Compliance Testing, LLC
Previously Flom Test Lab
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toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.ComplianceTesting.com
info@ComplianceTesting.com

Test Report

Prepared for: Wulfsberg Electronics Division

Model: RT7000

Description: Panel Mounted Tactical Radio - Aviation and Land-Based

Serial Number: N/A

FCC ID: FRWRT7000

To

FCC Part 22, 80, 87, 90

Date of Issue: February 12, 2019

On the behalf of the applicant:	**Wulfsberg Electronics Division** **6400 Wilkinson Drive** **Prescott, AZ 86301**
Attention of:	**Jim Buehring, Certification Manager** **Ph: (928)708-1527** **E-Mail: Jim.Buehring@cobham.com**

Prepared By
Compliance Testing, LLC
1724 S. Nevada Way
Mesa, AZ 85204
(480) 926-3100 phone / (480) 926-3598 fax
www.compliancetesting.com
Project No: p1890001

Christian Pawlak
Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	December 20, 2018	Christian Pawlak	Original Document
2.0	June 11, 2019	Greg Corbin	Updated model number on page 1

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ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC-IAF Communiqué dated January 2009).

The tests results contained within this test report all fall within our scope of accreditation, unless noted below.

Please refer to http://www.compliancetesting.com/labscope.html for current scope of accreditation.

Testing Certificate Number: **2152.01**

FCC Site Reg. #349717

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

The Applicant has been cautioned as to the following:

15.21: **Information to the User**

The user's manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a): **Special Accessories**

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without an additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II, Part 2, Subpart J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, and the following individual Parts: FCC Part 22, 80, and 90.

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing.

In accordance with ANSI/TIA 603C, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104°F) unless the particular equipment requirements specified testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Environmental Conditions		
Temp (ºC)	**Humidity (%)**	**Pressure (mbar)**
21.2 – 24.4	27.5 – 35.0	967 - 986

Measurement results, unless otherwise noted, are worst-case measurements.

Accessories:

Qty	Description	Manufacturer	Model	S/N
1	D-SS Series breakout box	SEI breakout boxes	SE-1030	N/A

Cables:

Qty	Description	Length (M)	Shielding Y/N	Shielded Hood Y/N	Termination
1	D-sub cable	8	Y	Y	N/A
1	GCAI to PC cable	<3m	N	N	N/A
1	Micro D-sub to CGAI interface cable	<3m	N	N	N/A

Modifications:

None

Test Result Summary

Specification	Test Name	Pass, Fail, N/A	Comments
2.1046 (b) 87.131 80.215(g) 22.809 (b)	Carrier Output Power (Conducted)	Pass	
2.1051 87.139 (a) 80.211(f) 22.359 (a)	Unwanted Emissions (Transmitter Conducted)	Pass	
2.1053 (a)	Field Strength of Spurious Radiation	Pass	
90.210 (b) 90.210(c) 90.210 (d) 90.210 (h) 90.210 (g) 90.210 (i) 90.210 (k) 2.1049 87.139 (a) 80.211(f)	Emission Masks (Occupied Bandwidth)	Pass	
2.1047 (a)	Audio Low Pass Filter (Voice Input)	Pass	
2.1047(a)	Audio Frequency Response	Pass	
2.1047(b)	Modulation Limiting	Pass	
90.214	Transient Frequency Behavior	Pass	
90.213 (a) 87.133 (a) 80.209 (a)(5) 22.355	Frequency Stability (Temperature Variation)	Pass	
90.213 (a) 87.133 (a) 80.209 (a)(5) 22.355	Frequency Stability (Voltage Variation)	Pass	

Frequency Test List and Rule Section Summary Table

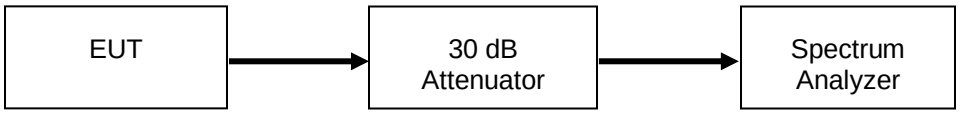
Frequency Range (MHz)	Test Frequency	FCC Rule Part(s)	Emission Designator(s)
29.7 - 88	31.50000	90	16K0F3E, 11K0F3E, 8K10F1E
	35.50000	22	16K0F3E, 11K0F3E, 8K10F1E
	43.20000	22	16K0F3E, 11K0F3E, 8K10F1E
	72.60000	22, 90	16K0F3E, 11K0F3E, 8K10F1E
	75.60000	22, 90	16K0F3E, 11K0F3E, 8K10F1E
118 - 137	118.05000	87	6K00A3E
	127.50000	87	6K00A3E
	136.95000	87	6K00A3E
FED ONLY	151.95000	87	6K00A3E
	381.50000	87	6K00A3E
136 - 174	151.01000	22, 90	11K0F3E, 8K10F1E
	161.01000	22, 80, 90	11K0F3E, 8K10F1E
	173.21000	90	11K0F3E, 8K10F1E
380 - 520	406.10000	90	16K0F3E, 11K0F3E, 8K10F1E
	454.90000	22, 80	11K0F3E, 8K10F1E
	458.20000	22, 80, 90	11K0F3E, 8K10F1E
	465.20000	80, 90	11K0F3E, 8K10F1E
	510.20000	22, 90	16K0F3E, 11K0F3E, 8K10F1E
764 - 806	769.01250	90	16K0F3E, 11K0F3E, 8K10F1E
	799.01250	90	16K0F3E, 11K0F3E, 8K10F1E
806 - 960	806.01250	90	16K0F3E, 11K0F3E, 8K10F1E
	809.01250	22, 90	16K0F3E, 11K0F3E, 8K10F1E
	851.01250	90	16K0F3E, 11K0F3E, 8K10F1E
	854.01250	22, 90	16K0F3E, 11K0F3E, 8K10F1E
	900.01250	90	16K0F3E, 11K0F3E, 8K10F1E
	928.00625	22	16K0F3E, 11K0F3E, 8K10F1E
	932.00625	22	16K0F3E, 11K0F3E, 8K10F1E
	939.01250	90	16K0F3E, 11K0F3E, 8K10F1E
	959.90625	22	16K0F3E, 11K0F3E, 8K10F1E

Carrier Output Power (Conducted)
Engineer: Christian Pawlak
Test Date: 2018-09-27

Measurement Procedure

The Equipment Under Test (EUT) was connected to a spectrum analyzer through a 30 dB Power attenuator. All cable and attenuator losses were input into the spectrum analyzer as a reference level offset to ensure accurate readings were obtained. The spectrum analyzer was set to 1 MHz RBW with a peak detector.

Test Setup



Transmitter Output Power

Tuned Frequency (MHz)	Emission Designator	Output Power (dBm)	Result
31.50000	16K0F3E	40.20	Pass
	11K0F3E	40.23	Pass
	8K10F1E	40.39	Pass
35.50000	16K0F3E	40.10	Pass
	11K0F3E	40.17	Pass
	8K10F1E	40.27	Pass
43.20000	16K0F3E	40.07	Pass
	11K0F3E	40.06	Pass
	8K10F1E	40.12	Pass
72.60000	16K0F3E	40.17	Pass
	11K0F3E	40.17	Pass
	8K10F1E	40.22	Pass
75.60000	16K0F3E	40.18	Pass
	11K0F3E	40.19	Pass
	8K10F1E	41.75	Pass
118.05000	6K00A3E	36.93	Pass
127.50000	6K00A3E	37.04	Pass
136.95000	6K00A3E	36.93	Pass
151.95000	6K00A3E	36.84	Pass
381.50000	6K00A3E	36.91	Pass
151.01000	11K0FE3	39.97	Pass
	8K10F1E	40.03	Pass
161.01000	11K0FE3	39.90	Pass
	8K10F1E	39.98	Pass
173.21000	11K0FE3	39.92	Pass
	8K10F1E	40.09	Pass
406.10000	16K0F3E	40.25	Pass
	11K0F3E	40.25	Pass
	8K10F1E	40.40	Pass
454.90000	11K0F3E	40.28	Pass
	8K10F1E	40.44	Pass
458.20000	11K0F3E	40.21	Pass
	8K10F1E	40.35	Pass
465.20000	11K0F3E	40.28	Pass
	8K10F1E	40.45	Pass
510.20000	16K0F3E	39.74	Pass
	11K0F3E	39.70	Pass
	8K10F1E	39.85	Pass

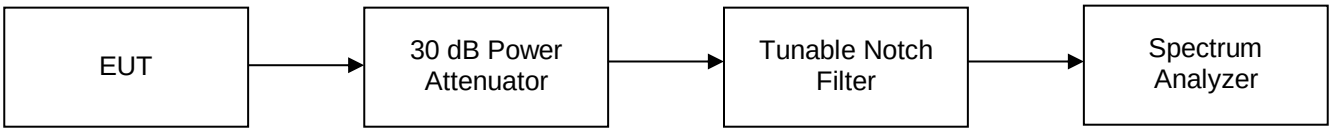
Tuned Frequency (MHz)	Emission Designator	Output Power (dBm)	Result
769.01250	16K0F3E	39.65	Pass
	11K0F3E	39.72	Pass
	8K10F1E	39.65	Pass
799.01250	16K0F3E	40.41	Pass
	11K0F3E	40.42	Pass
	8K10F1E	40.51	Pass
806.01250	16K0F3E	40.53	Pass
	11K0F3E	40.52	Pass
	8K10F1E	40.58	Pass
809.01250	16K0F3E	40.45	Pass
	11K0F3E	40.46	Pass
	8K10F1E	40.48	Pass
851.01250	16K0F3E	40.47	Pass
	11K0F3E	40.48	Pass
	8K10F1E	40.50	Pass
854.01250	16K0F3E	39.87	Pass
	11K0F3E	40.23	Pass
	8K10F1E	40.37	Pass
900.01250	16K0F3E	40.48	Pass
	11K0F3E	40.49	Pass
	8K10F1E	40.54	Pass
928.00625	16K0F3E	39.73	Pass
	11K0F3E	39.77	Pass
	8K10F1E	39.84	Pass
932.00625	16K0F3E	39.81	Pass
	11K0F3E	39.78	Pass
	8K10F1E	39.83	Pass
939.01250	16K0F3E	39.76	Pass
	11K0F3E	39.81	Pass
	8K10F1E	39.76	Pass
959.90625	16K0F3E	40.04	Pass
	11K0F3E	39.88	Pass
	8K10F1E	40.44	Pass

Conducted Spurious Emissions
Engineer: Christian Pawlak
Test Date: 2018-10-03

Test Procedure

The EUT was connected to a spectrum analyzer through a 30 dB power attenuator to verify that the UUT met the requirements for spurious emissions. A tunable notch filter was utilized to ensure the fundamental did not put the spectrum analyzer into compression. The reference level was adjusted to ensure the system had sufficient dynamic range to measure spurious emissions. The frequency range from 25 MHz to the 10th harmonic of the fundamental transmitter was observed and plotted. Multiple frequencies per rule section and frequency band were tested ensuring compliance across all operational rule sections.

Test Setup



All emissions were below the limit

See Annex A for test results

Field Strength of Spurious Radiation
Engineer: Christian Pawlak
Test Date: 2018-10-09 to 2018-11-05

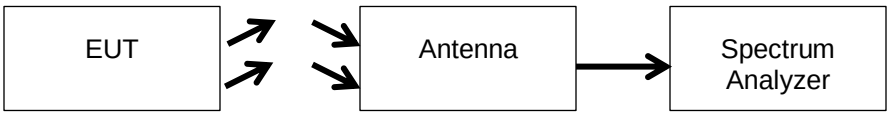
Radiated Spurious Emissions: 30 – 1000 MHz

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The output of the transmitter was connected to a non-radiating balance load. The EUT was set to transmit on the lowest, middle and highest frequencies at the maximum power level. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360° with the antennas in both the vertical and horizontal orientation and was raised from 1 to 4 meters to ensure the TX signal levels were maximized.

All emissions from 30 MHz to the 10th harmonic were examined.
Measured Level includes antenna and receiver cable correction factors.
Correction factors were input into the spectrum analyzer before recording "Measured Level".

RBW = 100 KHz
VBW = 300 KHz
Detector – Quasi Peak

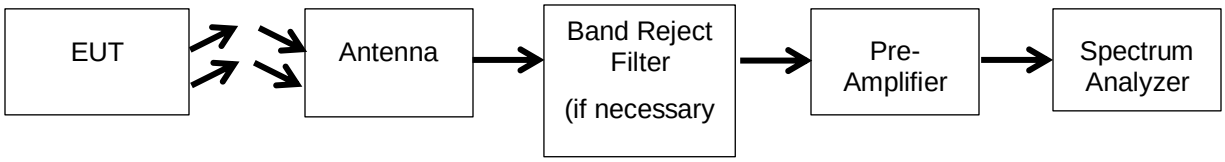
Test Setup



Test Procedure for
Radiated Spurious Emissions above 1 GHz

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The output of the transmitter was connected to a non-radiating balance load. The EUT was set to transmit on the lowest, middle and highest frequencies at the maximum power level. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360° with the antennas in both the vertical and horizontal orientation and was raised from 1 to 4 meters to ensure the TX signal levels were maximized.

Test Setup



*Note: All modulations and protocols were investigated. Only the emissions associated with the highest amplitude modulation are included.

All emissions were below the limit.

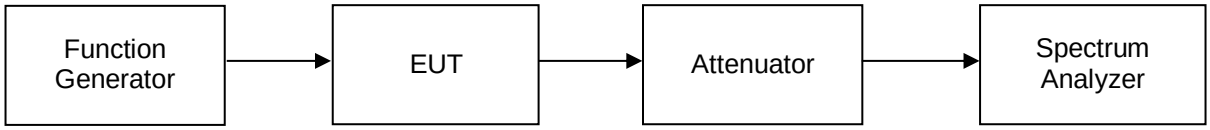
See Annex B for test results

Occupied Bandwidth
Engineer: Christian Pawlak
Test Date: 2018-09-26, 27

Measurement Procedure

The EUT was connected directly to a spectrum analyzer to verify that the EUT meets the required emissions mask. A modulation frequency of 2.5 kHz at a level of 100 mVPP was input into the EUT.

Test Setup



Tuned Frequency (MHz)	Emission Designator	Occupied Bandwidth (kHz)	Result
31.50000	16K0F3E	8.173	Pass
	11K0F3E	4.417	Pass
	8K10F1E	8.113	Pass
35.50000	16K0F3E	8.137	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.993	Pass
43.20000	16K0F3E	8.293	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.053	Pass
72.60000	16K0F3E	8.293	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.933	Pass
75.60000	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.933	Pass
118.05000	6K00A3E	5.228	Pass
127.50000	6K00A3E	5.228	Pass
136.95000	6K00A3E	5.228	Pass
151.95000	6K00A3E	5.168	Pass
381.50000	6K00A3E	5.168	Pass
151.01000	11K0FE3	4.087	Pass
	8K10F1E	8.113	Pass
161.01000	11K0FE3	4.147	Pass
	8K10F1E	7.993	Pass
173.21000	11K0FE3	4.147	Pass
	8K10F1E	8.053	Pass
406.10000	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.752	Pass
454.90000	11K0F3E	4.147	Pass
	8K10F1E	7.933	Pass
458.20000	11K0F3E	4.147	Pass
	8K10F1E	8.053	Pass
465.20000	11K0F3E	4.147	Pass
	8K10F1E	8.053	Pass

Tuned Frequency (MHz)	Emission Designator	Occupied Bandwidth (kHz)	Result
510.20000	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.993	Pass
769.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.812	Pass
799.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.993	Pass
806.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	8.053	Pass
809.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.752	Pass
851.01250	16K0F3E	8.233	Pass
	11K0F3E	4.207	Pass
	8K10F1E	7.873	Pass
854.01250	16K0F3E	8.233	Pass
	11K0F3E	4.146	Pass
	8K10F1E	8.113	Pass
900.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.993	Pass
928.00625	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	8.053	Pass
932.00625	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.993	Pass
939.01250	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	8.113	Pass
959.90625	16K0F3E	8.173	Pass
	11K0F3E	4.147	Pass
	8K10F1E	7.873	Pass

Adjacent Channel Power Test Summary

ACP > 400 kHz to 12 MHz paired receive band										
Center Frequency	Channel Bandwidth	>400 kHz to 12 MHz		12 MHz to paired receive band		Measured Power level	Reference Signal Level	Adjacent Power Level	Limit	Margin
		0.4	12							
MHz	kHz	MHz	MHz	MHz	MHz	dBm	dBm	dBc	dBc	dB
772	12.5	772.4	784	784	799	-41.2	39.7	-80.9	-75	-5.9
802	12.5	801.6	790	790	775	-42.14	39.7	-81.84	-75	-6.84
772	25	772.4	784	784	799	-40.35	39.2	-79.55	-75	-4.55
802	25	801.6	790	790	775	-40.66	39.2	-79.86	-75	-4.86

ACP in the paired Receive Band							
Center Frequency	Channel Bandwidth	Paired Receive Band	Measured Power level	Reference Signal Level	Adjacent Power Level	limit	margin
MHz	kHz	MHz	dBm	dBm	dBc	dBc	dB
772	12.5	799 - 805	-75.6	39.7	-115.3	-100	-15.3
802	12.5	769 - 775	-74.1	39.7	-113.8	-100	-13.8
772	25	799 - 805	-76.3	39.2	-115.5	-100	-15.5
802	25	769 - 775	-76.2	39.2	-115.4	-100	-15.4

Refer to data in Annex E for Adjacent Channel Power with less than 400 kHz offset.

Results meet all requirements.

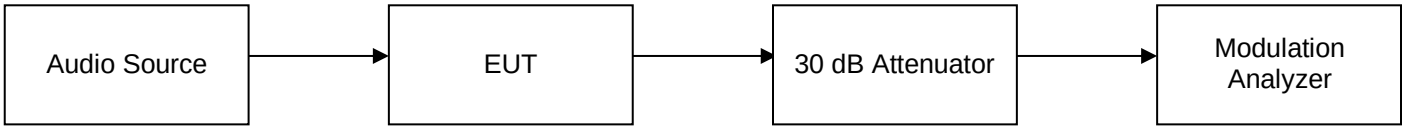
Refer to:
Annex C for emission mask data.
Annex D for Occupied BW data.
Annex E for Adjacent Channel Power data.

Audio Frequency Response
Engineer: Christian Pawlak
Test Date: 2018-10-03

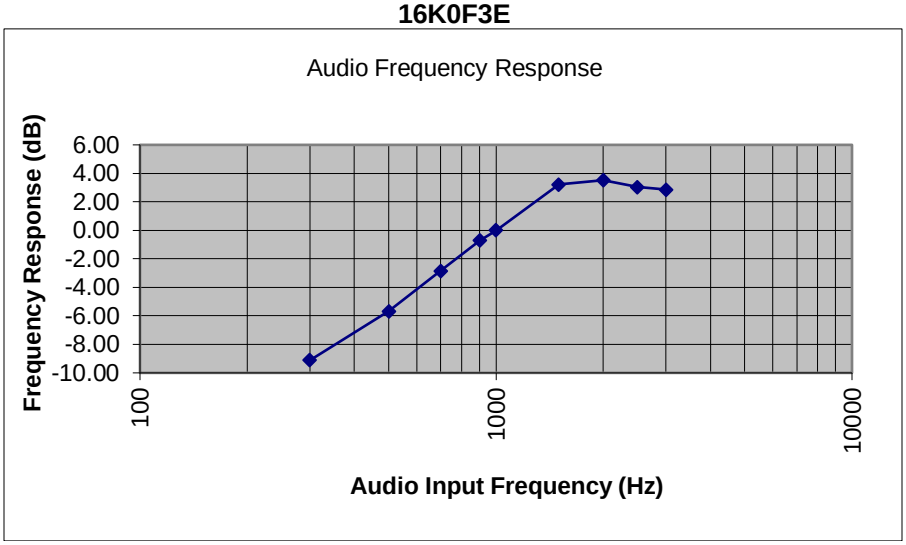
Measurement Procedure

The EUT was connected directly to a modulation analyzer through an attenuator. The audio source was tuned across the required audio frequency range and the audio frequency response was measured and plotted. The modulation analyzer is a real time spectrum analyzer with integrated demodulation, audio measurement capabilities, and timing analysis.

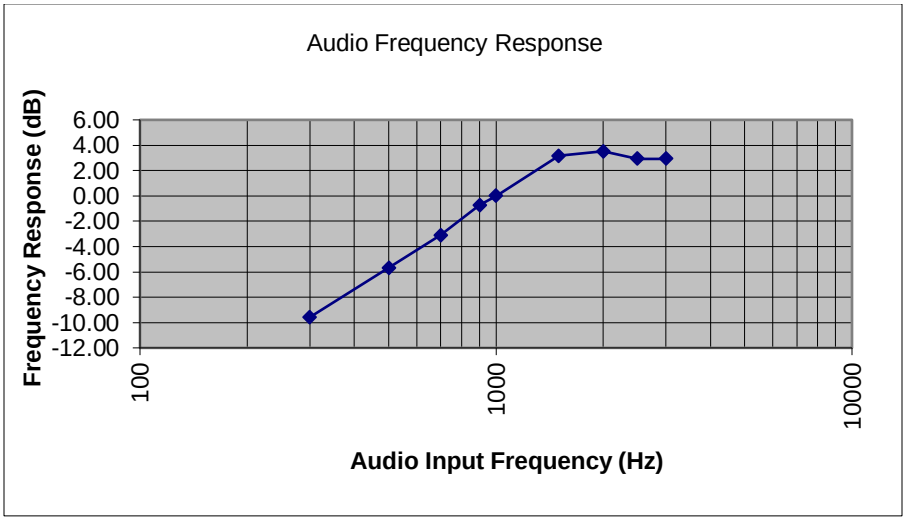
Test Setup



16K0F3E



11K3F3E



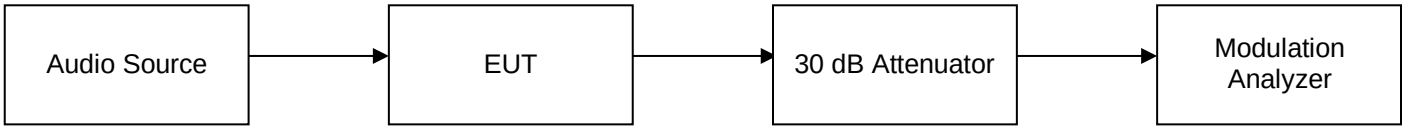
Results meet requirements.

Audio Low Pass Filter Response
Engineer: Christian Pawlak
Test Date: 2018-10-03

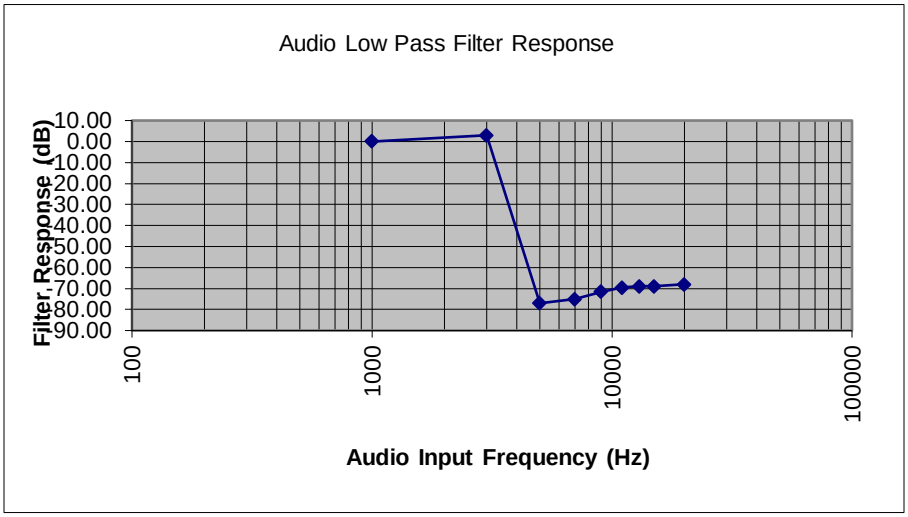
Measurement Procedure

The EUT was connected directly to a modulation analyzer through an attenuator. The audio source was tuned across the required audio frequency range and the audio frequency response was measured and plotted. The modulation analyzer is a real time spectrum analyzer with integrated demodulation, audio measurement capabilities, and timing analysis.

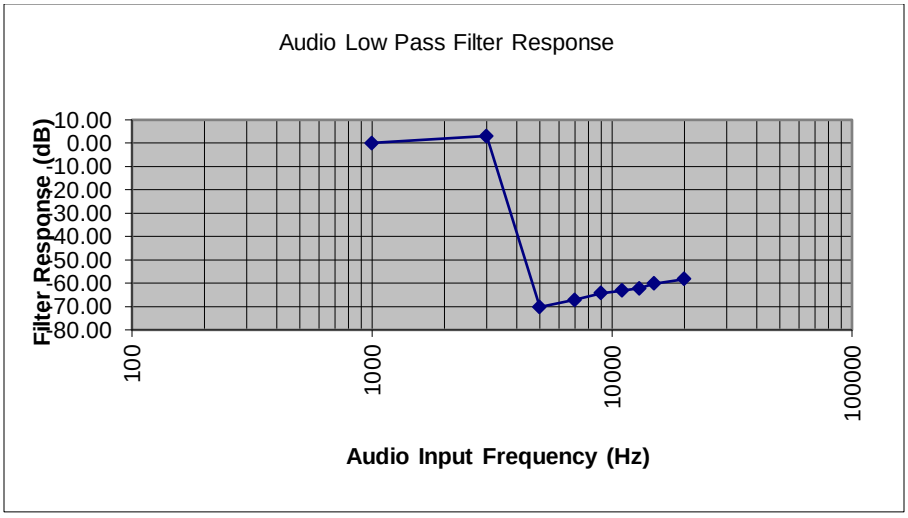
Test Setup



11K3F3E



16K0F3E



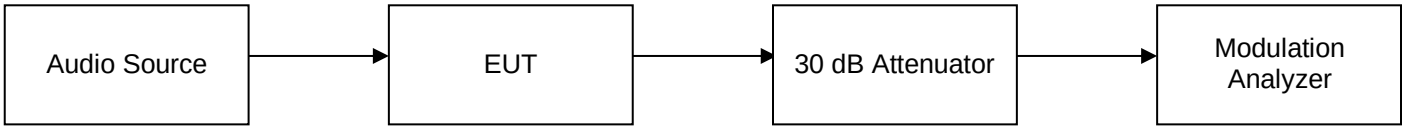
Meets the Requirements

Modulation Limiting
Engineer: Christian Pawlak
Test Date: 2018-10-03

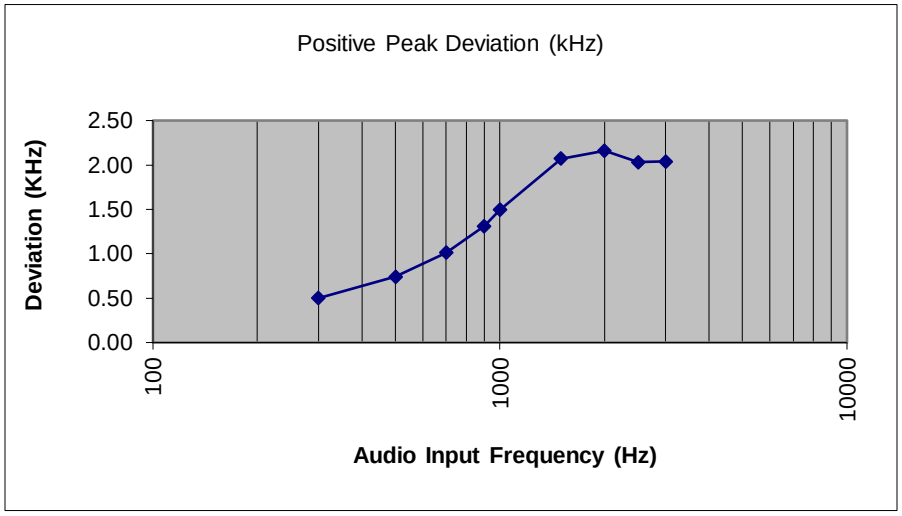
Measurement Procedure

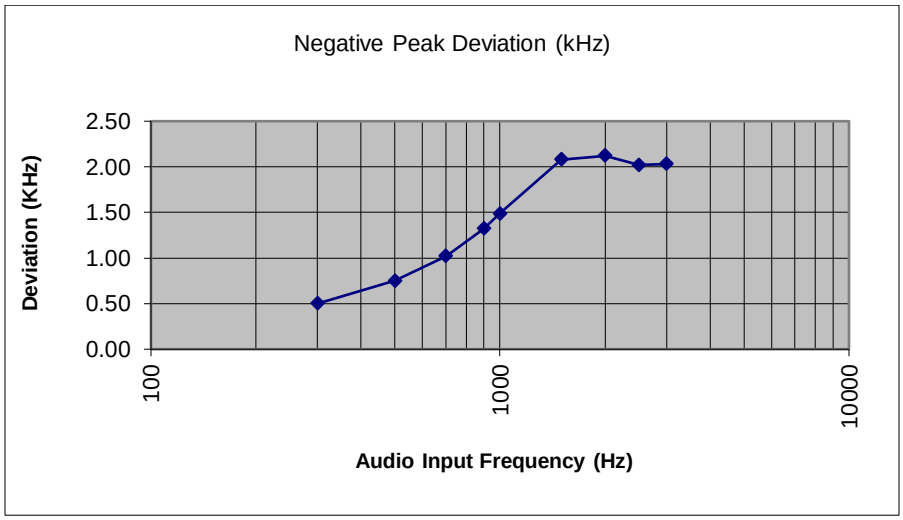
The EUT was connected directly to a modulation analyzer through an attenuator. The audio source was tuned across the required audio frequency range and the audio frequency response was measured and plotted. The modulation analyzer is a real time spectrum analyzer with integrated demodulation, audio measurement capabilities, and timing analysis.

Test Setup

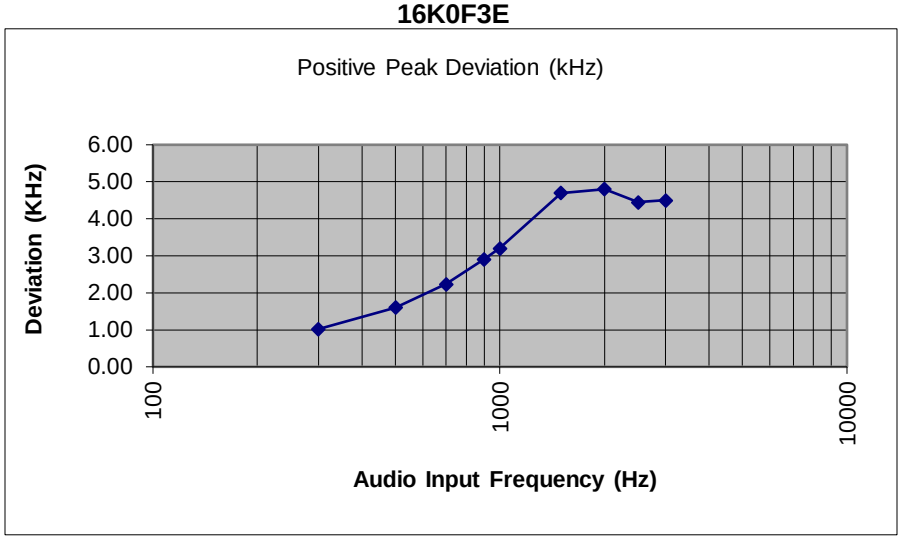


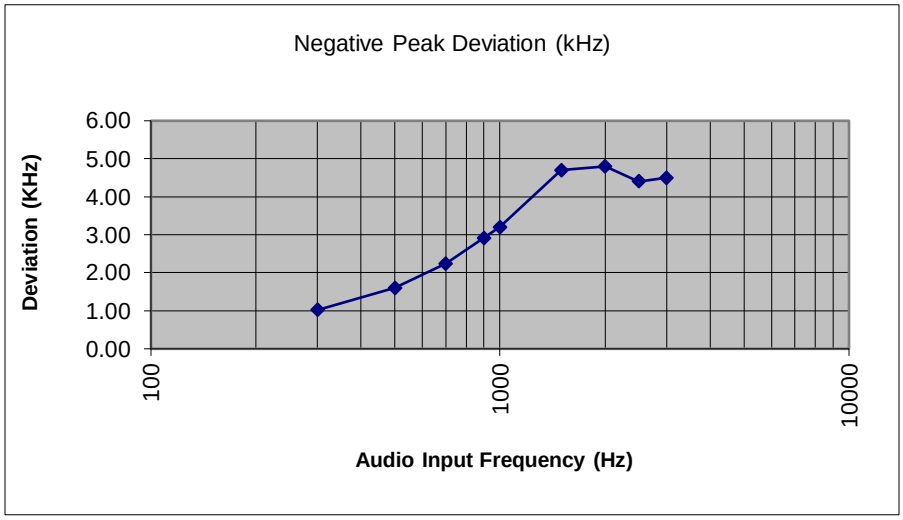
11K3F3E





16K0F3E





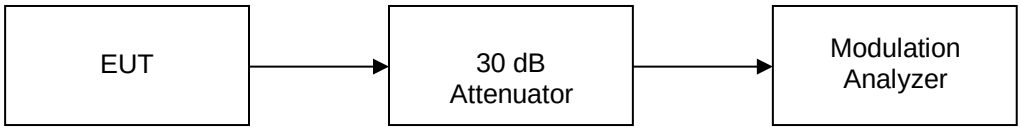
Meets the Requirements

Transient Frequency Behavior
Engineer: Greg Corbin
Test Date: 2/7/2019

Measurement Procedure

The EUT was connected directly to a modulation analyzer through a 30 dB attenuator to verify that the EUT meets the required Transient Frequency Behavior response per the specification. The modulation analyzer is a real time spectrum analyzer with integrated demodulation, audio measurement capabilities, and timing analysis.
The turn on and turn off transient timing was measured and recorded.

Test Setup



Tuned Frequency = 161.01 MHz				Tuned Frequency = 161.01 MHz			
Channel Bandwidth = 12.5 kHz				Channel Bandwidth = 25 kHz			
Time Interval	Frequency Error (kHz)	Limit (kHz)	Pass / Fail	Time Interval	Frequency Error (kHz)	Limit (kHz)	Pass / Fail
t1	0.061	± 12.5	Pass	t1	-0.137	± 25	Pass
t2	1.501	± 6.25	Pass	t2	-1.382	± 12.5	Pass
t3	2.659	± 12.5	Pass	t3	1.409	± 25	Pass

Tuned Frequency = 458.2 MHz				Tuned Frequency = 458.2 MHz			
Channel Bandwidth = 12.5 kHz				Channel Bandwidth = 25 kHz			
Time Interval	Frequency Error (kHz)	Limit (kHz)	Pass / Fail	Time Interval	Frequency Error (kHz)	Limit (kHz)	Pass / Fail
t1	-0.067	± 12.5	Pass	t1	-0.09	± 25	Pass
t2	-1.421	± 6.25	Pass	t2	-1.523	± 12.5	Pass
t3	1.899	± 12.5	Pass	t3	0.749	± 25	Pass

Refer to Annex F for Transient Frequency Behaviour plots.

Frequency Stability

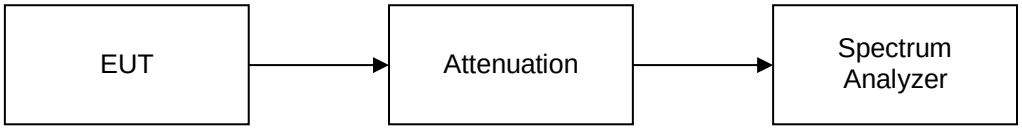
Engineer: Christian Pawlak

Test Date: 2018-10-03

Measurement Procedure

The EUT was placed in an environmental test chamber and the RF output was connected directly to a spectrum analyzer. The temperature was varied from -30°C to 50°C in 10°C increments. After a sufficient time for temperature stabilization the RF output frequency was measured. At 20°C the power supply voltage to the EUT was varied from 85% to 115% of the nominal value and the RF output was measured.

Measurement Setup



Temperature (°C)	Voltage (VDC)	Frequency (MHz)	Error (ppm)	Result (ppm)
50	28	939.01278	-0.23	Pass
40	28	939.01266	-0.11	Pass
30	28	939.01251	0.05	Pass
20	23.8	939.01256	0.00	Pass
	28	939.01251	0.05	Pass
	32.2	939.01250	0.06	Pass
10	3.7	939.01253	0.03	Pass
0	3.7	939.01245	0.12	Pass
-10	3.7	939.01220	0.38	Pass
-20	3.7	939.01202	0.58	Pass
-30	3.7	939.01131	1.33	Pass

Results Meet Requirements

Necessary Bandwidth Calculations

Modulation = 6K00A3E		
Necessary Bandwidth Calculation:		
Modulation	=	3000
Necessary Bandwidth (B_N), kHz	=	2M
	=	6000 Hz

Modulation = 11K0F3E		
Necessary Bandwidth Calculation:		
Maximum Modulation (M), kHz	=	3
Maximum Deviation (D), kHz	=	2.5
Constant Factor (K)	=	1
Necessary Bandwidth (B_N), kHz	=	(2xM)+(2xDxK)
	=	11.0

Modulation = 16K0F3E (RSS-119 Only)		
Necessary Bandwidth Calculation:		
Maximum Modulation (M) kHz	=	3
Maximum Deviation (D), kHz	=	5
Constant Factor (K)	=	1
Necessary Bandwidth (B_N), kHz	=	(2xM)+(2xDxK)
	=	16.0

Modulation = 8K10F1E		
Necessary Bandwidth Calculation:		
Maximum Modulation (M), kHz	=	1.65
Maximum Deviation (D), kHz	=	2.5
Constant Factor (K)	=	1
Necessary Bandwidth (B_N), kHz	=	(2xM)+(2xDxK)
	=	8.1

Test Equipment Utilized

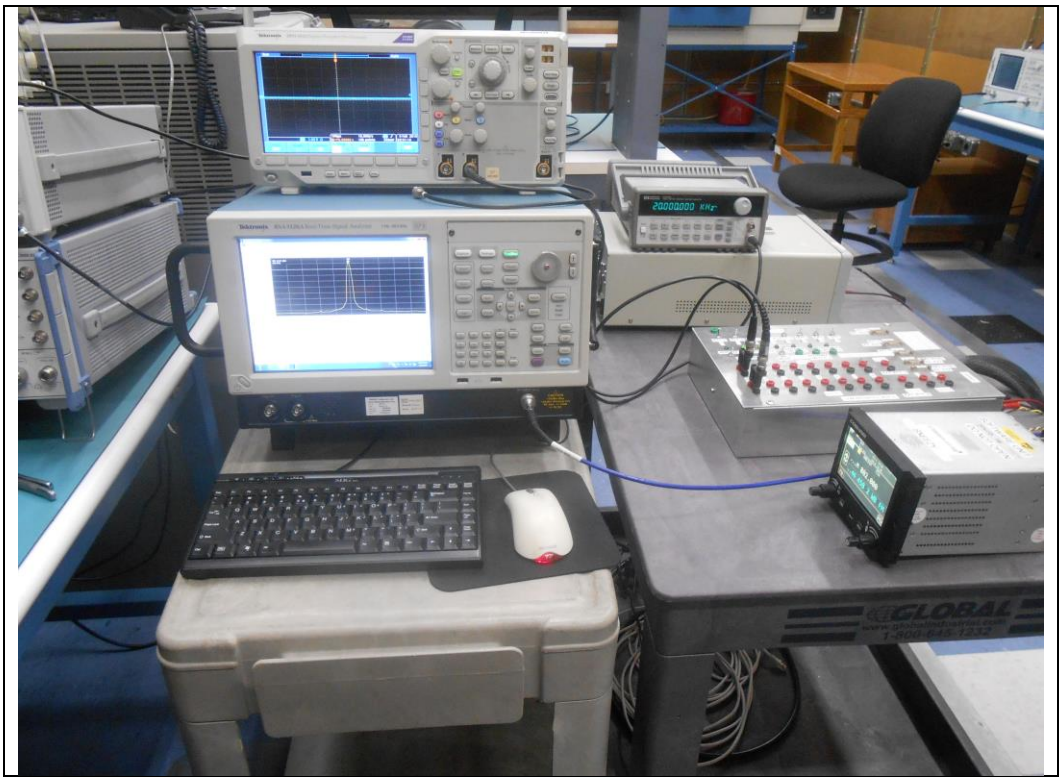
Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
Temperature Chamber	Tenney	Tenney Jr	i00027	NCR	
Function Generator	HP	33120A	i00118	NCR	
Power Supply	HP	6673A	i00492	NCR	
Horn Antenna	ARA	DRG-118/A	i00271	6/16/18	6/16/20
Humidity / Temp Meter	Newport	IBTHX-W-5	i00282	6/29/18	6/29/19
Voltmeter	Fluke	87III	i00319	4/11/16	4/11/19
Spectrum Analyzer	Agilent	E4407B	i00331	12/4/18	12/4/19
Data Logger	Fluke	Hydra Data Bucket	i00343	5/23/18	5/23/19
Bi-Log antenna	Chase	CBL6111C	i00267	3/8/18	3/8/20
EMI Analyzer	Agilent	E7405A	i00379	2/13/18	2/13/19
Spectrum Analyzer	Textronix	RSA5126A	i00424	5/9/18	5/9/19
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	8/15/16	8/15/19
Spectrum Analyzer	Rohde & Schwarz	FSU26	i00501	3/27/18	3/27/19

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT

Test Setup Photos
FCC ID: FRWRT7000PMR

RF Conducted #1



RF Radiated - below 1 GHz

RF Radiated – above 1 GHz