FCC Test Report

Report No.: AGC00589170601FE10

BRAND NAME:PRESIDENTMODEL NAME:ANDY USACLIENT:President Electronics USADATE OF ISSUE:Jun, 11,2017STANDARD(S):FCC Part 95D RulesREPORT VERSION:V 1.0	FCC ID	:	2AEOCPC201
MODEL NAME: ANDY USACLIENT: President Electronics USADATE OF ISSUE: Jun, 11,2017STANDARD(S): FCC Part 95D RulesREPORT VERSION: V1.0	BRAND NAME	:	PRESIDENT
CLIENT:President Electronics USADATE OF ISSUE:Jun, 11,2017STANDARD(S):FCC Part 95D RulesREPORT VERSION:V 1.0	MODEL NAME	:	ANDY USA
DATE OF ISSUE:Jun, 11,2017STANDARD(S):FCC Part 95D RulesREPORT VERSION:V 1.0	CLIENT	:	President Electronics USA
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REPORT VERSION : V 1.0	STANDARD(S)	:	FCC Part 95D Rules
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Attestation of Global Compliance (Shenzhen) Co., Ltd

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jun, 11,2017	Valid	Original Report

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VERIFICATION OF COMPLIANCE

Applicant:	President Electronics USA
	1007 Collier Center Way, Naples, Florida 34110, USA
Manufaaturari	GROUPE PRESIDENT ELECTRONICS
Manufacturer:	ROUTE DE SETE, BP100, 34540 BALARUC-LES-BAINS, FRANCE
Product Designation: CB RADIO	
Brand Name: PRESIDENT	
Test Model ANDY USA	
Date of Test:	Jun.08, 2017 to Jun, 11,2017

WE HEREBY CERTIFY THAT:

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in EIA/TIA-382A. The sample tested as described in this report is in compliance with the FCC Rules Part 95D requirements

The test results of this report relate only to the tested sample identified in this report.

Tested by

Steven Zhou

Steven Zhou(Zhou Pengyun) Jun, 11,2017

Reviewed by

BONG xie

Bart Xie(Xie Xiaobin)

Jun, 11,2017

Approved by

Solger Zhang(Zhang Hongyi) Jun, 11,2017 Authorized Officer

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

The EUT is a **ANALOG RADIO** designed for voice communication. It is designed by way of utilizing the AM modulation achieves the system operating.

A major technical description of EUT is described as following:

Hardware Version	PRESIDENT PP801_1/2 C05C6E8
Software Version	Andy_USA_AM_V1.0.heX
Modulation	AM
Channel Separation	10KHz
Emission Designator:	6k00A3E Bn = 2M M = 3000 Bn = 6000
Maximum Transmitter Power	3.91W
Number of Channels:	40
Output power Modification	4W (It was fixed by the manufacturer, any individual can't arbitrarily change it.)
Antenna Designation	Detachable
Antenna Gain	0dBi
Power Supply	DC 12V/24V
Limiting Voltage	DC Power Supply (13.8 V - 27.6VDC)
	Frequency Range: 26.965 MHz -27.405 MHz
Operation Frequency	Bottom Channel: 26.965MHz
Range and Channel	Middle Channel: 27.185MHz
	Top Channel: 27.405MHz
Frequency Tolerance	0.001163%
Applicable Standards:	EIA/TIA-382-A, FCC 47 CFR Par t 95D

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for FCC ID: 2AEOCPC201, filing to comply with:

FCC 47 CFR Part 95 Subpart D, Part 15 Subpart B

Licensed Non-Broadcast Station Transmitter (TNB)

1.3 TEST METHODOLOGY.

The radiated emission testing was performed according to the procedures of EIA/TIA-382A.

1.4 TEST FACILITY

Site	Dongguan Precise Testing Service Co., Ltd.
Location	Building D, Baoding Technology Park, Guangming Road2, Dongcheng District, Dongguan, Guangdong, China.
Description	The test site is constructed and calibrated to meet the FCC requirements in documents EIA/TIA-382A
FCC Registration No.	371540

1.5 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

1.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

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2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

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2.4 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System



Table 2-1 Equipment Used in Tested System

Item	Equipment	Model No.	Identifier	Note
1	CB RADIO	ANDY USA	FCC ID: 2AEOCPC201	EUT

3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
95.667	Conducted Power	Compliant
95.637	Modulation	Compliant
95.637	Audio Frequency Response	Compliant
95.633	Occupied Bandwidth	Compliant
95.635	Emission Mask	Compliant
95.625	Frequency Stability	Compliant
95.635	Radiated Spurious Emission	Compliant
95.635	Conducted TX Spurious Emissions	Compliant
95.635	Spurious Emission On Antenna Port	Compliant

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LIST OF EQUIPMENTS USED

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NO.	Cal. Date	Cal. Due
CLIMATE CHAMBER	EXPERY	TN-400	TN2007SR038	2016.07.02	2017.07.01
ATTENUATOR	WEINSCHEL CORP	58-30-33	ML030	2016.07.02	2017.07.01
DC POWER SUPPLY	ZHAOXIN	RXN-605D	N/A	2016.07.02	2017.07.01
MODULATION ANALYZER	HP	8920B	3104A03367	2016.07.02	2017.07.01
SIGNAL GENERATOR	AGILENT	E4421B	122501288	2016.07.03	2017.07.02
SIGNAL GENERATOR	R&S	SMT03	A0304261	2016.07.03	2017.07.02
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	2016.07.03	2017.07.02
Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3355	2016.07.03	2017.07.02
Substitution Antenna	SCHWARZBECK	VULB9160	9168-494	2016.07.03	2017.07.02
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	2016.07.03	2017.07.02
RF Cable	SCHWARZBECK	AK9515E	96221	2016.07.03	2017.07.02
3m Anechoic Chamber	CHENGYU	966	PTS-001	2016.06.03	2017.06.02
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	2016.06.03	2017.06.02
Spectrum analyzer	Agilent	E4407B	MY46185649	2016.06.03	2017.06.02
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	2016.06.03	2017.06.02
Substitution ANTENNA	EM	EM-AH-10180	67	2016.06.03	2017.06.02
Modulation Domain Analyzer	HP	53310A	3121A02467	2016.06.03	2017.06.02
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	2016.06.03	2017.06.02
RF Cable	SCHWARZBECK	AK9515E	96222	2016.06.03	2017.06.02
Shielded Room	CHENGYU	843	PTS-002	2016.06.03	2017.06.02

Note: 8920B can generate audio modulation frequency.

4. DESCRIPTION OF TEST MODES

RF TEST MODES

The EUT (CB Radio) has been tested under normal operating condition. (The top channel, the middle channel and the bottom channel) are chosen for testing at each channel separation.

No.	TEST MODES	CHANNEL SEPARATION
1	Low Channel	10 KHz
2	Middle Channel	10 KHz
3	High Channel	10 KHz

Note: Only the result of the worst case was recorded in the report.

5. FREQUENCY TOLERANCE

5.1 PROVISIONS APPLICABLE

Normative Reference: FCC 47 CFR §2.1055, §95.625

- a). According to FCC Part 2 Section 2.1055(a)(1), the frequency stability shall be measured with variation of ambient temperature from −30°C to +50°C centigrade.
- b). According to FCC Part 2 Section 2.1055(d)(2), for battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacturer.

5.2 MEASUREMENT PROCEDURE

5.2.1 Frequency stability versus environmental temperature

- 1. Setup the configuration per figure 1 for frequencies measurement inside an environment chamber, Install new battery in the EUT.
- Turn on EUT and set SA center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 1KHz and Video Resolution Bandwidth to 1KHz and Frequency Span to 50KHz.Record this frequency as reference frequency.
- 3. Set the temperature of chamber to 50 °C. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.
- 4. Repeat step 2 with a 10[°]C decreased per stage until the lowest temperature -30[°]C is measured, record all measured frequencies on each temperature step.

5.2.2 Frequency stability versus input voltage

- Setup the configuration per figure 1 for frequencies measured at temperature if it is within 15℃ to 25℃. Otherwise, an environment chamber set for a temperature of 20℃ shall be used. The EUT shall be powered by DC 12V/24V.
- 2. Set SA center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 1 KHz and Video Resolution Bandwidth to 1KHz. Record this frequency as reference frequency.
- 3. Supply the EUT primary voltage at the operating end point which is specified by manufacturer and record the frequency.

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5.3 TEST SETUP BLOCK DIAGRAM



Temperature Chamber

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5.3 TEST RESULT

Environment	Power	Reference Frequency			Limit
Temperature(°C)	(V)	26.965MHz	27.185MHz	27.405MHz	LIITIIL.
50	DC 13.8	0.000715%	0.000652%	0.000454%	
40	DC 13.8	0.000686%	0.000649%	0.000879%	
30	DC 13.8	0.000529%	0.000536%	0.000723%	
20	DC 13.8	0.000851%	0.000575%	0.000662%	
10	DC 13.8	0.000763%	0.000449%	0.000715%	0.005%
0	DC 13.8	0.000727%	0.000586%	0.001096%	
-10	DC 13.8	0.000826%	0.000726%	0.000515%	
-20	DC 13.8	0.000886%	0.000861%	0.000781%	
-30	DC 13.8	0.000692%	0.000575%	0.000563%	
Result			Pass		

(1) Frequency stability versus input voltage (Supply nominal voltage is 13.8V)

(2) Frequency stability versus input voltage (Supply nominal voltage is 27.6V)

Environment	Power	Reference Frequency			Limit
Temperature(℃)	(V)	26.965MHz	27.185MHz	27.405MHz	LIIIII.
50	DC 27.6	0.000962%	0.000792%	0.000862%	
40	DC 27.6	0.000862%	0.000861%	0.000973%	
30	DC 27.6	0.001292%	0.000904%	0.000982%	
20	DC 27.6	0.000992%	0.001106%	0.000975%	
10	DC 27.6	0.000893%	0.000983%	0.001235%	0.005%
0	DC 27.6	0.000975%	0.000792%	0.001052%	
-10	DC 27.6	0.001063%	0.000981%	0.000988%	
-20	DC 27.6	0.001262%	0.001063%	0.000963%	
-30	DC 27.6	0.001006%	0.000783%	0.000989%	
Result			Pass		

(3) Frequency stability result

Environment	Power	Power Reference Frequency			Limit
Temperature(°C)	(V)	26.965MHz	27.185MHz	27.405MHz	LIIIII.
25	DC 11.7	0.000815%	0. 000651%	0. 000926%	
25	DC 13.8	0.000862%	0. 000964%	0. 000869%	0.005%
25	DC 15.9	0.000922%	0. 000792%	0.000905%	
Result			Pass		

(4) Frequency stability result

Environment	Power	Power Reference Frequency			Limit
Temperature(°C)	(V)	26.965MHz	27.185MHz	27.405MHz	LIIIII.
25	DC 23.5	0.001163%	0. 000769%	0.000859%	
25	DC 27.6	0.00963%	0. 000986%	0.000968%	0.005%
25	DC 31.7	0.000996%	0. 000982%	0. 000984%	
Result			Pass		

DC Power :11.7(85%) - 13.8 - 15.9(115%), 23.5(85%) - 27.6 - 31.7(115%)

6. EMISSION BANDWIDTH

6.1 PROVISIONS APPLICABLE

Occupied Bandwidth: The EUT was connected to the audio signal generator and the spectrum analyzer via the main RF connector, and through an appropriate attenuator. The EUT was controlled to transmit its maximum power. Then the bandwidth of 99% power can be measured by the spectrum analyzer.

6.2 MEASUREMENT PROCEDURE

2). The EUT was modulated by 2.5 KHz Sine wave audio signal, The level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation.

3). Set SPA Center Frequency = fundamental frequency, RBW=100Hz.VBW= 300 Hz, Span = 50 KHz.

4). Set SPA Max hold. Mark peak, -99% bandwidth $_{\circ}$.

6.3 TEST SETUP BLOCK DIAGRAM



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6.4 MEASUREMENT RESULT

99% Bandwidth Measurement Result						
Operating Frequency		10 KHz Channel Separation				
	Test Data	Limits	Result			
26.965MHz	5.177KHz	8 KHz	Pass			
27.185MHz	5.178KHz	8 KHz	Pass			
27.405MHz	5.216KHz	8 KHz	Pass			

Occupied bandwidth of Bottom Channel (Maximum)



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Occupied bandwidth of Middle Channel (Maximum)

Occupied bandwidth of Top Channel (Maximum)



7. UNWANTED RADIATION

7.1 PROVISIONS APPLICABLE

For transmitters designed to operate with a 10 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

At least 25 dB on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.

At least 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.

At least $53 + 10 \log 10(P) dB$ on any frequency removed from the center of the authorized bandwidth by more than 250%.

7.2 MEASUREMENT PROCEDURE

(1)On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

(2)The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.

(3)The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

(4)The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

(5)The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.

(6)The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

(7)The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.

(8)The maximum signal level detected by the measuring receiver shall be noted.

(9)The measurement shall be repeated with the test antenna set to horizontal polarization.

(10) Replace the antenna with a proper Antenna (substitution antenna).

(11)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.

(12)The substitution antenna shall be connected to a calibrated signal generator.

(13)If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

(14)The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

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Amplifier and

Biconical or Log

(15)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.

(16)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.

(17)The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

7.3 TEST SETUP BLOCK DIAGRAM

SUBSTITUTION METHOD: (Radiated Emissions)

0.9 m

Turntable

Substituted Biconical or Log



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7.4 MEASUREMENT RESULTS:

Measurement Result for 10 KHz Channel Separation

On any frequency removed from the center of the authorized bandwidth by a displacement Frequency (fd in KHz)for of more than 10 KHz: at least 53+10 log(P) dB attenuation., 60 dB twice removed from fundamental.

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
26.965	Н	0		pass
53.930	Н	68.56	60	pass
80.90	Н	69.32	60	pass
107.860	Н	71.96	60	pass
134.825	Н	72.15	60	pass
161.790	Н	73.25	60	pass
188.755	Н	74.78	60	pass
215.720	Н	80.31	60	pass
242.685	Н	81.58	60	pass
269.650	Н	82.69	60	pass

Measurement Result for 10 KHz Channel Separation @ 26.965MHz

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
26.965	V	0		pass
53.930	V	69.52	60	pass
80.90	V	70.63	60	pass
107.860	V	70.92	60	pass
134.825	V	72.15	60	pass
161.790	V	73.36	60	pass
188.755	V	75.75	60	pass
215.720	V	76.62	60	pass
242.685	V	77.49	60	pass
269.650	V	79.18	60	pass

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Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
27 185		, , , , , , , , , , , , , , , , , , ,		0.000
27.105	11	0		pass
54.370	Н	68.31	60	pass
81.555	Н	74.36	60	pass
108.740	Н	73.26	60	pass
135.925	Н	72.96	60	pass
163.110	Н	75.48	60	pass
190.295	Н	77.52	60	pass
217.480	Н	76.91	60	pass
244.665	Н	75.52	60	pass
271.850	Н	77.75	60	pass

Measurement Result for 10 KHz Channel Separation @ 27.185MHz

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
27.185	V	0		pass
54.370	V	67.25	60	pass
81.555	V	69.33	60	pass
108.740	V	70.64	60	pass
135.925	V	73.82	60	pass
163.110	V	76.65	60	pass
190.295	V	76.99	60	pass
217.480	V	75.68	60	pass
244.665	V	78.17	60	pass
271.850	V	77.85	60	pass

Measurement Result for 10 KHz Channel Separation @ 27.405MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
27.405	Н	0		pass
54.810	Н	67.53	60	pass
82.215	Н	78.63	60	pass
109.620	Н	71.94	60	pass
137.025	Н	75.25	60	pass
164.430	Н	75.81	60	pass
191.835	Н	76.62	60	pass
219.240	Н	75.53	60	pass
246.645	Н	76.88	60	pass
274.050	Н	79.58	60	pass

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Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
27.405	V	0		pass
54.810	V	69.25	60	pass
82.215	V	70.92	60	pass
109.620	V	73.68	60	pass
137.025	V	74.32	60	pass
164.430	V	75.85	60	pass
191.835	V	76.62	60	pass
219.240	V	78.15	60	pass
246.645	V	79.82	60	pass
274.050	V	78.47	60	pass

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7.5 EMISSION MASK PLOT

The detailed procedure employed for Emission Mask measurements are specified as following:

- The transmitter shall be AM modulated by a 2.5 kHz audio signal,
- The level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation.



The Worst Emission Mask for 10 KHz bottom channel Separation

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The Worst Emission Mask for 10 KHz middle channel Separation

The Worst Emission Mask for 10 KHz top channel Separation



8. MAXIMUMN TRANSMITTER POWER

8.1 PROVISIONS APPLICABLE

Refer to FCC 47 CFR §2.1046, §95D.

8.2 TEST PROCEDURE

The RF output of Two-way Radio was conducted to a spectrum analyzer through an appropriate attenuator.

8.3 TEST CONFIGURATION

Conducted Output Power:



8.4 LIMIT

Limits			
§95.639	4W, 36 dBm		

8.5 TEST RESULT

Conducted Power Measurement Results			
Channel Senaration	Channal	Measurement Result (dBm)	
Channel Separation	Channel	For 36.02dBm(4W)	
10 KHz	Bottom(26.965MHz)	35.89	
	Middle(27.185MHz)	35.89	
	Top (27.405MHz)	35.91	

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BOTTOM (26.965 MHZ)-POWER

MIDDLE (27.185 MHZ) - POWER



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TOP (27.405 MHZ) -POWER

8.6 CONDUCT SPURIOUS PLOT

Conducted Spurious Emission (worst) @26.965 MHz With 10 KHz Channel Separation

20MHz-1GHz



Conducted Spurious Emission (worst) @27.185 MHz With 10 KHz Channel Separation 20MHz-1GHz

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4																		_		MKr→RetLVI
6																				
8																				More
10																				1 of 2
11										III								•	-	
MSG															STATUS					

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Conduct Spurious Emission (worst) @ 27.405 MHz With 10 KHz Channel Separation 20GHz-1GHz

🎉 Agilen	t Spectru	um An	alyzer - Sw	ept SA													
<mark>IXI</mark> Marko	. A E	RF	50 S	2 DC	MLI-			SE	NSE:IN	IT	Ava	Type	ALIGN AUTO	10:21:32 下午 TRA	- 六月 10, 20)17	Marker
Warke		04.7	91758	507	PN IFG	NO: Fast Gain:Lov	t⊊ ₩	Trig: Fre #Atten: 2	e Rur 0 dB	1	Avgil	Hold:	>100/100	TY D		WW N N	Select Marker
10 dB/c	liv	Ref Ref	Offset 3 37.00	0 dB dBm									N	/kr1 54 -37.3	.79 MH 40 dBi	z n	1
27.0																	Normal
-3.00 -13.0																	Delta
-23.0 -33.0 -43.0	♦ ¹		a ha share ta share a s	(a) (purch d)	testfortun		a sublicit	dara se in discharges hare		ignature (Georgia	Networks-and		adaabia dilaata a		-23.00 d	3m	Fixed⊳
-53.0	apter as a				a line of the sec			e off parallelistic affects of parallelistic									T iXed
Start 2 #Res I	Start 20.0 MHz Stop 1.0000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 94.66 ms (20000 pts)								Off								
MKR MOU 1 N 2 3 4 5 6		f		X	54.79	9 MHz		Y -37.340 dl	3m	FUNC	CTION	FUN	ICTION WIDTH	FUNCT	ON VALUE	* 11	Properties▶
7 8 9 10 11															Þ	-	More 1 of 2
MSG													STATU	5			

9. MODULATION CHARACTERISTICS

9.1 PROVISIONS APPLICABLE

Normative Reference: FCC 47 CFR §2.1047, Part 95D, 95.637.

According to CFR 47 section 2.1047(a), for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

9.2 MEASUREMENT METHOD

9.2.1 Modulation Limit

- (1). Configure the EUT as shown in figure 1, adjust the audio input for 60% of rated system deviation at 1KHz using this level as a reference (0dB) and vary the input level from -20 to +20dB. Record the frequency deviation obtained as a function of the input level.
- (2). Repeat step 1 with input frequency changing to 300, 600, 1000 and 2500Hz in sequence.

9.2.2 Audio Frequency Response

Voice modulated communication equipment. A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.



Figure 1: Modulation characteristic measurement configuration

9.3 MEASUREMENT RESULT

TEST RESULTS

(A). MODULATION LIMIT

Bottom Channel @ 10 KHz Channel Separations

Modulation Level (mV)	Freq. At 300 Hz	Freq. At 600 Hz	Freq. At 1000 Hz	Freq. At 2500 Hz
1	5	7	9	8
10	7	50	49	45
100	9	78	69	65
300	11	79	74	72
500	13	78	76	73
700	15	79	78	75
800	19	81	79	80
900	20	83	80	77
1000	21	82	81	79



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

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(B). AUDIO FREQUENCY RESPONSE:

Bottom Channel @10KHz Channel Separations	
--------------------------------------------------	--

	Audio Frequency Response(dB)							
Frequency (HZ)	(mV)	(dB)						
100	21.5	-13.60						
200	5.8	-1.80						
300	5.2	-1.20						
400	4.8	-1.10						
800	4.3	-0.50						
1000	4.3	-0.40						
1200	4.6	0.00						
1400	4.7	-0.10						
1600	4.8	-0.20						
1800	5.0	-0.50						
2000	6.1	-2.30						
3000	6.7	-3.50						
4000	13.8	-8.50						
6000	72.0	-23.50						



Audio Frequency Response@50%MI

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

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RADIATED EMISSION TEST SETUP

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APPENDIX II: EXTERNAL VIEW OF EUT TOTAL VIEW OF EUT



Part 1 TOP VIEW OF EUT



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-(A) QZ 5 5

BOTTOM VIEW OF EUT

FRONT VIEW OF EUT



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BACK VIEW OF EUT

LEFT VIEW OF EUT



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RIGHT VIEW OF EUT

OPEN VIEW-1 OF EUT



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INTERNAL VIEW-1 OF EUT

INTERNAL VIEW-2 OF EUT



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INTERNAL VIEW-3 OF EUT



INTERNAL VIEW-4 OF EUT



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Part 2 TOP VIEW OF EUT



BOTTOM VIEW OF EUT



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FRONT VIEW OF EUT



BACK VIEW OF EUT



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LEFT VIEW OF EUT



RIGHT VIEW OF EUT



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OPEN VIEW-1 OF EUT

INTERNAL VIEW-1 OF EUT



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INTERNAL VIEW-2 OF EUT



----END OF REPORT----