

FCC ID: 2A6ET-RT5302

Report No.: LCS220309090AEA



### **FCC TEST REPORT**

### For

### ShenZhen Ankbit Electronics Limited

# Original Voice Amplifier

Test Model: MK04

Additional Model: Please Refer to Page 6

Prepared for : ShenZhen Ankbit Electronics Limited

Address : Room 401, Building B, Runfeng Industrial Park, No. 4197 Baoan Blvd.,

Xixiang St., Baoan Dist., Shenzhen, China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei,

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Tel : (+86)755-82591330 Fax : (+86)755-82591332 Web : www.LCS-cert.com

Mail : webmaster@LCS-cert.com

Date of receipt of test sample : March 31, 2022

Number of tested samples : 1

Sample No : 220309090A

Serial number : Prototype

Date of Test : March 31, 2022 ~ April 20, 2022

Date of Report : April 21, 2022





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**FCC TEST REPORT** FCC CFR 47 PART 74

Report Reference No. .....: LCS220309090AEA

Date of Issue .....: April 21, 2022

Testing Laboratory Name.....: Shenzhen LCS Compliance Testing Laboratory Ltd.

Address ...... : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei,

Shajing Street, Baoan District, Shenzhen, 518000, China

Report No.: LCS220309090AEA

Testing Location/ Procedure.....: Full application of Harmonised standards ■

Partial application of Harmonised standards

Other standard testing method

Applicant's Name.....: ShenZhen Ankbit Electronics Limited

Address ...... : Room 401, Building B, Runfeng Industrial Park, No. 4197 Baoan

Blvd., Xixiang St., Baoan Dist., Shenzhen, China

Test Specification

Standard...... FCC CFR 47 PART 74

Test Report Form No. .....: LCSEMC-1.0

TRF Originator ......: Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF .....: Dated 2011-03

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EUT Description. .....: Original Voice Amplifier

Trade Mark.....: N/A

Test Model .....: MK04

Ratings .....: Input: DC 5V, 1A

DC 3.7V by Rechargeable Li-ion Battery, 550mAh

Result .....: Positive

Compiled by:

Supervised by:

Approved by:

Lh Li/ Administrator

Jin Wang/ Technique principal

Gavin Liang/ Manager





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### FCC -- TEST REPORT

April 21, 2022 **Test Report No.:** LCS220309090AEA Date of issue

Test Model..... : MK04 : Original Voice Amplifier Applicant..... : ShenZhen Ankbit Electronics Limited : Room 401, Building B, Runfeng Industrial Park, No. 4197 Baoan Address..... Blvd., Xixiang St., Baoan Dist., Shenzhen, China Telephone..... Fax..... : / Manufacturer..... : ShenZhen Ankbit Electronics Limited Address..... : Room 401, Building B, Runfeng Industrial Park, No. 4197 Baoan Blvd., Xixiang St., Baoan Dist., Shenzhen, China Telephone..... : / Fax..... : ShenZhen Ankbit Electronics Limited Factory..... Address..... : Room 401, Building B, Runfeng Industrial Park, No. 4197 Baoan Blvd., Xixiang St., Baoan Dist., Shenzhen, China Telephone.....

- The sing	71.77	- ILVI sing
Test Result	MSA LOSTEST	Positive

The 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.



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#### **Revision History**

Revision	Issue Date	Revision Content	Revised By
000	April 21, 2022	Initial Issue	

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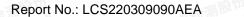














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### 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : Original Voice Amplifier

Test Model : MK04

Additional Model No. : MK01, MK02, MK03

Model Declaration : PCB board, structure and internal of these model(s) are the same, So

no additional models were tested.

Hardware Version : RT5062-TX VER:V02

Software Version : TX-MCU:7C2E

Power Supply : Input: DC 5V, 1A

DC 3.7V by Rechargeable Li-ion Battery, 550mAh

UHF(545.6MHz-560.3MHz)

Operation frequency : 545.6MHz-560.3MHz

Modulation Type : FM

Channel Number : 50channels
Channel Spacing : 300KHz

Antenna Type : Internal Antenna

Antenna Gain : 0dBi

Extreme temp. Tolerance : -30°C to +50°C

### 1.2. Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate

#### 1.3. External I/O Cable

I/O Port Description	Quantity	Cable
Type-C USB Port	1 ~ 服务	USB Cable: 1.2m, unshielded

### 1.4. Description of Test Facility

NVLAP Accreditation Code is 600167-0. FCC Designation Number is CN5024. Test Firm Registration Number: 254912

CAB identifier is CN0071.

CNAS Registration Number is L4595. Test Firm Registration Number: 254912.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR

16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.



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### 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 LCS 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		Frequency Range	Uncertainty	Note
Title Testing Lan		9KHz~30MHz	±3.10dB	(1)
PAT TC2		30MHz~200MHz	±2.96dB	(1)
Radiation Uncertainty	:	200MHz~1000MHz	±3.10dB	(1)
		1GHz~26.5GHz	±3.80dB	(1)
		26.5GHz~40GHz	±3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±1.63dB	(1)
Power disturbance	:	30MHz~300MHz	±1.60dB	(1)

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



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1.7. Description of Test Modes

The EUT has been tested under operating condition.

This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

Worst-case mode and channel used for 150 kHz-30 MHz power line conducted emissions was the mode and channel with the highest output power, which was determined to be (HCH).

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Worst-case mode and channel used for 9kHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be (HCH).

Pre-test AC conducted emission at charge from PC mode, recorded worst case.

Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded worst case.

Worst-Case data rates were utilized from preliminary testing of the Chipset, worst-case data rates used during the testing are as follows:

### 1.8. Frequency of Channels

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	545.60	18	550.70	35	555.80
2	545.90	19	551.00	36	556.10
3	546.20	20	551.30	37	556.40
4	546.50	21	551.60	38	556.70
5	546.80	22	551.90	39	557.00
6	♦ 547.10	23	552.20	40	557.30
7	547.40	24	552.50	41	557.60
8	547.70	25	552.80	cs 1es 42	557.90
9	548.00	26	553.10	43	558.20
10	548.30	27	553.40	44	558.50
11	548.60	28	553.70	45	558.80
12	548.90	29	554.00	46	559.10
13	549.20	30	554.30	47	559.40
14	549.50	31	554.60	48	559.70
15	549.80	32	554.90	49	560.00
16	550.10	33	555.20	50	560.30
17	550.40	34	555.50		



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### 2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.26-2015:American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

The radiated testing was performed at an antenna-to-EUT distance of 3 meters. All radiated and conducted emissions measurement was performed at Shenzhen LCS Compliance Testing Laboratory Ltd.

### 2.1. 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.

#### 2.2. EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section FCC Rules Part 74.

#### 2.3. General Test Procedures

#### 2.3.1 Radiated Emissions

please refer to radated spurioes emission







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### 3. SYSTEM TEST CONFIGURATION

#### 3.1. Justification

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

### 3.2. EUT Exercise Software

The system was configured for testing in a continuous transmits condition; and transmission frequency by switch button control.

### 3.3. Special Accessories

N/A

# 3.4. Block Diagram/Schematics

Please refer to the related document

### 3.5. Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

### 3.6. Test Setup

Please refer to the test setup photo.





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# 4. SUMMARY OF TEST RESULTS

Applied Standard: FCC Part 74			
FCC Rules	Description of Test	Result	
FCC Part 74.861(e)(1)(ii) FCC Part 2.1046	Maximum Conducted Output Power	Compliant	
FCC Part 74.861 (e)(5) FCC Part 2.1049	Occupied Bandwidth	Compliant	
FCC Part 74.861 (e)(4) FCC Part 2.1055	Frequency error	Compliant	
FCC Part 74.861(e)(6) 2.1053	Transmitter unwanted emissions(radiated or conducted)	Compliant	
FCC Part 2.1049 FCC Part 2.1047	Modulation characteristic	Compliant	
FCC Part 74.861 (e)(7) FCC Part 2.1049	Necessary bandwidth (BN) for analogue systems	Compliant	











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### 5. TEST RESULT

### 5.1. Transmitter output power

### 5.1.1. Measurement description:

Two traces are captured to show the difference between input- and output signals and to measure the effective output power of the device. Trace 1 shows the measurement results of the output signal and trace 2 shows the measurement results of the input signal. Marker D2 in the plots shows the difference between the input and the output signal

### 5.1.2. Measurement:

	, C5		
Measurement parameter			
Detector:	Peak (worst case) / Average (RMS)		
Sweep time:	Auto / 20s		
Resolution bandwidth:	> emission bandwidth		
Video bandwidth:	> resolution bandwidth		
Span:	> 2 times emissions bandwidth		
Trace mode:	Max. hold		
	Peak:		
	Unmodulated carrier		
1	RMS:		
」が 大学 Testing Lab	Modulate the transmitter with a 2.5 kHz		
	tone at a level 16 dB higher than that		
EUT configuration:	required to produce a frequency		
	deviation of ± 75 kHz, or to produce		
	50% of the manufacturer's rated		
	deviation, whichever is less.		

### 5.1.3. Limits:

	FCC
上讯检测股份 1.0b	470 MHz to 608 MHz 250 mW (average) / 24 dBm (average)

#### 5.1.4. Test result:

The EUT was programmed to be in continuously transmitting mode.

#### 5.1.5. Test result

Test Mode	Channel	Frequency (MHz)	Measured Maximum Peak Power(dBm)	Measured Maximum Average Power(dBm)	Limits Average (dBm)	Verdict
	1	545.60	3.925	/		
FM	25	552.80	3.358	/	24	PASS
- ar 47	50	560.30	3.359	1 102 43		-1 10



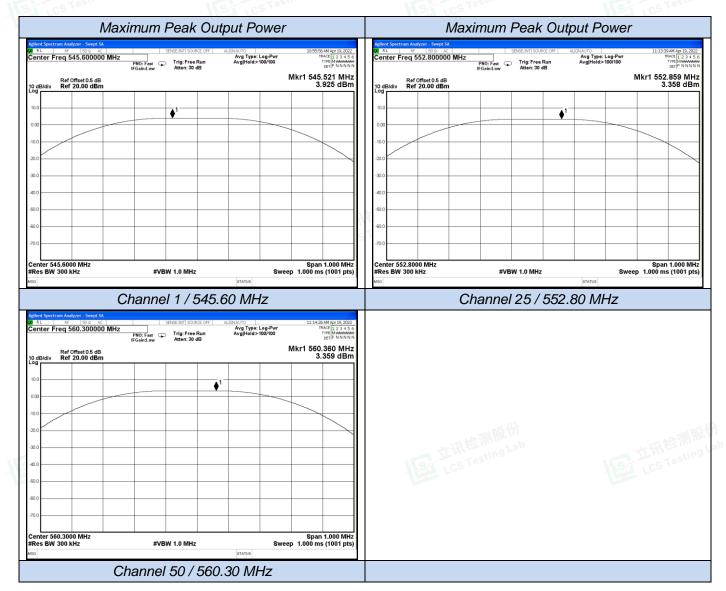
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#### 5.2. Occupied bandwidth and Emission Mask

### 5.2.1. Measurement description:

Two traces are captured to show the difference between input- and output signals and to measure the effective bandwidth of the output signal. Trace 1 shows the measurement results of the output signal and trace 2 shows the measurement results of the input signal.

#### 5.2.2. Measurement:

Measurement parameter			
Detector:	Peak		
Sweep time:	Auto No. 105 Tes		
Resolution bandwidth:	1 % to 5 % of the occupied bandwidth		
Video bandwidth:	3 x resolution bandwidth		
Span:	2 x emission bandwidth		
Trace mode:	Max. hold		
Analyzer function:	99% power occupied bandwidth		
Analyzer randien.	function		
EUT:	Modulated signal with max. frequency		
201.	deviation		

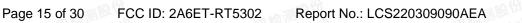
#### 5.2.3. Result:

Test Mode	Channel	Frequency (MHz)	99% Bandwidth (KHz)	Limits (KHz)	Verdict
	1	545.60	185.67		
FM	25	552.80	185.39	200	PASS
	50	560.30	185.12		



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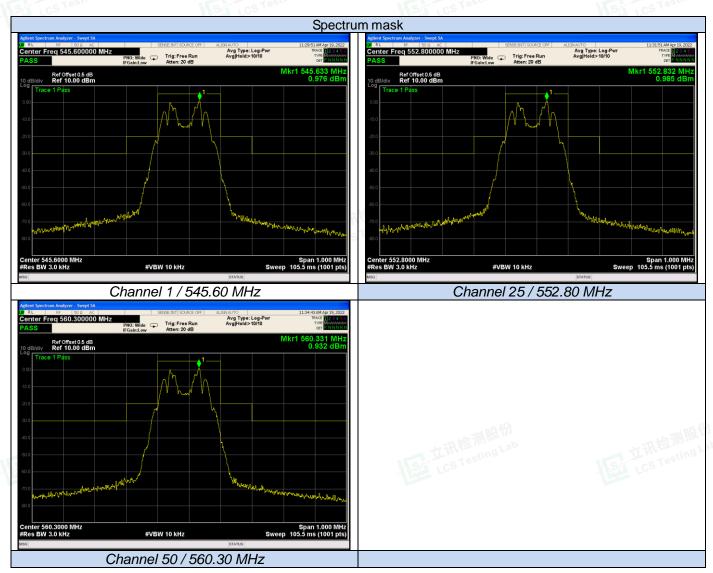




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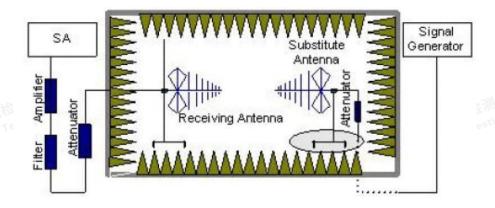


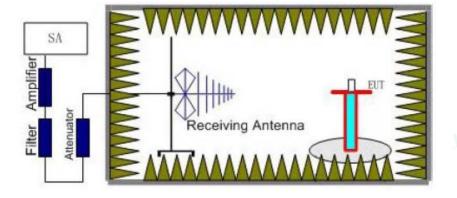


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- 5.3. Transmitter unwanted emissions(radiated or conducted)
- 5.3.1. Measurement description:

#### **TEST CONFIGURATION**





### **TEST PROCEDURE**

- 1. EUT was placed on a 1.50 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 1.50 m. 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 transmit frequencies in three channels (High, Middle, Low) 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<sub>r</sub>).



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- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an 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<sub>Mea</sub>) 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<sub>r</sub>). The power of signal source (P<sub>Mea</sub>) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
- 5. A amplifier should 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: 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 (2.15 dBi) and known input power.
- 7. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.
- 8. In order to make sure test results more clearly, we set frequency range and sweep time for difference frequency range as follows table:

#### **TEST LIMITS**

FCC & IC (according to ETSI EN 300 422-1 V2.1.2 (2017-01))						
	Max. spurious level					
State	47 MHz to 74 MHz 87.5 MHz to 118 MHz 174 MHz to 230 MHz	Other frequencies ≤ 1000 MHz	All frequencies > 1000 MHz			
Operating	4.0 nW	250 nW	1.00 µW			
Standby	2.0 nW	2.0 nW	20.0 nW			

FCC & IC					
The mean power of emissions shall be attenuated below the mean output power of the transmitter in					
accordance with the follow	ring schedule:				
On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the	25 dB				
On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of	35 dB				
On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least	43 + 10log10 (mean output power in watts) dB				



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5.3.2. Results for Radiated Emissions

Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
		545.60MHz			
147.67	Н	-43.94	-36.00	-7.94	PK
65.23	V	-58.44	-54.00	-4.44	PK
324.31	Н	-40.66	-36.00	-4.66	PK
703.50	V	-61.22	-54.00	-7.22	PK
4926.84	Н	-40.68	-30.00	-10.68	PK
4926.95	V	-35.72	-30.00	-5.72	PK
7389.56	) H	-38.65	-30.00	-8.65	PK
7397 09	3/D \/	-1151	-30 00	-1151	DK

Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
		552.80MHz			
91.01	Н	-68.38	-54.00	-14.38	PK
129.80	V	-38.20	-36.00	-2.20	PK
190.12	Н	-69.07	-54.00	-15.07	PK
224.70	V	-63.39	-54.00	-9.39	PK
4926.85	Н	-41.83	-30.00	-11.83	PK
4926.55	V	-38.39	-30.00	-8.39	PK
7387.30	Н	-42.37	-30.00	-12.37	PK
7386.36	V	-43.66	-30.00	-13.66	PK

4.44 (3.17)				4 C) - V	
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
		560.30MHz			
40.43	Н	-48.68	-36.00	-12.68	PK
84.54	V	-46.93	-36.00	-10.93	PK
869.42	Н	-40.06	-36.00	-4.06	PK
221.12	V	-67.59	-54.00	-13.59	PK
4924.13	Н	-41.88	-30.00	-11.88	PK
4925.19	V	-35.17	-30.00	-5.17	PK
7386.82	Н	-41.73	-30.00	-11.73	PK
7388.84	V	-35.56	-30.00	-5.56	PK

Note: 1, All detected emissions are more than 20 dB below the limit, In addition to main frequency.



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### 5.4. Conducted spurious emission

#### 5.4.1. Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. The EUT is set to channel 6. This measurement is repeated for DSSS and OFDM modulation. If peaks are found channel 1 and channel 11 will be measured too. The measurement is performed with the data rate producing the highest output power. Both power lines, phase and neutral line, are measured. Found peaks are re-measured with average and quasi peak detection to show compliance to the limits.

#### 5.4.2. Measurement:

· V //// 135c	V =      135c					
Measurement parameter						
Detector: Peak - Quasi Peak / Average						
Sweep time:	Auto					
Resolution bandwidth:	F < 150 kHz:	200 Hz				
Resolution bandwidth.	F > 150 kHz:	9 kHz				
Video bandwidth:	F < 150 kHz:	1 kHz				
video baridwidiri.	F > 150 kHz:	100 kHz				
Span:	9 kHz to 30 MHz					
Trace mode:	Max Hold	27				

#### 5.4.3. Limits:

Ca. MENA 1 Ca. MENA 1 Ca. MENA 1 Ca.							
	FCC						
Frequency (MHz)	Quasi-Peak (dBμV/m)	Average (dBµV/m)					
0.15 – 0.5	66 to 56*	56 to 46*					
0.5 – 5	56	46					
5 – 30.0	60	50					

5.4.4. Results: Not Applicable.



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### 5.5. Frequency Stability

Test Requirement:FCC CFR 47 Part 74.e) 4)

Test Method:FCC CFR 47 Part 2.1055

Requirements:+/-50 ppm

- (e) For low power auxiliary stations operating in the bands allocated for TV broadcasting, the following technical requirements apply:
  - (4) The frequency tolerance of the transmitter shall be 0.005 percent.

Test Procedure:

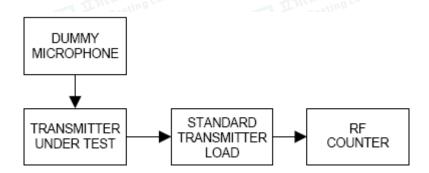
Frequency stability versus Environmental Temperature

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. After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.

### Frequency Stability versus Input Voltage

At room temperature ( $25 \pm 5^{\circ}$ C), an external variable DC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage. For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.







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#### Test Result:

	Assigned Frequence	cy: 545.60MHz,
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within +/- 28.025 kHz
50	3.7	+2.73
40	3.7	+2.31
30	3.7	+2.10
20	3.7	+1.72
10	3.7	-1.09 -1.09
0	3.7	-1.58
-10	3.7	-1.87
-20	3.7	-2.23
-30	3.7	-2.47
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within Max +/- 28.025 kHz
25	4.2	+2.03
25	3.7	-1.82
25	3.3	-2.20
Testing Lab	I Masting Lab	Till Testing Land

	Assigned Frequence	cy: 552.80 MHz
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within +/- 28.625 kHz
50	3.7	+2.24
40	3.7	+2.09
30	3.7	+1.56
20	3.7	+1.25
10	3.7	-1.19
0	3.7	-1.64
15 105 Tes -10	3.7	-1.65
-20	3.7	-2.08
-30	3.7	-2.36
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within Max +/- 28.625 kHz
25	4.2	+1.07
25	3.7	-1.21
25	3.3	-1.35
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	Assigned Frequence	cy: 560.30 MHz
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within +/- 29.225 kHz
50	3.7	+2.72
40	3.7	+2.36
30	3.7	+2.09
20	3.7	+1.79
10	3.7	-0.98
0	3.7	-1.42
-10	3.7	-1.66
-20	3.7	-2.56
-30	3.7	-2.81
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed Total emission within Max +/- 29.225 kHz
25	4.2	+2.25
25	3.7	-1.73
25	3.3	-2.07

Battery end point: 3.7Vdc

The results: The unit does meet the FCC requirements.







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#### 5.6. Modulation Characteristics

Test Requirement:FCC CFR 47 Part 74.e) 3)

Test Method:FCC CFR 47 Part 2.1047 & TIA/EIA 603 E 2016:Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

#### Requirements:

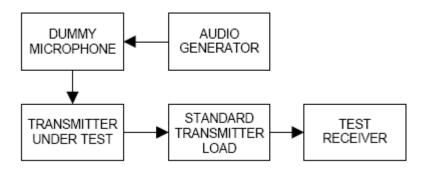
- (e) For low power auxiliary stations operating in the bands allocated for TV broadcasting, the following technical requirements apply:
- (3) Any form of modulation may be used. A maximum deviation of ±75 kHz is permitted when frequency modulation is employed.

Test Procedure:

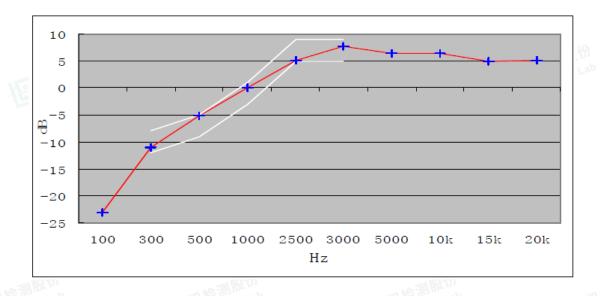
#### **Audio Frequency Response**

The RF output of the transceiver was connected to the input of FSP 30 with FM deviation module through sufficient attenuation so as not to overload the meter or distort the reading. An audio signal generator was connected to the audio input of microphone.

The audio signal input level was adjusted to obtain 20% of the maximum rated system deviation at 1 kHz, and recorded as DEV REF. With the audio signal generator level unchanged, set the generator frequency between 100 to 5000 Hz. The transmitter deviations (DEV FREQ ) were measured and the audio frequency response was calculated as 20log10 [DEV FREQ / DEV REF ]



The plot(s) of Audio Frequency Response is presented hereinafter as reference.





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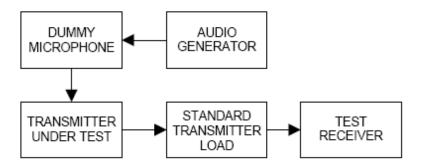
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0dB=10mV at 1kHz (20% of the maximum rated system deviation).

### **Modulation Limiting**

- a) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
- b) Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤0.25 Hz to ≥15,000 Hz. Turn the de-emphasis function off.
- c) Apply a **1000 Hz** modulating signal to the transmitter from the audio frequency generator, and adjust the level to obtain 60% of full rated system deviation.
- d) Increase the level from the audio frequency generator by 20 dB in one step (rise time between the 10% and 90% points shall be 0.1 second maximum).
- e) Measure both the instantaneous and steady-state deviation at and after the time of increasing the audio input level.
  - With the level from the audio frequency generator held constant at the level obtained in step e), slowly vary the audio frequency from 100 to 15k Hz and observe the steady-state deviation. Record the maximum deviation.



Test at five different modulating frequencies (100Hz ,300Hz, 500Hz, 1KHz, 2.5kHz, 5kHz, 10kHz, 15kHz), the output level of the audio generator was varied up to 1V and the FM deviation level was recorded.

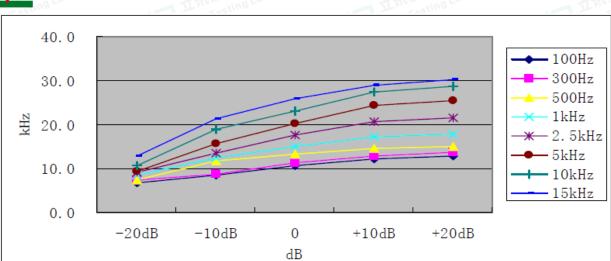
I	P	ositive	npak	devis	tion
ı	_	osilive	DEak	uevic	111011

	- 115
Test Frequency	552.80MHz



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### 5.7. Necessary bandwidth (BN) for analogue systems

### 5.7.1.Measurement:

Measurement parameter					
Detector:	Peak - Quasi Peak / Average				
Sweep time:	Auto 1 kHz				
Resolution bandwidth:					
Video bandwidth:	1 kHz				
Span:	Span: Fc-1MHz to fc+1MHz(2MHz)				
Trace mode:	Max Hold				

### 5.7.2.Limits:







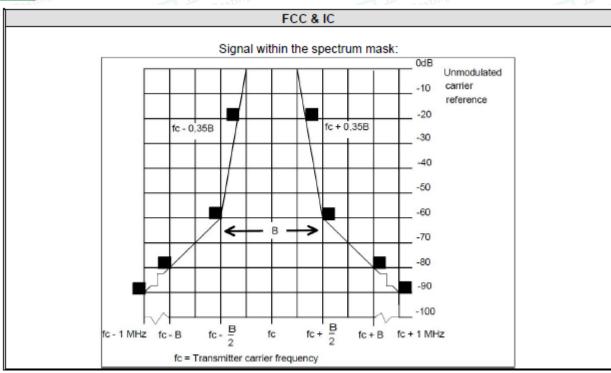
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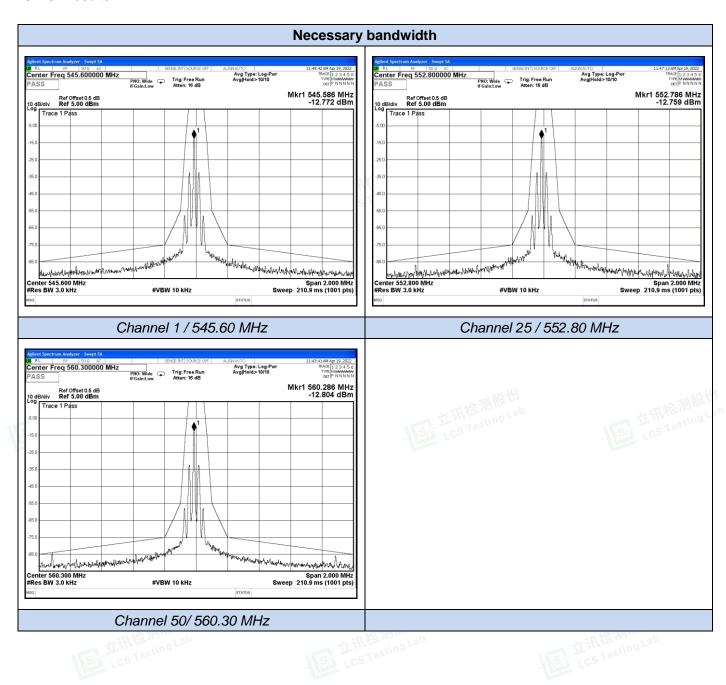






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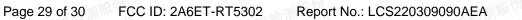
#### 5.7.3. Results:





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# **6. LIST OF MEASURING EQUIPMENTS**

Ite m	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2021-11-16	2022-11-15
2	DC Power Supply	Agilent	E3642A	N/A	2021-11-25	2022-11-24
3	Temperature & Humidity Chamber	GUANGZHOU GOGNWEN	GDS-100	70932	2021-10-07	2022-10-06
4	EMI Test Software	AUDIX	E3	/	N/A	N/A
5	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2021-06-21	2022-06-20
6	Positioning Controller	MF	MF7082	MF78020803	2021-06-21	2022-06-20
7	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2021-07-25	2024-07-24
8	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-07-25	2024-07-24
9	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-07-01	2024-06-30
10	EMI Test Receiver	R&S	ESR 7	101181	2021-06-21	2022-06-20
11	RS SPECTRUM ANALYZER	R&S	FSP40	100503	2021-11-16	2022-11-15
12	Broadband Preamplifier	/	BP-01M18G	P190501	2021-06-21	2022-06-20
13	EMI Test Receiver	R&S	ESPI	101840	2021-06-21	2022-06-20
14	Artificial Mains	R&S	ENV216	101288	2021-06-21	2022-06-20
15	10dB Attenuator	SCHWARZBECK	MTS-IMP-136	261115-001-003 2	2021-06-21	2022-06-20
16	EMI Test Software	Farad	EZ	THAM CHING Lab	N/A	N/A









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# 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------

