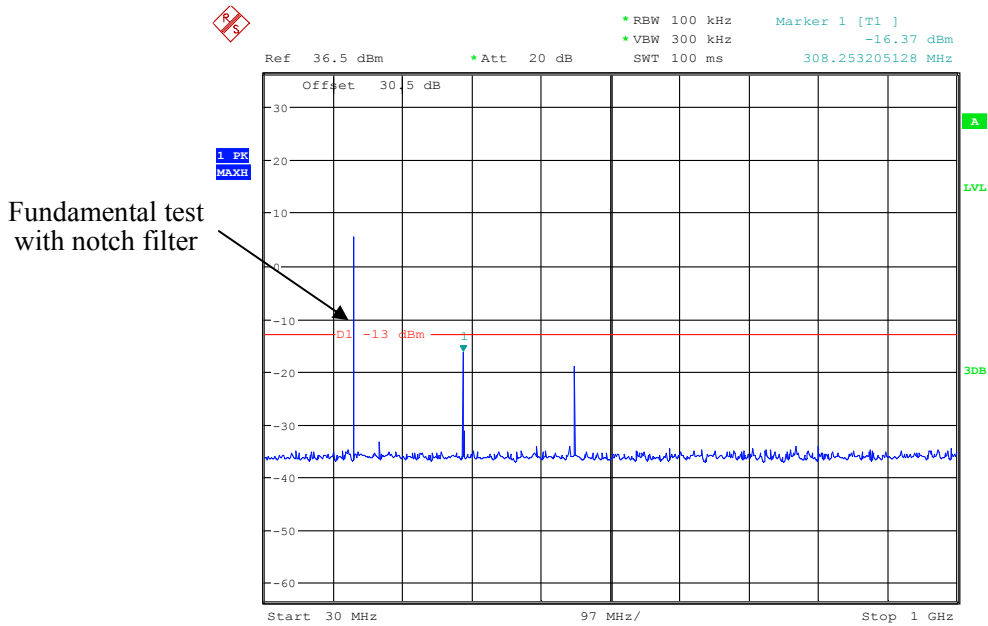
Date: 9.OCT.2019 14:05:54

1 GHz – 4 GHz, 151.88 MHz



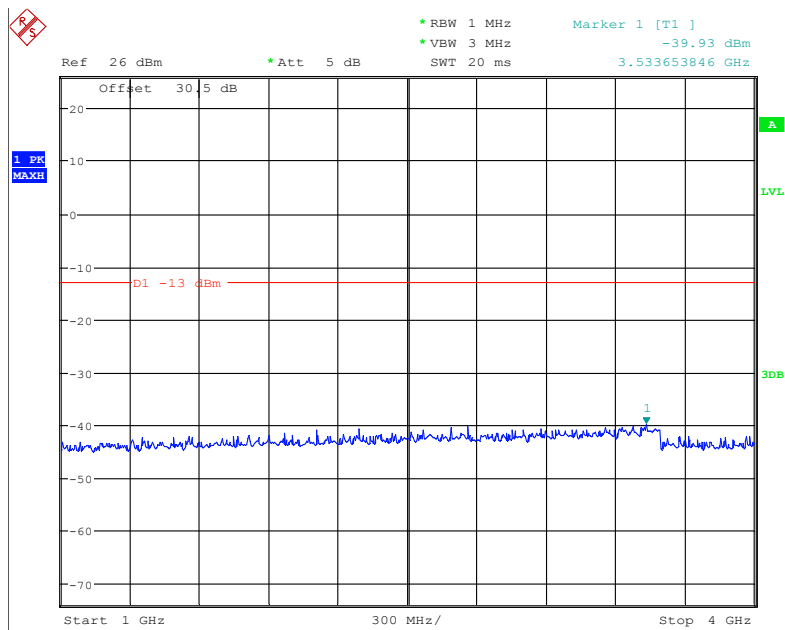
Date: 9.OCT.2019 14:09:58

30 MHz – 1 GHz, 154.6 MHz



Date: 9.OCT.2019 13:53:44

1 GHz – 4 GHz, 154.6 MHz



Date: 9.OCT.2019 13:56:18

FCC §2.1053 & §95.2779 - RADIATED SPURIOUS EMISSION

Applicable Standard

FCC §2.1053 & §95.2779

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

For 151.820 MHz, 151.880 MHz and 151.940 MHz:

Spurious attenuation limit in dB = 50+10 Log₁₀ (power out in Watts)

For 154.570 MHz and 154.600 MHz:

Spurious attenuation limit in dB = 43+10 Log₁₀ (power out in Watts)

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Zero Yan and by Curry Xiang on 2019-10-08.

Test Mode: Transmitting

Channel: 151.88MHz

Indicated		Table Angle Degree	Test Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Receiver Reading (dBuV)		Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
303.76	53.97	308	2.4	H	-47.5	0.71	0.0	-48.21	-20	28.21
303.76	42.59	102	1.1	V	-57.3	0.71	0.0	-58.01	-20	38.01
1063.16	45.71	338	2.3	H	-63.0	1.60	6.20	-58.40	-20	38.40
1063.16	44.22	175	1.5	V	-65.4	1.60	6.20	-60.80	-20	40.80
1215.04	45.68	315	1.7	H	-62.4	1.50	6.80	-57.10	-20	37.10
1215.04	44.10	173	2.1	V	-63.6	1.50	6.80	-58.30	-20	38.30
1366.92	48.53	170	1.1	H	-59.8	1.60	7.90	-53.50	-20	33.50
1366.92	47.62	114	1.8	V	-60.9	1.60	7.90	-54.60	-20	34.60
1518.80	47.35	111	1.0	H	-61.3	1.60	8.50	-54.40	-20	34.40
1518.80	46.30	60	1.0	V	-62.7	1.60	8.50	-55.80	-20	35.80

Channel: 154.6 MHz

Indicated		Table Angle Degree	Test Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Receiver Reading (dBuV)		Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
309.2	53.42	331	2.0	H	-48.1	0.71	0.0	-48.81	-13	35.81
309.2	40.91	39	1.3	V	-58.9	0.71	0.0	-59.61	-13	46.61
1082.20	44.41	177	2.0	H	-64.3	1.60	6.20	-59.70	-13	46.70
1082.20	46.21	330	2.0	V	-63.4	1.60	6.20	-58.80	-13	45.80
1236.80	43.40	336	1.5	H	-64.6	1.50	6.80	-59.30	-13	46.30
1236.80	43.12	219	1.8	V	-64.6	1.50	6.80	-59.30	-13	46.30
1391.40	45.13	196	1.2	H	-63.2	1.60	7.90	-56.90	-13	43.90
1391.40	46.24	233	1.0	V	-62.3	1.60	7.90	-56.00	-13	43.00
1546.00	43.86	259	2.2	H	-64.8	1.60	8.50	-57.90	-13	44.90
1546.00	44.95	37	1.2	V	-64.0	1.60	8.50	-57.10	-13	44.10

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2: Absolute Level = SG Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

FCC§2.1055 (d), §95.2765 - FREQUENCY STABILITY**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.

(a) MURS transmitters that operate with an emission bandwidth of 6.25 kHz or less must be designed such that the carrier frequencies remain within ± 2.0 parts-per-million (ppm) of the channel center frequencies specified in §95.2763 during normal operating conditions.

(b) MURS transmitters that operate with an emission bandwidth greater than 6.25 kHz must be designed such that the carrier frequencies remain within ± 5.0 ppm of the channel center frequencies specified in §95.2763 during normal operating conditions.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC 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 DC 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**

Temperature:	24 °C
Relative Humidity:	54 %
ATM Pressure:	101.0 kPa

The testing was performed by Gavin Guo on 2019-10-09.

Test Mode: Transmitting

MURS: 151.88 MHz

Reference Frequency: 151.88 MHz, Limit: ± 2 ppm			
Environment Temperature (°C)	Voltage Supplied (V _{DC})	Measurement Frequency (MHz)	Frequency Error (ppm)
Frequency Stability Ver. Temperature			
50	7.4	151.880063	0.415
40	7.4	151.880068	0.445
30	7.4	151.880073	0.481
20	7.4	151.880079	0.520
10	7.4	151.880082	0.539
0	7.4	151.880091	0.602
-10	7.4	151.880095	0.626
-20	7.4	151.880104	0.684
-30	7.4	151.880106	0.699
Frequency Stability Ver. Input Voltage			
20	6.4	151.880082	0.543
20	8.1	151.880091	0.599

MURS: 154.6 MHz

Reference Frequency: 154.6 MHz, Limit: ± 5 ppm			
Environment Temperature (°C)	Voltage Supplied (V _{DC})	Measurement Frequency (MHz)	Frequency Error (ppm)
Frequency Stability Ver. Temperature			
50	7.4	154.600058	0.375
40	7.4	154.600061	0.392
30	7.4	154.600063	0.406
20	7.4	154.600065	0.418
10	7.4	154.600071	0.462
0	7.4	154.600072	0.463
-10	7.4	154.600081	0.524
-20	7.4	154.600082	0.529
-30	7.4	154.600058	0.578
Frequency Stability Ver. Input Voltage			
20	6.4	154.600066	0.429
20	8.1	154.600072	0.466

FCC §2.1047 & §95.2775 - MODULATION CHARACTERISTIC**Applicable Standard**

Per FCC §2.1047 and §95.2775: The audio filter must be between the modulation limiter and the modulated stage of the transmitter. And at any frequency (f in kHz) between 3 and 15 kHz, the filter must have an attenuation of at least $40 \log(f/3)$ dB more than the attenuation at 1 kHz. Above 15 kHz, it must have an attenuation of at least 28 dB more than the attenuation at 1 kHz.

Test Procedure

Test Method: TIA/EIA-603-D

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Gavin Guo on 2019-10-09.

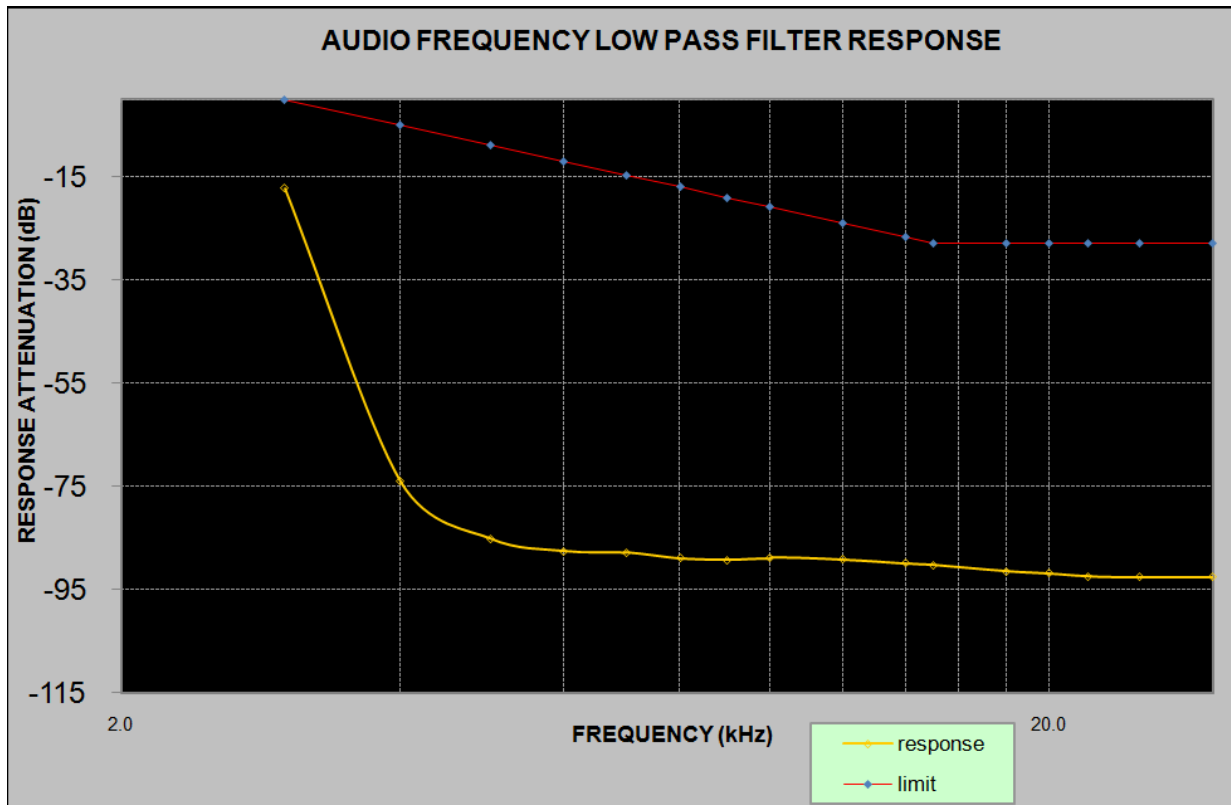
Please refer to the following tables and plots.

Test Mode: Transmitting

Audio frequency lows pass filter response

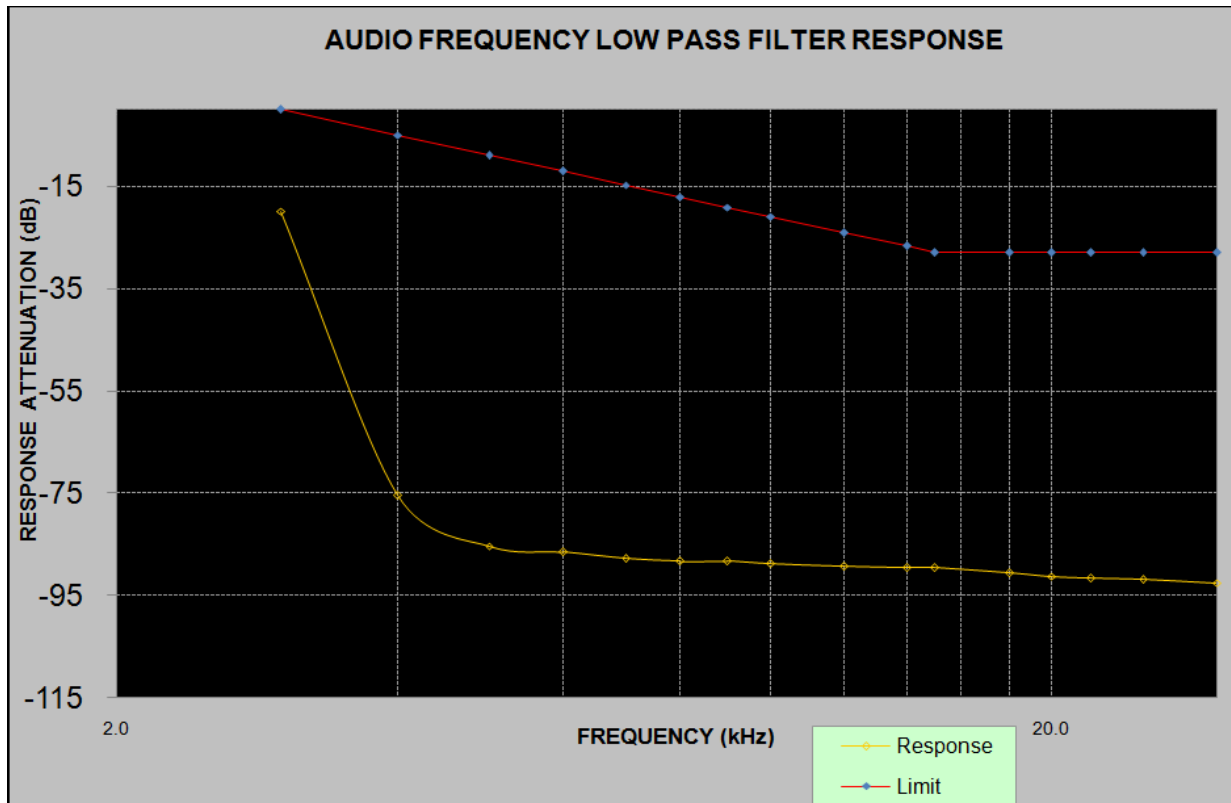
Carrier Frequency: 151.88MHz

Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1.0	0.0	/
3.0	-17.3	0.0
4.0	-74.1	-5.0
5.0	-85.2	-8.9
6.0	-87.6	-12.0
7.0	-87.9	-14.7
8.0	-88.9	-17.0
9.0	-89.3	-19.1
10.0	-88.9	-20.9
12.0	-89.2	-24.1
14.0	-89.9	-26.8
15.0	-90.3	-28.0
18.0	-91.5	-28.0
20.0	-91.9	-28.0
22.0	-92.5	-28.0
25.0	-92.6	-28.0
30.0	-92.6	-28.0



Carrier Frequency: 154.6MHz

Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1.0	0.0	/
3.0	-19.9	0.0
4.0	-75.4	-5.0
5.0	-85.4	-8.9
6.0	-86.6	-12.0
7.0	-87.8	-14.7
8.0	-88.4	-17.0
9.0	-88.3	-19.1
10.0	-88.9	-20.9
12.0	-89.4	-24.1
14.0	-89.6	-26.8
15.0	-89.7	-28.0
18.0	-90.6	-28.0
20.0	-91.3	-28.0
22.0	-91.7	-28.0
25.0	-91.9	-28.0
30.0	-92.6	-28.0



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