

TEST REPORT

FCC/ISED Test for VP8000-F2, VP8000-F3

APPLICANT

JVC KENWOOD Corporation

REPORT NO.

HCT-RF-2208-FI013

DATE OF ISSUE

September 7, 2022

Tested by
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Additional Model

-

Applicant

JVC KENWOOD Corporation

1-16-2, Hakusan, Midori-ku, Yokohama-shi, Kanagawa, 226-8525 JAPAN

**Eut Type
FCC Model Name**

MULTIBAND DIGITAL TRANSCEIVER

VP8000-F2, VP8000-F3

ISEDModel Name

VP8000-F2, VP8000-F3

FCC ID / IC

K44515000/ 282F-515000

FCC Rule Part(s)

Part 2, 22, 74, 90

ISED Rule(s)

RSS-Gen Issue 5, RSS-119 Issue 12

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	September 07, 2022	Initial Release

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC / ISERules under normal use and maintenance.

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

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1. GENERAL INFORMATION

Manufacturer:	JVC KENWOOD Corporation
Address:	3-12, Moriyacho, Kanagawa-ku, Yokohama-shi, Kanagawa, 221-0022 JAPAN
FCC ID:	K44515000
ISED:	282F-515000
EUT Type:	MULTIBAND DIGITAL TRANSCEIVER
Date(s) of Tests:	August 01, 2022 ~ August 30, 2022
Place of Tests:	HCT Co., Ltd. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Korea

2. EUT DESCRIPTION

EUT Type	MULTIBAND DIGITAL TRANSCEIVER	
FCC Model Name	VP8000-F2, VP8000-F3	
ISED Model Name	VP8000-F2, VP8000-F3	
Power Supply Voltage	DC 7.5 V	
Antenna Type	KRA-23M/ KRA-23M2/ KRA-23M3 KRA-27M/ KRA-27M2/ KRA-27M3 KRA-42M/ KRA-42M2/ KRA-42M3 KRA-22M/ KRA-22M2/ KRA-22M3 KRA-26M/ KRA-26M2/ KRA-26M3 KRA-41M/ KRA-41M2/ KRA-41M3 KRA-25 KRA-28 KRA-29/ KRA-29P KRA-32 KRA-36 KRA-47MB 5010900400	
Peak Antenna gain	The peak gain of all antenna are 0 dBd	
Output Power	- VHF: 6W (Power output continuously variable to 1 W) - UHF: 5W (Power output continuously variable to 1 W) - 700/800 MHz: 3W (Power output continuously variable to 1 W)	
Battery type	- KNB-L2: 2600mAh Li-ion Battery - KNB-L3: 3400mAh Li-ion Battery - KNB-LS5: 2000mAh Li-ion Battery - KNB-LS7: 3800mAh Li-ion Battery - KNB-L11: 4000mAh Li-ion Battery - KBP-8: AAx12 Battery	
Type of Emission	- 16K0F3E: Analogue (Part22,74, 90: 470-512 &700/800 MHz and ISED) - 14K0F3E: Analogue (Only 700/800 MHz) - 11K0F3E: Analogue - 8K10F1E, 8K10F1D: P25 phase1 - 8K10F1W: P25 phase 2, TDMA - 8K30F1E, 8K30F1D, 8K30F7W: NXDN - 7K60FXE, 7K60FXD, 7K60F1E,7K60F1D,7K60F1W, 7K60FXW: DMR - 4K00F1E, 4K00F1D, 4K00F7W: NXDN - 4K00F2D: CWID	
Maximum deviation:	- 16K0F3E: ± 5 kHz - 14K0F3E: ± 4 kHz - 11K0F3E: ± 2.5 kHz	
Frequency Range	FCC 150 ~ 174 MHz 406.1 ~ 512 MHz 769 ~ 775 MHz 799 ~ 805 MHz 806 ~ 824 MHz 851 ~ 869 MHz	ISED 138 ~ 144 MHz 148 ~ 174 MHz 406.1 ~ 430 MHz 450 ~ 470 MHz 768 ~ 776 MHz 798 ~ 806 MHz 806 ~ 824 MHz 851 ~ 869 MHz
FCC Rule Part	- 150 ~174 MHz: Part 22, 74, 90 - 406.1 ~ 512 MHz: Part 22, 74, 90	

	- 769 ~ 775 and 799 ~ 805 MHz: Part 90 - 806 ~ 824 and 851 ~ 869 MHz: Part 90	
Frequency Stability	± 0.4 ppm	
CHANNEL BANDWIDTH FCC/ISED	25 kHz	- 16K0F3E - 14K0F3E
	12.5 kHz	- 11K0F3E - 8K10F1E, 8K10F1D - 8K10F1W - 8K30F1E, 8K30F1D, 8K30F7W: - 7K60FXE, 7K60FXD, 7K60F1E, 7K60F1D, 7K60F1W, 7K60FXW
	6.25 kHz	- 4K00F1E, 4K00F1D, 4K00F7W: - 4K00F2D:
PMN	VP8000-F2, VP8000-F3	
HVIN	VP8000-F2, VP8000-F3	
FVIN	N/A	
HMN	N/A	

TEST FREQUENCY

Standard	Channel Bandwidth (kHz)	Test Frequency (MHz)
FCC	25 (16K0F3E)	- 470.05/ 491.05/ 511.95 - 769.05/ 774.95 - 799.05/ 804.95 - 806.05/ 815.05/ 823.95 - 851.01/860.05/ 868.95
	25 (14K0F3E)	- 769.05/ 774.95 - 799.05/ 804.95 - 806.05/ 815.05/ 823.95 - 851.01/860.05/ 868.95
ISED	25 (16K0F3E)	- 138.05/ 150.05/ 173.95 - 406.15/ 429.95/ 469.95 - 768.05/ 775.95 - 798.05/ 805.95 - 806.05/ 815.05/ 823.95 - 851.01/860.05/ 868.95
	25 (14K0F3E)	- 768.05/ 775.95 - 798.05/ 805.95 - 806.05/ 815.05/ 823.95 - 851.01/860.05/ 868.95
FCC/ISED	Other	- 138.05/ 150.05/ 162.05/ 173.95 - 406.15/ 429.95/ 469.95/ 511.95 - 768.05/ 769.05/ / 774.95/ 775.95 - 798.05/ 799.05/ 804.95/ 805.95 - 806.05/ 815.05/ 823.95 - 851.01/860.05/ 868.95

3. TEST METHODOLOGY

TIA-603-E dated March, 2016 entitled “Land Mobile FM or PM Communications Equipment Measurement and Performance Standards” were used in the measurement.

3.1 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.

3.2 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 FCC Rules Part 2, 22, 74, 90 / RSS-Gen Issue 5, RSS-119 Issue 12

3.3 GENERAL TEST PROCEDURES

Radiated Emissions

Radiated emission measurements are performed in the Fully-anechoic chamber. The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission. The level and position of the maximized emission is recorded with the spectrum analyzer using a positive peak detector.

A half wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The power is calculated by the following formula;

$$P_d(\text{dBm}) = P_g(\text{dBm}) - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dB})}$$

Where: P_d is the dipole equivalent power and P_g is the generator output power into the substitution antenna.

The maximum EIRP is calculated by adding the forward power to the calibrated source plus its appropriate gain value. These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration.

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting is programmed.

3.5 Type of Emission

Type of Emission	- 16K0F3E: Analogue (Part22,74, 90: 470-512 &700/800 MHz and ISSED) - 14K0F3E: Analogue (Only 700/800 MHz) - 11K0F3E: Analogue - 8K10F1E, 8K10F1D: P25 phase1 - 8K10F1W: P25 phase 2, TDMA - 8K30F1E, 8K30F1D, 8K30F7W: NXDN - 7K60FXE, 7K60FXD, 7K60F1E,7K60F1D,7K60F1W, 7K60FXW: DMR - 4K00F1E, 4K00F1D, 4K00F7W: NXDN - 4K00F2D: CWID
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4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.

The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

For ISED, test facility was accepted dated February 14, 2019 (CAB identifier: KR0032).

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

6. WORST CASE CONFIGURATION AND MODE

Radiated test

1. VP8000-F2 & Additional Models were tested and the worst case results are reported.
 - Worst case : VP8000-F2
2. All Type of Emission were investigated and the worst case type results are reported.
 - Worstcase : 11K0F3E/ 4K00F1E, 4K00F1D, 4K00F7W
3. All modes of operation were investigated and the worst case configuration results are reported.
 - Mode : Stand alone (High Power/ Low Power)
 - Stand alone +Microphone (High Power/ Low Power)
 - Stand alone +Accessories (High Power/ Low Power)
 - Stand alone +Microphone +Accessories (High Power/ Low Power)
 - Worstcase : Stand alone +Microphone (High Power)
4. All type of battery were investigated and the worst case configuration results are reported.
 - Battery type : KNB-L2, KNB-L3, KNB-LS5, KNB-LS7, KNB-L11, KBP-8
 - Worstcase : KNB-LS5
5. All Antenna were investigated and the worst case configuration results are reported.
 - Worstcase : KRA-47MB
6. Measurements value show only up to 9 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
7. Radiated Spurious Emissions of VHF & UHF were measured using notch filter.

Conducted test

1. VP8000-F2 & Additional Models were tested and the worst case results are reported.
 - Worst case : VP8000-F2
2. All Power of operation were investigated and the worst case configuration results are reported.
 - Power : High Power/ Low Power
 - Worstcase : High Power
3. Frequency Stability:
 - All Type of Emission were investigated and the worst case type results are reported.
 - Worstcase : 16K0F3E/ 11K0F3E/ 4K00F1E, 4K00F1D, 4K00F7W
 - The limits were varied, so worst limit was applied.
 - Worst limit : 0.4 ppm
4. Transient Frequency Behavior :
 - All Type of Emission were investigated and the worst case type results are reported.
 - Worstcase : 16K0F3E/ 11K0F3E/ 4K00F1E, 4K00F1D, 4K00F7W
5. Conducted Spurious Emission :
 - All Type of Emission were investigated and the worst case type results are reported.
 - Worstcase : 16K0F3E/ 11K0F3E/ 4K00F1E, 4K00F1D, 4K00F7W/ 4K00F2D
6. In order to simplify the report, attached plots were only the worstcase.
 - Conducted Spurious Emission: 4K00F1E, 4K00F1D, 4K00F7W
 - Occupied Bandwidth: 16K0F3E/ 11K0F3E/ 4K00F1E, 4K00F1D, 4K00F7W
 - Adjacent Channel Power: 16K0F3E/ 11K0F3E/ 4K00F2D
7. Conducted Spurious Emissions of VHF & UHF were measured using notch filter.
8. Mask:
 - Peak detector and RMS detector were investigated and the worst case results are reported.
 - Detector : Peak/ RMS
 - Worstcase : Peak
9. Continuous operation(Duty cycle=100%) software was provided by manufacturer.
 - So 8K10F1W(TDMA) was measured as duty cycle 100%.

7. SUMMARY TEST OF RESULTS

VHF, UHF

Test Description	FCC Part Section(s)	ISED Part Section(s)	Test Condition	Test Result
Carrier RF Output Power	§ 2.1046, § 22.565, § 74.461, § 90.205	RSS119 (5.4)	Conducted	PASS
Unwanted Emissions	§ 2.1051 § 22.359, § 74.462, § 74.535, § 90.210	RSS119 (5.8)		PASS
99% Bandwidth(ISED)	NA	RSS119 (5.5)		PASS
Carrier Frequency Stability	§ 2.1055, § 22.355, § 74.464, § 90.213(a)	RSS119 (5.3)		PASS
Audio Frequency Response	§ 2.1047(a)	-		PASS
Audio Low Pass Filter	§ 2.1047(a)	-		PASS
Modulation Limiting	§ 2.1047(b)	-		PASS
Transient Frequency Behavior	§ 74.462, § 90.214	RSS119 (5.9)		PASS
Emission Mask	§ 2.1049, § 22.359, § 74.462, § 74.535, § 90.210	RSS119 (5.8)	Radiated	PASS
Field Strength of Spurious Radiation	§ 2.1053 § 22.359, § 74.462, § 74.535, § 90.210	RSS119 (5.8)		PASS
Receiver Spurious Emissions	NA	RSS-Gen(7)		PASS
Necessary Bandwidth	§ 2.202(g)	-	-	-

Test Description	Test Limit(FCC)	Test Limit(ISED)
Carrier RF Output Power	Varies	60W
Unwanted Emissions	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB
99% Bandwidth(ISED)	N/A	6.25 kHz: 6 kHz 12.5 kHz: 11.25kHz 25 kHz: 20 kHz
Carrier Frequency Stability	6.25 kHz = 1 ppm 12.5 kHz = 2.5 ppm 25 kHz = 5 ppm	6.25 kHz = 1 ppm 12.5 kHz = 2.5 ppm 25 kHz = 5 ppm
Audio Frequency Response	Varies	N/A
Audio Low Pass Filter		
Modulation Limiting	25 kHz = 5 kHz 12.5 kHz = 2.5 kHz	N/A
Transient Frequency Behavior	<u>See Note1</u>	<u>See Note1</u>
Emission Mask	Emission Mask B, D, E	Emission Mask B, D, E
Field Strength of Spurious Radiation	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB
Receiver Spurious Emissions	N/A	<u>See Note2</u>

FCC: 769 ~ 775 MHz, 799 ~ 805 MHz
ISED: 768 ~ 776 MHz, 798 ~ 806 MHz

Test Description	FCC Part Section(s)	IC Part Section(s)	Test Condition	Test Result
Carrier Output Power	§ 2.1046 § 90.205, § 90.541	RSS119 (5.4)	Conducted	PASS
Unwanted Emissions	§ 2.1051 § 90.543 (c)	RSS119 (5.8)		PASS
99% Bandwidth	-	RSS119 (5.5)		PASS
Carrier Frequency Stability	§ 2.1055 § 90.539	RSS119 (5.3)		PASS
Audio Frequency Response	§ 2.1047(a)	-		PASS
Audio Low Pass Filter	§ 2.1047(a)	-		PASS
Modulation Limiting	§ 2.1047(b)	-		PASS
Adjacent Channel Power	§ 90.543	RSS119 (5.8.9)		PASS
Field Strength of Spurious Radiation	§ 2.1053, § 90.543 (c)	RSS119 (5.8)	Radiated	PASS
GNSS (EIRP for 1559 – 1610MHz)	§ 90.543	RSS119 (5.8.9.2)		PASS
Receiver Spurious Emissions	-	RSS-Gen(7)		PASS
Necessary Bandwidth	§ 2.202	-	-	-

Test Description	Test Limit(FCC)	Test Limit(ISED)
Carrier RF Output Power	< 3 W ERP	< 3 W ERP
Unwanted Emissions	43 + 10 log (P)dB	43 + 10 log (P)dB
99% Bandwidth(ISED)	N/A	Provided that the ACP requirements are met, any authorized bandwidth that does not exceed the channel bandwidth can be used.
Carrier Frequency Stability	0.4 ppm	0.4 ppm
Audio Frequency Response	Varies	Varies
Audio Low Pass Filter		
Modulation Limiting	12.5 kHz = 2.5 kHz 25 kHz = 5 kHz	12.5 kHz = 2.5 kHz 25 kHz = 5 kHz
Adjacent Channel Power	<u>See Note3</u>	<u>See Note3</u>
Field Strength of Spurious Radiation	43 + 10 log (P)dB	43 + 10 log (P)dB
GNSS (EIRP for 1559 – 1610MHz)	–70 dBW EIRP (Wide) –80 dBW EIRP (Narrow)	–70 dBW EIRP (Wide) –80 dBW EIRP (Narrow)
Receiver Spurious Emissions	N/A	<u>See Note1</u>

806-824 MHz, 851-869 MHz

Test Description	FCC Part Section(s)	IC Part Section(s)	Test Condition	Test Result
Carrier Output Power	§ 2.1046 § 90.205 § 90.635	RSS119 (5.4)	Conducted	PASS
Unwanted Emissions	§ 2.1051 § 90.210	RSS119 (5.8)		PASS
99% Bandwidth	-	RSS119 (5.5)		PASS
Carrier Frequency Stability	§ 2.1055 § 90.213(a)	RSS119 (5.3)		PASS
Audio Frequency Response	§ 2.1047(a)	-		PASS
Audio Low Pass Filter	§ 2.1047(a)	-		PASS
Modulation Limiting	§ 2.1047(b)	-		PASS
Emission Mask	§ 2.1049(c)(1), § 90.210, § 90.691	RSS119 (5.8)		PASS
Field Strength of Spurious Radiation	§ 2.1053, § 90.210	RSS119 (5.8)	Radiated	PASS
Receiver Spurious Emissions	-	RSS-Gen(7)		PASS
Necessary Bandwidth	§ 2.202	-	-	-

Test Description	Test Limit(FCC)	Test Limit(ISED)
Carrier RF Output Power	< 100 W	< 30 W
Unwanted Emissions	43 + 10 log (P)dB	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB
99% Bandwidth(ISED)	N/A	6.25 kHz: 6 kHz 12.5 kHz: 11.25kHz 25 kHz: 20 kHz
Carrier Frequency Stability	809MHz-824MHz= 2.5 ppm 854MHz-869MHz= 2.5 ppm 806MHz-809MHz= 1.5 ppm 851MHz-854MHz= 1.5 ppm	6.25 kHz = 0.4 ppm 12.5 kHz = 1.5 ppm 25 kHz = 2.5 ppm
Audio Frequency Response	Varies	Varies
Audio Low Pass Filter		
Modulation Limiting	12.5 kHz = 2.5 kHz 25 kHz = 5 kHz	12.5 kHz = 2.5 kHz 25 kHz = 5 kHz
Emission Mask	Emission Mask B, EA	Emission Mask B, D, E
Field Strength of Spurious Radiation	43 + 10 log (P)dB	6.25 kHz: 55+ 10 log (P)dB 12.5 kHz: 50 + 10 log (P)dB 25 kHz: 43 + 10 log (P)dB
Receiver Spurious Emissions	N/A	<u>See Note1</u>

Note:

1. Transient Frequency Behavior Limit :

Channel Bandwidth (kHz)	Time Intervals (Notes 1, 2)	Maximum Frequency Difference (kHz)	Transient Duration Limit (ms)	
			138-174 MHz	406.1-512 MHz
25	t ₁	±25	5	10
	t ₂	±12.5	20	25
	t ₃	±25	5	10
12.5	t ₁	±12.5	5	10
	t ₂	±6.25	20	25
	t ₃	±12.5	5	10
6.25	t ₁	±6.25	5	10
	t ₂	±3.125	20	25
	t ₃	±6.25	5	10

2. Receiver Spurious Emissions Limit :

Frequency (MHz)	FieldStrength ($\mu\text{v/m}$ at 3meters)
30 – 88	100
88 - 216	150
216 – 960	200
Above 960	500

3. Adjacent Channel Power Limit :

6.25 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
6.25	6.25	-40
12.5	6.25	-60
18.75	6.25	-60
25.00	6.25	-65
37.50	25.00	-65
62.50	25.00	-65
87.50	25.00	-65
150.00	100.00	-65
250.00	100.00	-65
350.00	100.00	-65
>400 kHz to 12 MHz	30 (s)	-75
12 MHz to paired receive band	30 (s)	-75
In the paired receive band	30 (s)	-100

12.5 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
9.375	6.25	-40
15.625	6.25	-60
21.875	6.25	-60
37.50	25.00	-60
62.50	25.00	-65
87.50	25.00	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 to 12 MHz	30 (s)	-75
12 MHz to paired receive band	30 (s)	-75
In the paired receive band	30 (s)	-100

25 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
15.625	6.25	-40
21.875	6.25	-60
37.50	25	-60
62.50	25	-65
87.50	25	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 kHz to 12 MHz	30 (s)	-75
12 MHz to paired receive band	30 (s)	-75
In the paired receive band	30 (s)	-100

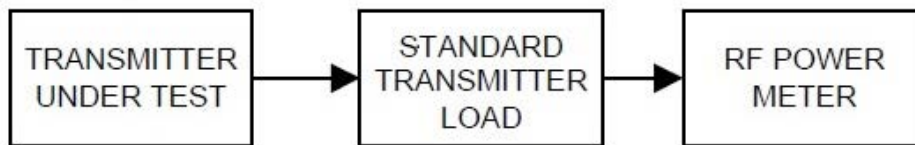
8. TEST RESULT

8.1 Carrier Output Power

▣ Definition

The conducted carrier power output rating for a transmitter is the power available at the output terminals of the transmitter when the output terminals are connected to the standard transmitter load.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

According to 2.2.1 in TIA-603-E Standard.

- a) Connect the equipment as illustrated.
- b) Detector: AVG RMS measurement
- c) Measure the transmitter output power during the defined duty cycle.
Correct for all losses in the RF path.
- d) The value recorded in step c) is the conducted carrier output power rating.

■ TEST RESULTS(Carrier Output Power)

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
16K0F3E	ISED	138.05	37.744	5.949	30.378	1.091
	ISED	150.05	37.621	5.783	29.964	0.992
	ISED	173.95	37.647	5.817	30.390	1.094
	ISED	406.15	36.860	4.853	30.075	1.018
	ISED	429.95	36.291	4.257	30.315	1.075
	ISED	469.95	36.678	4.654	29.720	0.938
	FCC	470.05	36.198	4.166	29.995	0.999
	FCC	491.05	36.069	4.045	30.393	1.095
	FCC	511.95	36.365	4.330	30.208	1.049
	ISED	768.05	34.383	2.743	30.166	1.039
	FCC/ISED	769.05	34.345	2.720	30.168	1.040
	FCC/ISED	774.95	34.350	2.722	30.178	1.042
	ISED	775.95	34.324	2.706	29.792	0.953
	ISED	798.05	34.009	2.517	29.774	0.949
	FCC/ISED	799.05	34.026	2.527	29.724	0.938
	FCC/ISED	804.95	34.119	2.582	29.762	0.947
	ISED	805.95	34.133	2.590	29.747	0.943
	FCC/ISED	806.05	34.405	2.757	29.876	0.972
	FCC/ISED	815.05	34.592	2.878	30.329	1.079
	FCC/ISED	823.95	34.658	2.923	29.926	0.983
	FCC/ISED	851.05	34.422	2.768	29.859	0.968
	FCC/ISED	860.05	34.320	2.704	29.826	0.961
	FCC/ISED	868.95	34.211	2.637	29.908	0.979

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
14K0F3E	ISED	768.05	34.432	2.774	30.198	1.047
	FCC/ISED	769.05	34.429	2.773	30.152	1.036
	FCC/ISED	774.95	34.396	2.752	30.151	1.035
	ISED	775.95	34.476	2.803	30.223	1.053
	ISED	798.05	34.147	2.598	29.733	0.940
	FCC/ISED	799.05	33.934	2.474	29.757	0.946
	FCC/ISED	804.95	34.216	2.640	29.719	0.937
	ISED	805.95	34.239	2.654	29.774	0.949
	FCC/ISED	806.05	34.384	2.744	29.718	0.937
	FCC/ISED	815.05	34.570	2.864	29.931	0.984
	FCC/ISED	823.95	34.635	2.908	30.261	1.062
	FCC/ISED	851.05	34.408	2.760	29.883	0.973
	FCC/ISED	860.05	34.324	2.706	29.890	0.975
	FCC/ISED	868.95	34.216	2.640	29.749	0.944

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
11K0F3E	ISED	138.05	37.516	5.644	30.322	1.077
	FCC/ISED	150.05	37.235	5.290	29.995	0.999
	FCC/ISED	162.05	37.235	5.290	30.351	1.084
	FCC/ISED	173.95	36.947	4.951	30.155	1.036
	FCC/ISED	406.15	36.535	4.503	30.344	1.083
	FCC/ISED	429.95	36.043	4.021	29.783	0.951
	FCC/ISED	469.95	36.138	4.109	29.998	1.000
	FCC	511.95	36.408	4.373	30.371	1.089
	ISED	768.05	34.277	2.677	30.152	1.036
	FCC/ISED	769.05	34.316	2.702	30.139	1.033
	FCC/ISED	774.95	34.332	2.712	30.175	1.041
	ISED	775.95	34.319	2.704	30.182	1.043
	ISED	798.05	34.012	2.519	29.711	0.936
	FCC/ISED	799.05	34.043	2.537	29.791	0.953
	FCC/ISED	804.95	34.127	2.586	29.712	0.936
	ISED	805.95	34.159	2.606	29.723	0.938
	FCC/ISED	806.05	34.333	2.712	29.708	0.935
	FCC/ISED	815.05	34.540	2.844	29.926	0.983
	FCC/ISED	823.95	34.629	2.904	30.321	1.077
	FCC/ISED	851.05	34.375	2.739	29.924	0.983
	FCC/ISED	860.05	34.271	2.674	29.808	0.957
	FCC/ISED	868.95	34.166	2.610	29.820	0.959

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
8K10F1E, 8K10F1D	ISED	138.05	37.707	5.898	30.316	1.076
	FCC/ISED	150.05	37.672	5.850	29.975	0.994
	FCC/ISED	162.05	37.760	5.970	30.332	1.080
	FCC/ISED	173.95	37.719	5.915	30.131	1.031
	FCC/ISED	406.15	36.916	4.915	30.356	1.085
	FCC/ISED	429.95	36.402	4.368	29.741	0.942
	FCC/ISED	469.95	36.777	4.761	29.991	0.998
	FCC	511.95	36.884	4.880	30.357	1.086
	ISED	768.05	34.410	2.761	30.160	1.038
	FCC/ISED	769.05	34.395	2.751	30.144	1.034
	FCC/ISED	774.95	34.393	2.750	30.195	1.046
	ISED	775.95	34.412	2.762	30.200	1.047
	ISED	798.05	34.118	2.581	29.791	0.953
	FCC/ISED	799.05	34.123	2.584	29.802	0.955
	FCC/ISED	804.95	34.287	2.684	29.695	0.932
	ISED	805.95	34.276	2.676	29.707	0.935
	FCC/ISED	806.05	34.459	2.792	29.691	0.931
	FCC/ISED	815.05	34.655	2.920	29.915	0.981
	FCC/ISED	823.95	34.739	2.978	30.300	1.071
	FCC/ISED	851.05	34.521	2.832	29.892	0.975
	FCC/ISED	860.05	34.559	2.857	29.885	0.974
	FCC/ISED	868.95	34.497	2.817	29.762	0.947

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
8K10F1W	ISED	138.05	37.760	5.971	30.358	1.086
	FCC/ISED	150.05	37.644	5.813	30.016	1.004
	FCC/ISED	162.05	37.614	5.773	30.384	1.092
	FCC/ISED	173.95	37.664	5.840	30.145	1.034
	FCC/ISED	406.15	36.906	4.904	30.346	1.083
	FCC/ISED	429.95	36.483	4.449	29.777	0.950
	FCC/ISED	469.95	36.856	4.848	29.934	0.985
	FCC	511.95	36.973	4.981	30.389	1.094
	ISED	768.05	34.500	2.818	30.205	1.048
	FCC/ISED	769.05	34.526	2.835	30.157	1.037
	FCC/ISED	774.95	34.509	2.824	30.172	1.040
	ISED	775.95	34.459	2.792	30.191	1.045
	ISED	798.05	34.066	2.550	29.787	0.952
	FCC/ISED	799.05	34.223	2.644	29.721	0.938
	FCC/ISED	804.95	34.329	2.710	29.753	0.945
	ISED	805.95	34.306	2.696	29.774	0.949
	FCC/ISED	806.05	34.607	2.889	29.751	0.944
	FCC/ISED	815.05	34.633	2.906	29.890	0.975
	FCC/ISED	823.95	34.677	2.936	30.288	1.069
	FCC/ISED	851.05	34.590	2.877	29.952	0.989
	FCC/ISED	860.05	34.599	2.883	29.861	0.968
	FCC/ISED	868.95	34.547	2.849	29.828	0.961

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
7K60FXD, 7K60FXE, 7K60F1E, 7K60F1D, 7K60F1W, 7K60FXW	ISED	138.05	37.715	5.909	30.399	1.096
	FCC/ISED	150.05	37.592	5.744	29.943	0.987
	FCC/ISED	162.05	37.751	5.959	30.398	1.096
	FCC/ISED	173.95	37.647	5.817	30.145	1.034
	FCC/ISED	406.15	36.969	4.976	30.401	1.097
	FCC/ISED	429.95	36.347	4.312	29.764	0.947
	FCC/ISED	469.95	36.754	4.735	29.971	0.993
	FCC	511.95	36.914	4.913	30.352	1.084
	ISED	768.05	34.541	2.845	30.214	1.050
	FCC/ISED	769.05	34.503	2.821	30.156	1.037
	FCC/ISED	774.95	34.456	2.790	30.156	1.037
	ISED	775.95	34.568	2.863	30.171	1.040
	ISED	798.05	34.243	2.656	29.792	0.953
	FCC/ISED	799.05	34.215	2.639	29.719	0.937
	FCC/ISED	804.95	34.289	2.685	29.718	0.937
	ISED	805.95	34.265	2.670	29.738	0.941
	FCC/ISED	806.05	34.529	2.837	29.704	0.934
	FCC/ISED	815.05	34.676	2.935	29.836	0.963
	FCC/ISED	823.95	34.689	2.944	30.309	1.074
	FCC/ISED	851.05	34.682	2.939	29.964	0.992
	FCC/ISED	860.05	34.682	2.939	29.793	0.954
	FCC/ISED	868.95	34.629	2.903	29.798	0.954

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
8K30F1E, 8K30F1D, 8K30F7W	ISED	138.05	37.668	5.846	30.375	1.090
	FCC/ISED	150.05	37.700	5.888	29.992	0.998
	FCC/ISED	162.05	37.703	5.893	30.407	1.098
	FCC/ISED	173.95	37.762	5.974	30.105	1.024
	FCC/ISED	406.15	36.874	4.869	30.320	1.076
	FCC/ISED	429.95	36.434	4.400	29.735	0.941
	FCC/ISED	469.95	36.785	4.770	29.956	0.990
	FCC	511.95	36.880	4.875	30.370	1.089
	ISED	768.05	34.544	2.847	30.168	1.040
	FCC/ISED	769.05	34.522	2.833	30.165	1.039
	FCC/ISED	774.95	34.484	2.808	30.180	1.042
	ISED	775.95	34.717	2.963	30.188	1.044
	ISED	798.05	34.340	2.716	29.760	0.946
	FCC/ISED	799.05	34.313	2.699	29.759	0.946
	FCC/ISED	804.95	34.277	2.677	29.716	0.937
	ISED	805.95	34.265	2.670	29.729	0.940
	FCC/ISED	806.05	34.532	2.839	29.711	0.936
	FCC/ISED	815.05	34.733	2.974	29.885	0.974
	FCC/ISED	823.95	34.666	2.928	30.280	1.067
	FCC/ISED	851.05	34.579	2.870	29.925	0.983
	FCC/ISED	860.05	34.589	2.876	29.842	0.964
	FCC/ISED	868.95	34.552	2.853	29.796	0.954

Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
4K00F1E, 4K00F1D, 4K00F7W	ISED	138.05	37.724	5.921	30.402	1.097
	FCC/ISED	150.05	37.701	5.890	29.988	0.997
	FCC/ISED	162.05	37.772	5.986	30.367	1.088
	FCC/ISED	173.95	37.718	5.914	30.078	1.018
	FCC/ISED	406.15	36.916	4.916	30.408	1.098
	FCC/ISED	429.95	36.406	4.372	29.725	0.939
	FCC/ISED	469.95	36.776	4.760	29.969	0.993
	FCC	511.95	36.843	4.834	30.402	1.097
	ISED	768.05	34.407	2.759	30.181	1.043
	FCC/ISED	769.05	34.408	2.759	30.205	1.048
	FCC/ISED	774.95	34.399	2.754	30.200	1.047
	ISED	775.95	34.404	2.757	30.187	1.044
	ISED	798.05	34.124	2.585	29.786	0.952
	FCC/ISED	799.05	34.121	2.583	29.720	0.938
	FCC/ISED	804.95	34.223	2.644	29.737	0.941
	ISED	805.95	34.238	2.653	29.682	0.929
	FCC/ISED	806.05	34.527	2.836	29.729	0.939
	FCC/ISED	815.05	34.702	2.953	29.918	0.981
	FCC/ISED	823.95	34.705	2.955	30.313	1.075
	FCC/ISED	851.05	34.571	2.865	29.908	0.979
	FCC/ISED	860.05	34.548	2.850	29.847	0.965
	FCC/ISED	868.95	34.537	2.843	29.837	0.963

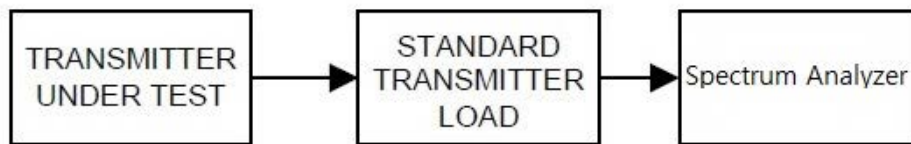
Emission	Standard	Test Freq (MHz)	High Power		Low Power	
			dBm	W	dBm	W
4K00F2D	ISED	138.05	37.692	5.878	30.402	1.097
	FCC/ISED	150.05	37.592	5.744	29.944	0.987
	FCC/ISED	162.05	37.668	5.845	30.397	1.096
	FCC/ISED	173.95	37.620	5.781	30.116	1.027
	FCC/ISED	406.15	36.877	4.872	30.315	1.075
	FCC/ISED	429.95	36.357	4.322	29.756	0.945
	FCC/ISED	469.95	36.739	4.720	29.917	0.981
	FCC	511.95	36.969	4.977	30.456	1.111
	ISED	768.05	34.504	2.821	30.120	1.028
	FCC/ISED	769.05	34.468	2.797	30.164	1.038
	FCC/ISED	774.95	34.441	2.781	30.209	1.049
	ISED	775.95	34.650	2.918	30.213	1.050
	ISED	798.05	34.260	2.667	29.770	0.948
	FCC/ISED	799.05	34.251	2.661	29.774	0.949
	FCC/ISED	804.95	34.265	2.670	29.718	0.937
	ISED	805.95	34.296	2.689	29.743	0.943
	FCC/ISED	806.05	34.484	2.808	29.683	0.930
	FCC/ISED	815.05	34.649	2.917	29.911	0.980
	FCC/ISED	823.95	34.683	2.939	30.319	1.076
	FCC/ISED	851.05	34.652	2.919	29.879	0.972
	FCC/ISED	860.05	34.657	2.922	29.885	0.974
	FCC/ISED	868.95	34.560	2.858	29.836	0.963

8.2 Carrier Frequency Stability

■ Definition

The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

■ TEST CONFIGURATION



■ TEST PROCEDURE

According to 2.2.2 in TIA-603-E Standard.

- Connect the equipment as illustrated.
- Operate the equipment in standby conditions for 15 minutes before proceeding.
- Record the carrier frequency of the transmitter as MCF_{MHz}
- Calculate the ppm frequency error by the following:

$$\text{ppm error} = ((MCF_{MHz} / ACF_{MHz}) - 1) * 10^6$$

where

MCF_{MHz} is the Measured Carrier Frequency in MHz

ACF_{MHz} is the Assigned Carrier Frequency in MHz

- The value recorded in step d) is the carrier frequency stability.

■ TEST LIMIT

The limits were varied, so worst limit was applied.

(Worst limit: 0.4 ppm)

TEST RESULTS

(1) Frequency Stability (Temperature Variation)

16K0F3E

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
138.05	+20 (Ref)	138.050001153	0.008	0.4
	-30	138.050010799	0.078	
	-20	138.050030981	0.224	
	-10	138.049978759	-0.154	
	0	138.049999328	-0.005	
	+10	138.050001153	0.008	
	+30	138.050029904	0.217	
	+40	138.050027600	0.200	
	+50	138.050002399	0.017	
150.05	+20 (Ref)	150.049995012	-0.033	0.4
	-30	150.049980790	-0.128	
	-20	150.050011765	0.078	
	-10	150.050000034	0.000	
	0	150.050001094	0.007	
	+10	150.049995012	-0.033	
	+30	150.050018111	0.121	
	+40	150.050003429	0.023	
	+50	150.049970133	-0.199	
173.95	+20 (Ref)	173.949975327	-0.142	0.4
	-30	173.949991177	-0.051	
	-20	173.949974171	-0.148	
	-10	173.949960298	-0.228	
	0	173.949981133	-0.108	
	+10	173.949975327	-0.142	
	+30	173.949994229	-0.033	
	+40	173.949984749	-0.088	
	+50	173.949971685	-0.163	
406.15	+20 (Ref)	406.149929918	-0.173	0.4
	-30	406.149951368	-0.120	
	-20	406.149935619	-0.159	
	-10	406.149947773	-0.129	
	0	406.149952901	-0.116	
	+10	406.149929918	-0.173	
	+30	406.149919735	-0.198	
	+40	406.149912431	-0.216	
	+50	406.149928215	-0.177	
429.95	+20 (Ref)	429.949942575	-0.134	0.4
	-30	429.949915452	-0.197	
	-20	429.949930163	-0.162	
	-10	429.949946596	-0.124	
	0	429.949956327	-0.102	
	+10	429.949942575	-0.134	
	+30	429.949924871	-0.175	
	+40	429.949934398	-0.153	
	+50	429.949949624	-0.117	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
469.95	+20 (Ref)	469.949955229	-0.095	0.4
	-30	469.949948528	-0.110	
	-20	469.949952632	-0.101	
	-10	469.949967421	-0.069	
	0	469.949932763	-0.143	
	+10	469.949955229	-0.095	
	+30	469.949970998	-0.062	
	+40	469.949934856	-0.139	
	+50	469.949929274	-0.150	
470.05	+20 (Ref)	470.049852826	-0.313	0.4
	-30	470.049849098	-0.321	
	-20	470.049841453	-0.337	
	-10	470.049826267	-0.370	
	0	470.049856321	-0.306	
	+10	470.049852826	-0.313	
	+30	470.049842740	-0.335	
	+40	470.049828108	-0.366	
	+50	470.049844790	-0.330	
491.05	+20 (Ref)	491.049859120	-0.287	0.4
	-30	491.049870545	-0.264	
	-20	491.049887671	-0.229	
	-10	491.049841911	-0.322	
	0	491.049845415	-0.315	
	+10	491.049859120	-0.287	
	+30	491.049845864	-0.314	
	+40	491.049856504	-0.292	
	+50	491.049868831	-0.267	
511.95	+20 (Ref)	511.949842590	-0.307	0.4
	-30	511.949842035	-0.309	
	-20	511.949854263	-0.285	
	-10	511.949859879	-0.274	
	0	511.949862813	-0.268	
	+10	511.949842590	-0.307	
	+30	511.949856630	-0.280	
	+40	511.949818281	-0.355	
	+50	511.949860107	-0.273	
768.05	+20 (Ref)	768.049888753	-0.145	0.4
	-30	768.049859148	-0.183	
	-20	768.049886095	-0.148	
	-10	768.049912093	-0.114	
	0	768.049859157	-0.183	
	+10	768.049888753	-0.145	
	+30	768.049877725	-0.159	
	+40	768.049897669	-0.133	
	+50	768.049888765	-0.145	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
769.05	+20 (Ref)	769.049808476	-0.249	0.4
	-30	769.049832480	-0.218	
	-20	769.049824932	-0.228	
	-10	769.049787182	-0.277	
	0	769.049836859	-0.212	
	+10	769.049808476	-0.249	
	+30	769.049792416	-0.270	
	+40	769.049812771	-0.243	
	+50	769.049826164	-0.226	
774.95	+20 (Ref)	774.949791372	-0.269	0.4
	-30	774.949803877	-0.253	
	-20	774.949767271	-0.300	
	-10	774.949780585	-0.283	
	0	774.949768181	-0.299	
	+10	774.949791372	-0.269	
	+30	774.949810820	-0.244	
	+40	774.949795979	-0.263	
	+50	774.949818217	-0.235	
775.95	+20 (Ref)	775.949763455	-0.305	0.4
	-30	775.949747847	-0.325	
	-20	775.949789109	-0.272	
	-10	775.949764563	-0.303	
	0	775.949756302	-0.314	
	+10	775.949763455	-0.305	
	+30	775.949752205	-0.319	
	+40	775.949779219	-0.285	
	+50	775.949740688	-0.334	
798.05	+20 (Ref)	798.049755038	-0.307	0.4
	-30	798.049738319	-0.328	
	-20	798.049767219	-0.292	
	-10	798.049739406	-0.327	
	0	798.049752381	-0.310	
	+10	798.049755038	-0.307	
	+30	798.049725589	-0.344	
	+40	798.049765251	-0.294	
	+50	798.049769545	-0.289	
799.05	+20 (Ref)	799.049774304	-0.282	0.4
	-30	799.049783235	-0.271	
	-20	799.049767458	-0.291	
	-10	799.049758355	-0.302	
	0	799.049803885	-0.245	
	+10	799.049774304	-0.282	
	+30	799.049792207	-0.260	
	+40	799.049768374	-0.290	
	+50	799.049777097	-0.279	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
804.95	+20 (Ref)	804.949760015	-0.298	0.4
	-30	804.949785887	-0.266	
	-20	804.949760134	-0.298	
	-10	804.949732394	-0.332	
	0	804.949745929	-0.316	
	+10	804.949760015	-0.298	
	+30	804.949743012	-0.319	
	+40	804.949755677	-0.304	
	+50	804.949755605	-0.304	
805.95	+20 (Ref)	805.949763005	-0.294	0.4
	-30	805.949776288	-0.278	
	-20	805.949777626	-0.276	
	-10	805.949790938	-0.259	
	0	805.949781102	-0.272	
	+10	805.949763005	-0.294	
	+30	805.949764273	-0.292	
	+40	805.949776920	-0.277	
	+50	805.949759069	-0.299	
806.05	+20 (Ref)	806.049768427	-0.287	0.4
	-30	806.049783034	-0.269	
	-20	806.049746292	-0.315	
	-10	806.049741545	-0.321	
	0	806.049743403	-0.318	
	+10	806.049768427	-0.287	
	+30	806.049763203	-0.294	
	+40	806.049780795	-0.272	
	+50	806.049775429	-0.279	
815.05	+20 (Ref)	815.049715120	-0.350	0.4
	-30	815.049712572	-0.353	
	-20	815.049703513	-0.364	
	-10	815.049731311	-0.330	
	0	815.049691616	-0.378	
	+10	815.049715120	-0.350	
	+30	815.049720444	-0.343	
	+40	815.049697775	-0.371	
	+50	815.049714596	-0.350	
823.95	+20 (Ref)	823.949701050	-0.363	0.4
	-30	823.949720625	-0.339	
	-20	823.949726140	-0.332	
	-10	823.949696092	-0.369	
	0	823.949712441	-0.349	
	+10	823.949701050	-0.363	
	+30	823.949724721	-0.334	
	+40	823.949711409	-0.350	
	+50	823.949708422	-0.354	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
851.05	+20 (Ref)	851.049679936	-0.376	0.4
	-30	851.049666543	-0.392	
	-20	851.049705859	-0.346	
	-10	851.049685646	-0.369	
	0	851.049756013	-0.287	
	+10	851.049679936	-0.376	
	+30	851.049685517	-0.370	
	+40	851.049708575	-0.342	
	+50	851.049758759	-0.283	
860.05	+20 (Ref)	860.049714127	-0.332	0.4
	-30	860.049723594	-0.321	
	-20	860.049709596	-0.338	
	-10	860.049685191	-0.366	
	0	860.049715637	-0.331	
	+10	860.049714127	-0.332	
	+30	860.049742683	-0.299	
	+40	860.049717282	-0.329	
	+50	860.049742040	-0.300	
868.95	+20 (Ref)	868.949738262	-0.301	0.4
	-30	868.949761497	-0.274	
	-20	868.949761642	-0.274	
	-10	868.949730713	-0.310	
	0	868.949710863	-0.333	
	+10	868.949738262	-0.301	
	+30	868.949754413	-0.283	
	+40	868.949759369	-0.277	
	+50	868.949766420	-0.269	

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Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
138.05	+20 (Ref)	138.049972069	-0.202	0.4
	-30	138.049993838	-0.045	
	-20	138.049947593	-0.380	
	-10	138.049987402	-0.091	
	0	138.049997879	-0.015	
	+10	138.049972069	-0.202	
	+30	138.049972073	-0.202	
	+40	138.049976081	-0.173	
	+50	138.049996512	-0.025	
150.05	+20 (Ref)	150.049974717	-0.168	0.4
	-30	150.049953719	-0.308	
	-20	150.049979609	-0.136	
	-10	150.050002686	0.018	
	0	150.049971939	-0.187	
	+10	150.049974717	-0.168	
	+30	150.049973298	-0.178	
	+40	150.049964092	-0.239	
	+50	150.049951972	-0.320	
162.05	+20 (Ref)	162.049961779	-0.236	0.4
	-30	162.049969245	-0.190	
	-20	162.049954379	-0.282	
	-10	162.049945181	-0.338	
	0	162.049941367	-0.362	
	+10	162.049961779	-0.236	
	+30	162.049940956	-0.364	
	+40	162.049968823	-0.192	
	+50	162.049937467	-0.386	
173.95	+20 (Ref)	173.949941112	-0.339	0.4
	-30	173.949941899	-0.334	
	-20	173.949933060	-0.385	
	-10	173.949966199	-0.194	
	0	173.949946477	-0.308	
	+10	173.949941112	-0.339	
	+30	173.949942851	-0.329	
	+40	173.949934364	-0.377	
	+50	173.949940215	-0.344	
406.15	+20 (Ref)	406.149874410	-0.309	0.4
	-30	406.149897401	-0.253	
	-20	406.149878577	-0.299	
	-10	406.149852087	-0.364	
	0	406.149868189	-0.325	
	+10	406.149874410	-0.309	
	+30	406.149856112	-0.354	
	+40	406.149863517	-0.336	
	+50	406.149846169	-0.379	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
429.95	+20 (Ref)	429.949857453	-0.332	0.4
	-30	429.949862405	-0.320	
	-20	429.949846962	-0.356	
	-10	429.949860684	-0.324	
	0	429.949837587	-0.378	
	+10	429.949857453	-0.332	
	+30	429.949830472	-0.394	
	+40	429.949849495	-0.350	
	+50	429.949863824	-0.317	
469.95	+20 (Ref)	469.949868167	-0.281	0.4
	-30	469.949858005	-0.302	
	-20	469.949884940	-0.245	
	-10	469.949845306	-0.329	
	0	469.949877715	-0.260	
	+10	469.949868167	-0.281	
	+30	469.949887236	-0.240	
	+40	469.949887468	-0.239	
	+50	469.949861681	-0.294	
511.95	+20 (Ref)	511.949827210	-0.338	0.4
	-30	511.949819708	-0.352	
	-20	511.949847620	-0.298	
	-10	511.949843082	-0.307	
	0	511.949820114	-0.351	
	+10	511.949827210	-0.338	
	+30	511.949849706	-0.294	
	+40	511.949827757	-0.336	
	+50	511.949830699	-0.331	
768.05	+20 (Ref)	768.049751166	-0.324	0.4
	-30	768.049735971	-0.344	
	-20	768.049735803	-0.344	
	-10	768.049755640	-0.318	
	0	768.049763389	-0.308	
	+10	768.049751166	-0.324	
	+30	768.049772275	-0.296	
	+40	768.049751932	-0.323	
	+50	768.049764788	-0.306	
769.05	+20 (Ref)	769.049717600	-0.367	0.4
	-30	769.049697006	-0.394	
	-20	769.049747529	-0.328	
	-10	769.049710867	-0.376	
	0	769.049704194	-0.385	
	+10	769.049717600	-0.367	
	+30	769.049704284	-0.385	
	+40	769.049707946	-0.380	
	+50	769.049741272	-0.336	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
774.95	+20 (Ref)	774.949708835	-0.376	0.4
	-30	774.949719190	-0.362	
	-20	774.949712357	-0.371	
	-10	774.949723207	-0.357	
	0	774.949738680	-0.337	
	+10	774.949708835	-0.376	
	+30	774.949729533	-0.349	
	+40	774.949733773	-0.344	
	+50	774.949733553	-0.344	
775.95	+20 (Ref)	775.949707716	-0.377	0.4
	-30	775.949716559	-0.365	
	-20	775.949695943	-0.392	
	-10	775.949719909	-0.361	
	0	775.949727587	-0.351	
	+10	775.949707716	-0.377	
	+30	775.949726563	-0.352	
	+40	775.949775609	-0.289	
	+50	775.949691709	-0.397	
798.05	+20 (Ref)	798.049703269	-0.372	0.4
	-30	798.049727240	-0.342	
	-20	798.049722874	-0.347	
	-10	798.049693157	-0.384	
	0	798.049700324	-0.376	
	+10	798.049703269	-0.372	
	+30	798.049688003	-0.391	
	+40	798.049712012	-0.361	
	+50	798.049696957	-0.380	
799.05	+20 (Ref)	799.049722125	-0.348	0.4
	-30	799.049714790	-0.357	
	-20	799.049722627	-0.347	
	-10	799.049722594	-0.347	
	0	799.049732649	-0.335	
	+10	799.049722125	-0.348	
	+30	799.049710785	-0.362	
	+40	799.049744329	-0.320	
	+50	799.049744130	-0.320	
804.95	+20 (Ref)	804.949738695	-0.325	0.4
	-30	804.949749235	-0.312	
	-20	804.949763656	-0.294	
	-10	804.949718474	-0.350	
	0	804.949708824	-0.362	
	+10	804.949738695	-0.325	
	+30	804.949708809	-0.362	
	+40	804.949721670	-0.346	
	+50	804.949734493	-0.330	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
805.95	+20 (Ref)	805.949741783	-0.320	0.4
	-30	805.949764642	-0.292	
	-20	805.949770747	-0.284	
	-10	805.949720258	-0.347	
	0	805.949761095	-0.296	
	+10	805.949741783	-0.320	
	+30	805.949760810	-0.297	
	+40	805.949742298	-0.320	
	+50	805.949721049	-0.346	
806.05	+20 (Ref)	806.049736800	-0.327	0.4
	-30	806.049765508	-0.291	
	-20	806.049717457	-0.351	
	-10	806.049762764	-0.294	
	0	806.049711789	-0.358	
	+10	806.049736800	-0.327	
	+30	806.049726358	-0.339	
	+40	806.049720109	-0.347	
	+50	806.049757702	-0.301	
815.05	+20 (Ref)	815.049770848	-0.281	0.4
	-30	815.049800691	-0.245	
	-20	815.049794624	-0.252	
	-10	815.049745699	-0.312	
	0	815.049747416	-0.310	
	+10	815.049770848	-0.281	
	+30	815.049777538	-0.273	
	+40	815.049746146	-0.311	
	+50	815.049744527	-0.313	
823.95	+20 (Ref)	823.949768347	-0.281	0.4
	-30	823.949757883	-0.294	
	-20	823.949740494	-0.315	
	-10	823.949774848	-0.273	
	0	823.949794924	-0.249	
	+10	823.949768347	-0.281	
	+30	823.949788882	-0.256	
	+40	823.949745861	-0.308	
	+50	823.949780739	-0.266	
851.05	+20 (Ref)	851.049876142	-0.146	0.4
	-30	851.049903302	-0.114	
	-20	851.049901642	-0.116	
	-10	851.049865550	-0.158	
	0	851.049890423	-0.129	
	+10	851.049876142	-0.146	
	+30	851.049862289	-0.162	
	+40	851.049852358	-0.173	
	+50	851.049904651	-0.112	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
860.05	+20 (Ref)	860.049791639	-0.242	0.4
	-30	860.049768842	-0.269	
	-20	860.049816275	-0.214	
	-10	860.049779512	-0.256	
	0	860.049801471	-0.231	
	+10	860.049791639	-0.242	
	+30	860.049791238	-0.243	
	+40	860.049801220	-0.231	
	+50	860.049780492	-0.255	
868.95	+20 (Ref)	868.949699254	-0.346	0.4
	-30	868.949717038	-0.326	
	-20	868.949723361	-0.318	
	-10	868.949710533	-0.333	
	0	868.949693391	-0.353	
	+10	868.949699254	-0.346	
	+30	868.949695275	-0.351	
	+40	868.949687685	-0.359	
	+50	868.949711794	-0.332	

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Test Frequency (MHz)	Temperature (Degree C)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
138.05	+20 (Ref)	138.050004866	0.035	0.4
	-30	138.049983827	-0.117	
	-20	138.049982550	-0.126	
	-10	138.050015982	0.116	
	0	138.049990579	-0.068	
	+10	138.050004866	0.035	
	+30	138.049992698	-0.053	
	+40	138.049984975	-0.109	
	+50	138.049979704	-0.147	
150.05	+20 (Ref)	150.050002637	0.018	0.4
	-30	150.050012160	0.081	
	-20	150.050018709	0.125	
	-10	150.049986163	-0.092	
	0	150.050029255	0.195	
	+10	150.050002637	0.018	
	+30	150.050016728	0.111	
	+40	150.050006486	0.043	
	+50	150.050009865	0.066	
162.05	+20 (Ref)	162.049995522	-0.028	0.4
	-30	162.050022481	0.139	
	-20	162.050011065	0.068	
	-10	162.050024413	0.151	
	0	162.049991737	-0.051	
	+10	162.049995522	-0.028	
	+30	162.050022046	0.136	
	+40	162.049978599	-0.132	
	+50	162.049972509	-0.170	
173.95	+20 (Ref)	173.949992863	-0.041	0.4
	-30	173.949992152	-0.045	
	-20	173.950019032	0.109	
	-10	173.949967163	-0.189	
	0	173.950007069	0.041	
	+10	173.949992863	-0.041	
	+30	173.950002778	0.016	
	+40	173.949972047	-0.161	
	+50	173.950014137	0.081	
406.15	+20 (Ref)	406.149959445	-0.100	0.4
	-30	406.149934940	-0.160	
	-20	406.149954009	-0.113	
	-10	406.149937602	-0.154	
	0	406.149938328	-0.152	
	+10	406.149959445	-0.100	
	+30	406.149951204	-0.120	
	+40	406.149987138	-0.032	
	+50	406.149959492	-0.100	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
429.95	+20 (Ref)	429.949924640	-0.175	0.4
	-30	429.949911599	-0.206	
	-20	429.949938334	-0.143	
	-10	429.949932688	-0.157	
	0	429.949910755	-0.208	
	+10	429.949924640	-0.175	
	+30	429.949952898	-0.110	
	+40	429.949912627	-0.203	
	+50	429.949942736	-0.133	
469.95	+20 (Ref)	469.949923707	-0.162	0.4
	-30	469.949901572	-0.209	
	-20	469.949944352	-0.118	
	-10	469.949908914	-0.194	
	0	469.949917339	-0.176	
	+10	469.949923707	-0.162	
	+30	469.949947226	-0.112	
	+40	469.949936813	-0.134	
	+50	469.949915525	-0.180	
511.95	+20 (Ref)	511.950014871	0.029	0.4
	-30	511.950043576	0.085	
	-20	511.949987860	-0.024	
	-10	511.950026008	0.051	
	0	511.950016364	0.032	
	+10	511.950014871	0.029	
	+30	511.950020472	0.040	
	+40	511.950044683	0.087	
	+50	511.950042307	0.083	
768.05	+20 (Ref)	768.049889988	-0.143	0.4
	-30	768.049882014	-0.154	
	-20	768.049903764	-0.125	
	-10	768.049873401	-0.165	
	0	768.049860445	-0.182	
	+10	768.049889988	-0.143	
	+30	768.049910848	-0.116	
	+40	768.049874166	-0.164	
	+50	768.049904792	-0.124	
769.05	+20 (Ref)	769.049904948	-0.124	0.4
	-30	769.049899344	-0.131	
	-20	769.049892338	-0.140	
	-10	769.049916012	-0.109	
	0	769.049877421	-0.159	
	+10	769.049904948	-0.124	
	+30	769.049922273	-0.101	
	+40	769.049884696	-0.150	
	+50	769.049895354	-0.136	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
774.95	+20 (Ref)	774.949892736	-0.138	0.4
	-30	774.949879804	-0.155	
	-20	774.949868369	-0.170	
	-10	774.949887703	-0.145	
	0	774.949921988	-0.101	
	+10	774.949892736	-0.138	
	+30	774.949898124	-0.131	
	+40	774.949919175	-0.104	
	+50	774.949920486	-0.103	
775.95	+20 (Ref)	775.949900121	-0.129	0.4
	-30	775.949908535	-0.118	
	-20	775.949913107	-0.112	
	-10	775.949879417	-0.155	
	0	775.949921036	-0.102	
	+10	775.949900121	-0.129	
	+30	775.949883635	-0.150	
	+40	775.949917017	-0.107	
	+50	775.949875693	-0.160	
798.05	+20 (Ref)	798.049890984	-0.137	0.4
	-30	798.049872562	-0.160	
	-20	798.049918895	-0.102	
	-10	798.049906965	-0.117	
	0	798.049863143	-0.171	
	+10	798.049890984	-0.137	
	+30	798.049872584	-0.160	
	+40	798.049875010	-0.157	
	+50	798.049870164	-0.163	
799.05	+20 (Ref)	799.049898942	-0.126	0.4
	-30	799.049874689	-0.157	
	-20	799.049926613	-0.092	
	-10	799.049897059	-0.129	
	0	799.049886437	-0.142	
	+10	799.049898942	-0.126	
	+30	799.049927562	-0.091	
	+40	799.049886100	-0.143	
	+50	799.049915305	-0.106	
804.95	+20 (Ref)	804.949906869	-0.116	0.4
	-30	804.949880078	-0.149	
	-20	804.949920422	-0.099	
	-10	804.949892629	-0.133	
	0	804.949885037	-0.143	
	+10	804.949906869	-0.116	
	+30	804.949920058	-0.099	
	+40	804.949893617	-0.132	
	+50	804.949928864	-0.088	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
805.95	+20 (Ref)	805.949904647	-0.118	0.4
	-30	805.949895384	-0.130	
	-20	805.949923414	-0.095	
	-10	805.949897278	-0.127	
	0	805.949902008	-0.122	
	+10	805.949904647	-0.118	
	+30	805.949877352	-0.152	
	+40	805.949933006	-0.083	
	+50	805.949923765	-0.095	
806.05	+20 (Ref)	806.049860106	-0.174	0.4
	-30	806.049830573	-0.210	
	-20	806.049847101	-0.190	
	-10	806.049861550	-0.172	
	0	806.049832288	-0.208	
	+10	806.049860106	-0.174	
	+30	806.049863750	-0.169	
	+40	806.049858720	-0.175	
	+50	806.049881586	-0.147	
815.05	+20 (Ref)	815.049889392	-0.136	0.4
	-30	815.049914127	-0.105	
	-20	815.049863558	-0.167	
	-10	815.049915864	-0.103	
	0	815.049892460	-0.132	
	+10	815.049889392	-0.136	
	+30	815.049873184	-0.156	
	+40	815.049879911	-0.147	
	+50	815.049882365	-0.144	
823.95	+20 (Ref)	823.949903631	-0.117	0.4
	-30	823.949884569	-0.140	
	-20	823.949926505	-0.089	
	-10	823.949920031	-0.097	
	0	823.949882223	-0.143	
	+10	823.949903631	-0.117	
	+30	823.949931475	-0.083	
	+40	823.949891596	-0.132	
	+50	823.949876422	-0.150	
851.05	+20 (Ref)	851.049868662	-0.154	0.4
	-30	851.049869064	-0.154	
	-20	851.049888162	-0.131	
	-10	851.049883733	-0.137	
	0	851.049890567	-0.129	
	+10	851.049868662	-0.154	
	+30	851.049862662	-0.161	
	+40	851.049873315	-0.149	
	+50	851.049840816	-0.187	

Test Frequency (MHz)	Temperature (Degree C)	Frequency (Hz)	Frequency stability (ppm)	Limit (ppm)
860.05	+20 (Ref)	860.049902619	-0.113	0.4
	-30	860.049890585	-0.127	
	-20	860.049902702	-0.113	
	-10	860.049877799	-0.142	
	0	860.049907576	-0.107	
	+10	860.049902619	-0.113	
	+30	860.049896598	-0.120	
	+40	860.049913078	-0.101	
	+50	860.049879516	-0.140	
868.95	+20 (Ref)	868.949907167	-0.107	0.4
	-30	868.949907526	-0.106	
	-20	868.949927135	-0.084	
	-10	868.949898730	-0.117	
	0	868.949891683	-0.125	
	+10	868.949907167	-0.107	
	+30	868.949906580	-0.108	
	+40	868.949927674	-0.083	
	+50	868.949919711	-0.092	

(2)Frequency Stability (Voltage Variation)

Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
16K0F3E	138.05	80	6.00	138.050	0.005	0.4
		100	7.50	138.050	0.004	
		120	9.00	138.050	0.004	
	150.05	80	6.00	150.050	-0.035	0.4
		100	7.50	150.050	-0.047	
		120	9.00	150.050	-0.038	
	173.95	80	6.00	173.950	-0.145	0.4
		100	7.50	173.950	-0.154	
		120	9.00	173.950	-0.147	
	406.15	80	6.00	406.150	-0.170	0.4
		100	7.50	406.150	-0.159	
		120	9.00	406.150	-0.171	
	429.95	80	6.00	429.950	-0.131	0.4
		100	7.50	429.950	-0.111	
		120	9.00	429.950	-0.132	
	469.95	80	6.00	469.950	-0.095	0.4
		100	7.50	469.950	-0.092	
		120	9.00	469.950	-0.103	
	470.05	80	6.00	470.050	-0.309	0.4
		100	7.50	470.050	-0.285	
		120	9.00	470.050	-0.306	
	491.05	80	6.00	491.050	-0.283	0.4
		100	7.50	491.050	-0.289	
		120	9.00	491.050	-0.290	
	511.95	80	6.00	511.950	-0.302	0.4
		100	7.50	511.950	-0.319	
		120	9.00	511.950	-0.311	
	768.05	80	6.00	768.050	-0.126	0.4
		100	7.50	768.050	-0.147	
		120	9.00	768.050	-0.135	
	769.05	80	6.00	769.050	-0.231	0.4
		100	7.50	769.050	-0.260	
		120	9.00	769.050	-0.245	
	774.95	80	6.00	774.950	-0.253	0.4
		100	7.50	774.950	-0.282	
		120	9.00	774.950	-0.268	
	775.95	80	6.00	775.950	-0.286	0.4
		100	7.50	775.950	-0.312	
		120	9.00	775.950	-0.300	
	798.05	80	6.00	798.050	-0.286	0.4
		100	7.50	798.050	-0.303	
		120	9.00	798.050	-0.294	
	799.05	80	6.00	799.050	-0.268	0.4
		100	7.50	799.050	-0.293	
		120	9.00	799.050	-0.280	
	804.95	80	6.00	804.950	-0.281	0.4
		100	7.50	804.950	-0.301	
		120	9.00	804.950	-0.290	
	805.95	80	6.00	805.950	-0.278	0.4
		100	7.50	805.950	-0.301	
		120	9.00	805.950	-0.289	
	806.05	80	6.00	806.050	-0.286	0.4
		100	7.50	806.050	-0.298	
		120	9.00	806.050	-0.291	
	815.05	80	6.00	815.050	-0.349	0.4

Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
		100	7.50	815.050	-0.349	
		120	9.00	815.050	-0.351	
	823.95	80	6.00	823.950	-0.362	0.4
		100	7.50	823.950	-0.353	
		120	9.00	823.950	-0.362	
	851.05	80	6.00	851.050	-0.371	0.4
		100	7.50	851.050	-0.360	
		120	9.00	851.050	-0.369	
	860.05	80	6.00	860.050	-0.332	0.4
		100	7.50	860.050	-0.321	
		120	9.00	860.050	-0.334	
	868.95	80	6.00	868.950	-0.299	0.4
		100	7.50	868.950	-0.288	
		120	9.00	868.950	-0.300	

Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
11K0F3E	138.05	80	6.00	138.050	-0.212	0.4
		100	7.50	138.050	-0.239	
		120	9.00	138.050	-0.224	
	150.05	80	6.00	150.050	-0.166	0.4
		100	7.50	150.050	-0.157	
		120	9.00	150.050	-0.161	
	162.05	80	6.00	162.050	-0.238	0.4
		100	7.50	162.050	-0.252	
		120	9.00	162.050	-0.241	
	173.95	80	6.00	173.950	-0.341	0.4
		100	7.50	173.950	-0.348	
		120	9.00	173.950	-0.344	
	406.15	80	6.00	406.150	-0.327	0.4
		100	7.50	406.150	-0.347	
		120	9.00	406.150	-0.342	
	429.95	80	6.00	429.950	-0.323	0.4
		100	7.50	429.950	-0.298	
		120	9.00	429.950	-0.320	
	469.95	80	6.00	469.950	-0.277	0.4
		100	7.50	469.950	-0.277	
		120	9.00	469.950	-0.283	
	511.95	80	6.00	511.950	-0.313	0.4
		100	7.50	511.950	-0.283	
		120	9.00	511.950	-0.303	
	768.05	80	6.00	768.050	-0.317	0.4
		100	7.50	768.050	-0.351	
		120	9.00	768.050	-0.338	
	769.05	80	6.00	769.050	-0.353	0.4
		100	7.50	769.050	-0.371	
		120	9.00	769.050	-0.369	
	774.95	80	6.00	774.950	-0.361	0.4
		100	7.50	774.950	-0.375	
		120	9.00	774.950	-0.375	
	775.95	80	6.00	775.950	-0.363	0.4
		100	7.50	775.950	-0.375	
		120	9.00	775.950	-0.377	
	798.05	80	6.00	798.050	-0.356	0.4
		100	7.50	798.050	-0.366	
		120	9.00	798.050	-0.365	
	799.05	80	6.00	799.050	-0.332	0.4
		100	7.50	799.050	-0.351	
		120	9.00	799.050	-0.344	
	804.95	80	6.00	804.950	-0.306	0.4
		100	7.50	804.950	-0.323	
		120	9.00	804.950	-0.315	
	805.95	80	6.00	805.950	-0.303	0.4
		100	7.50	805.950	-0.321	
		120	9.00	805.950	-0.312	
	806.05	80	6.00	806.050	-0.326	0.4
		100	7.50	806.050	-0.310	
		120	9.00	806.050	-0.326	
	815.05	80	6.00	815.050	-0.283	0.4
		100	7.50	815.050	-0.276	
		120	9.00	815.050	-0.288	
	823.95	80	6.00	823.950	-0.279	0.4
		100	7.50	823.950	-0.276	

Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
	851.05	120	9.00	823.950	-0.283	0.4
		80	6.00	851.050	-0.147	
		100	7.50	851.050	-0.145	
		120	9.00	851.050	-0.147	
	860.05	80	6.00	860.050	-0.243	0.4
		100	7.50	860.050	-0.258	
		120	9.00	860.050	-0.248	
		80	6.00	868.950	-0.345	0.4
	868.95	100	7.50	868.950	-0.346	
		120	9.00	868.950	-0.347	

Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
4K00F1E, 4K00F1D, 4K00F7W	138.05	80	6.00	138.050	0.037	0.4
		100	7.50	138.050	0.045	
		120	9.00	138.050	0.040	
	150.05	80	6.00	150.050	0.020	0.4
		100	7.50	150.050	0.013	
		120	9.00	150.050	0.019	
	162.05	80	6.00	162.050	-0.029	0.4
		100	7.50	162.050	-0.045	
		120	9.00	162.050	-0.034	
	173.95	80	6.00	173.950	-0.048	0.4
		100	7.50	173.950	-0.077	
		120	9.00	173.950	-0.060	
	406.15	80	6.00	406.150	-0.112	0.4
		100	7.50	406.150	-0.137	
		120	9.00	406.150	-0.126	
	429.95	80	6.00	429.950	-0.164	0.4
		100	7.50	429.950	-0.143	
		120	9.00	429.950	-0.161	
	469.95	80	6.00	469.950	-0.148	0.4
		100	7.50	469.950	-0.122	
		120	9.00	469.950	-0.144	
	511.95	80	6.00	511.950	0.031	0.4
		100	7.50	511.950	0.010	
		120	9.00	511.950	0.025	
	768.05	80	6.00	768.050	-0.110	0.4
		100	7.50	768.050	-0.101	
		120	9.00	768.050	-0.104	
	769.05	80	6.00	769.050	-0.115	0.4
		100	7.50	769.050	-0.138	
		120	9.00	769.050	-0.129	
	774.95	80	6.00	774.950	-0.132	0.4
		100	7.50	774.950	-0.154	
		120	9.00	774.950	-0.147	
	775.95	80	6.00	775.950	-0.107	0.4
		100	7.50	775.950	-0.119	
		120	9.00	775.950	-0.112	
	798.05	80	6.00	798.050	-0.130	0.4
		100	7.50	798.050	-0.147	
		120	9.00	798.050	-0.141	
	799.05	80	6.00	799.050	-0.119	0.4
		100	7.50	799.050	-0.137	
		120	9.00	799.050	-0.129	
	804.95	80	6.00	804.950	-0.107	0.4
		100	7.50	804.950	-0.105	
		120	9.00	804.950	-0.110	
	805.95	80	6.00	805.950	-0.110	0.4
		100	7.50	805.950	-0.113	
		120	9.00	805.950	-0.115	
	806.05	80	6.00	806.050	-0.171	0.4
		100	7.50	806.050	-0.151	
		120	9.00	806.050	-0.169	
	815.05	80	6.00	815.050	-0.122	0.4
		100	7.50	815.050	-0.101	
		120	9.00	815.050	-0.118	
	823.95	80	6.00	823.950	-0.106	0.4
		100	7.50	823.950	-0.094	

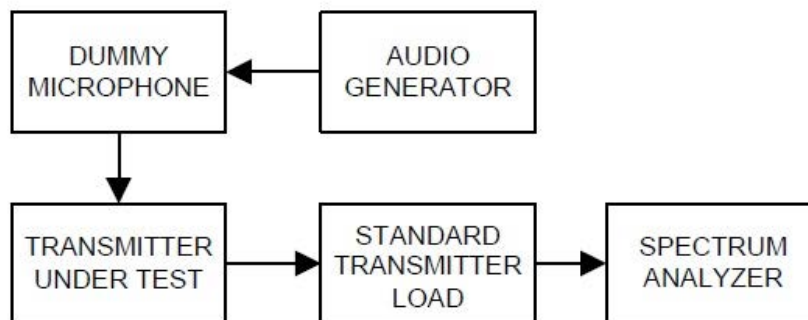
Type of Emission	Test Frequency (MHz)	Diviation (%)	Voltage (V)	Frequency (MHz)	Frequency stability (ppm)	Limit (ppm)
	851.05	120	9.00	823.950	-0.105	0.4
		80	6.00	851.050	-0.128	
		100	7.50	851.050	-0.103	
		120	9.00	851.050	-0.120	
	860.05	80	6.00	860.050	-0.101	0.4
		100	7.50	860.050	-0.094	
		120	9.00	860.050	-0.101	
		80	6.00	868.950	-0.097	0.4
	868.95	100	7.50	868.950	-0.099	
		120	9.00	868.950	-0.101	

8.3 Occupied Bandwidth

■ Definition

The transmitter sideband spectrum denotes the sideband power produced at a discrete frequency separation from the carrier up to the test bandwidth (see TIA-603-E Section 1.3.4.4) due to all sources of unwanted noise within the transmitter in a modulated condition.

■ TEST CONFIGURATION



■ TEST PROCEDURE

According to TIA-603-E Section 2.2.11.2

- a) For EUT supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for +/- 2.5 kHz deviation (or 50 % modulation). (FM modulation).
- b) With level constant, the signal level was increased 16 dB.
- c) For EUT supporting digital modulation, the digital modulation mode was operated to its maximum extent.
- d) Adjust the spectrum analyzer for the following setting:
 - 1) RBW : 100Hz (Authorized Band 6 kHz),
100Hz (Authorized Band 11.25 kHz),
300Hz (Authorized Band 20 kHz)
 - 2) VBW : Video Bandwidth at least 10 times the resolution bandwidth.
 - 4) Sweep Speed : Sweep Speed slow enough to maintain measurement calibration.
 - 5) Sampling Time : 10 times
 - 6) Detector Mode = Positive Peak.
- e) The occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.

■ TEST RESULTS

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
16K0F3E	25	ISED	138.05	10.754	20.00
		ISED	150.05	10.666	
		ISED	173.95	10.546	
		ISED	406.15	10.593	
		ISED	429.95	10.586	
		ISED	469.95	10.782	
		FCC	470.05	10.929	
		FCC	491.05	10.740	
		FCC	511.95	14.452	
		ISED	768.05	10.563	
		FCC/ISED	769.05	10.643	
		FCC/ISED	774.95	10.626	
		ISED	775.95	10.674	
		ISED	798.05	10.687	
		FCC/ISED	799.05	10.646	
		FCC/ISED	804.95	10.689	
		ISED	805.95	10.683	
		FCC/ISED	806.05	10.675	
		FCC/ISED	815.05	10.692	
		FCC/ISED	823.95	10.670	
		FCC/ISED	851.05	10.614	
		FCC/ISED	860.05	10.598	
		FCC/ISED	868.95	10.610	

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
14K0F3E	25	ISED	768.05	10.330	20.00
		FCC/ISED	769.05	10.333	
		FCC/ISED	774.95	10.348	
		ISED	775.95	10.397	
		ISED	798.05	10.348	
		FCC/ISED	799.05	10.352	
		FCC/ISED	804.95	10.353	
		ISED	805.95	10.352	
		FCC/ISED	806.05	10.357	
		FCC/ISED	815.05	10.359	
		FCC/ISED	823.95	10.347	
		FCC/ISED	851.05	10.331	
		FCC/ISED	860.05	10.327	
		FCC/ISED	868.95	10.337	

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
11K0F3E	12.5	ISED	138.05	5.241	11.25
		FCC/ISED	150.05	9.822	
		FCC/ISED	162.05	5.249	
		FCC/ISED	173.95	5.223	
		FCC/ISED	406.15	5.270	
		FCC/ISED	429.95	5.213	
		FCC/ISED	469.95	9.887	
		FCC	511.95	5.332	
		ISED	768.05	9.815	
		FCC/ISED	769.05	9.875	
		FCC/ISED	774.95	9.862	
		ISED	775.95	9.869	
		ISED	798.05	9.852	
		FCC/ISED	799.05	9.825	
		FCC/ISED	804.95	5.239	
		ISED	805.95	5.339	
		FCC/ISED	806.05	5.245	
		FCC/ISED	815.05	5.275	
		FCC/ISED	823.95	5.247	
		FCC/ISED	851.05	5.227	
		FCC/ISED	860.05	5.236	
		FCC/ISED	868.95	5.236	

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
8K10F1E, 8K10F1D	12.5	ISED	138.05	7.167	11.25
		FCC/ISED	150.05	7.422	
		FCC/ISED	162.05	7.227	
		FCC/ISED	173.95	7.051	
		FCC/ISED	406.15	7.390	
		FCC/ISED	429.95	7.338	
		FCC/ISED	469.95	7.532	
		FCC	511.95	7.446	
		ISED	768.05	7.583	
		FCC/ISED	769.05	7.598	
		FCC/ISED	774.95	7.606	
		ISED	775.95	7.572	
		ISED	798.05	7.616	
		FCC/ISED	799.05	7.622	
		FCC/ISED	804.95	7.554	
		ISED	805.95	7.566	
		FCC/ISED	806.05	6.805	
		FCC/ISED	815.05	6.827	
		FCC/ISED	823.95	6.764	
		FCC/ISED	851.05	6.687	
		FCC/ISED	860.05	6.655	
		FCC/ISED	868.95	6.705	

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
8K10F1W	12.5	ISED	138.05	7.371	11.25
		FCC/ISED	150.05	7.542	
		FCC/ISED	162.05	7.455	
		FCC/ISED	173.95	7.325	
		FCC/ISED	406.15	7.644	
		FCC/ISED	429.95	7.581	
		FCC/ISED	469.95	7.686	
		FCC	511.95	7.711	
		ISED	768.05	7.723	
		FCC/ISED	769.05	7.743	
		FCC/ISED	774.95	7.756	
		ISED	775.95	7.744	
		ISED	798.05	7.758	
		FCC/ISED	799.05	7.657	
		FCC/ISED	804.95	7.729	
		ISED	805.95	7.767	
		FCC/ISED	806.05	7.594	
		FCC/ISED	815.05	7.574	
		FCC/ISED	823.95	7.510	
		FCC/ISED	851.05	7.429	
		FCC/ISED	860.05	7.457	
		FCC/ISED	868.95	7.370	

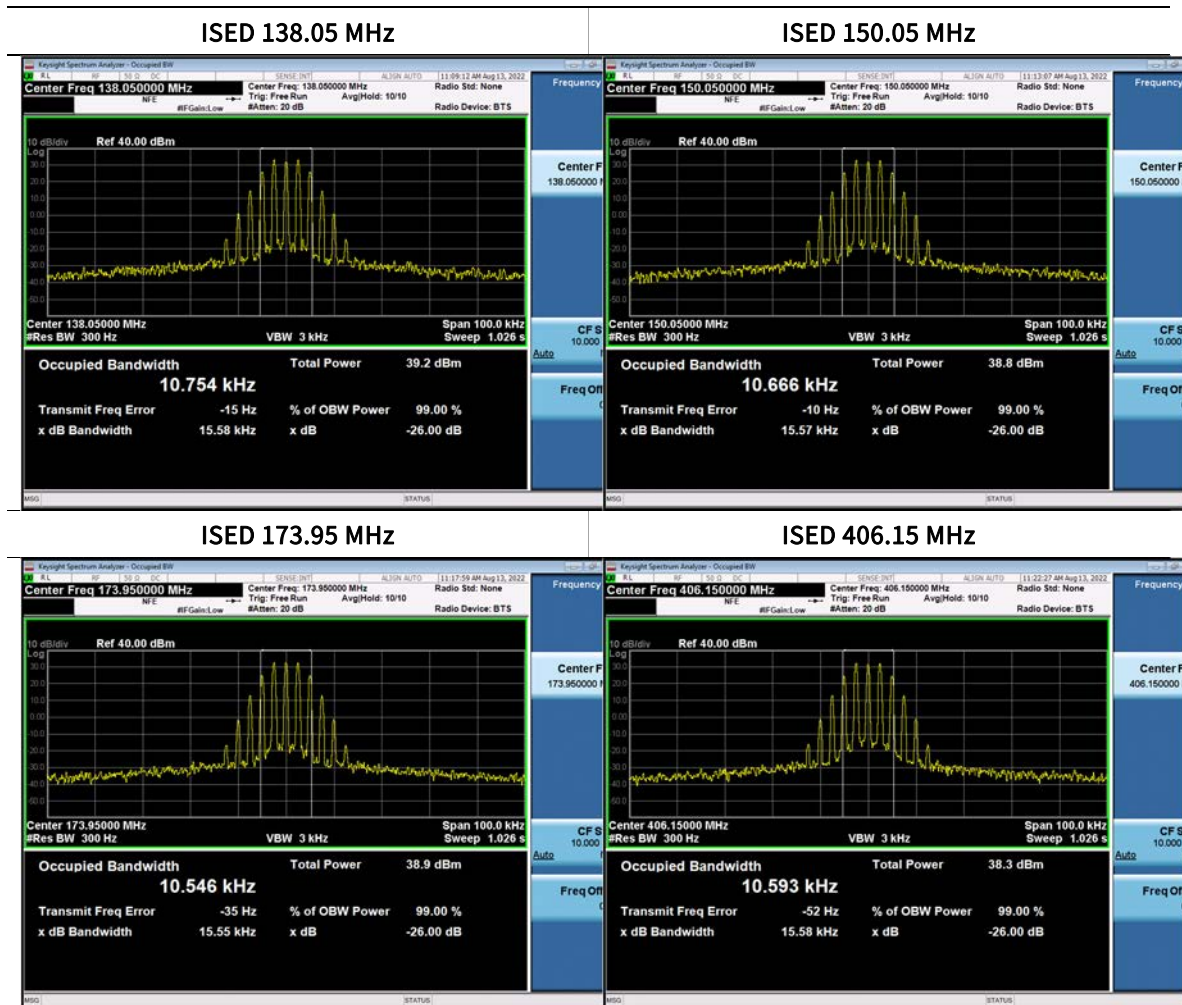
Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
7K60FXD, 7K60FXE, 7K60F1E, 7K60F1D, 7K60F1W, 7K60FXW	12.5	ISED	138.05	6.637	11.25
		FCC/ISED	150.05	6.777	
		FCC/ISED	162.05	6.681	
		FCC/ISED	173.95	6.589	
		FCC/ISED	406.15	6.805	
		FCC/ISED	429.95	6.792	
		FCC/ISED	469.95	6.914	
		FCC	511.95	6.940	
		ISED	768.05	6.828	
		FCC/ISED	769.05	6.840	
		FCC/ISED	774.95	6.883	
		ISED	775.95	6.840	
		ISED	798.05	6.891	
		FCC/ISED	799.05	6.901	
		FCC/ISED	804.95	6.900	
		ISED	805.95	6.924	
		FCC/ISED	806.05	6.793	
		FCC/ISED	815.05	6.819	
		FCC/ISED	823.95	6.797	
		FCC/ISED	851.05	6.822	
		FCC/ISED	860.05	6.754	
		FCC/ISED	868.95	6.661	

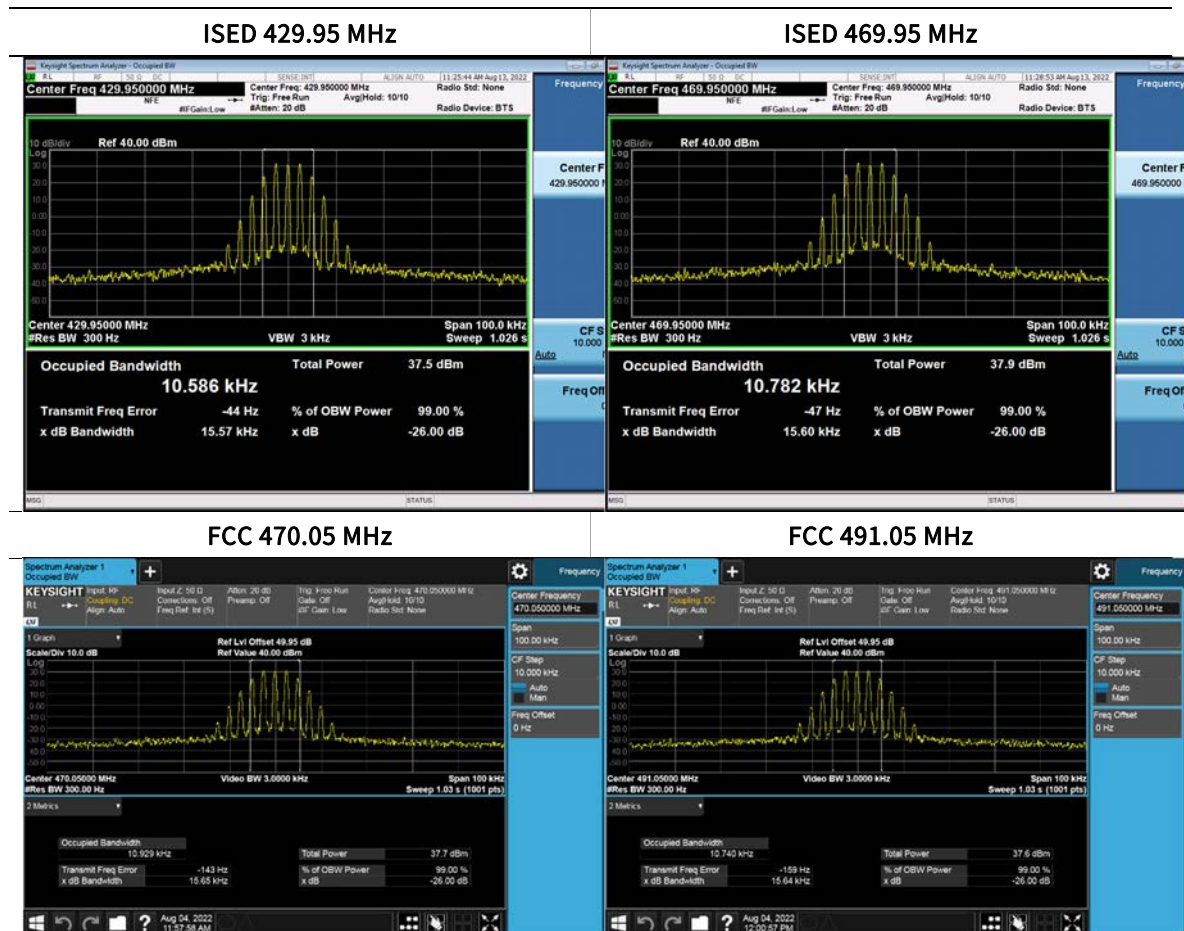
Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
8K30F1E, 8K30F1D, 8K30F7W	12.5	ISED	138.05	7.085	11.25
		FCC/ISED	150.05	7.198	
		FCC/ISED	162.05	7.091	
		FCC/ISED	173.95	6.980	
		FCC/ISED	406.15	7.063	
		FCC/ISED	429.95	7.023	
		FCC/ISED	469.95	7.159	
		FCC	511.95	7.147	
		ISED	768.05	7.036	
		FCC/ISED	769.05	7.090	
		FCC/ISED	774.95	7.129	
		ISED	775.95	7.162	
		ISED	798.05	7.139	
		FCC/ISED	799.05	7.135	
		FCC/ISED	804.95	7.146	
		ISED	805.95	7.180	
		FCC/ISED	806.05	7.024	
		FCC/ISED	815.05	7.025	
		FCC/ISED	823.95	6.973	
		FCC/ISED	851.05	6.916	
		FCC/ISED	860.05	6.894	
		FCC/ISED	868.95	6.969	

Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
4K00F1E, 4K00F1D, 4K00F7W	6.25	ISED	138.05	3.274	6.00
		FCC/ISED	150.05	3.299	
		FCC/ISED	162.05	3.310	
		FCC/ISED	173.95	3.248	
		FCC/ISED	406.15	3.302	
		FCC/ISED	429.95	3.265	
		FCC/ISED	469.95	3.319	
		FCC	511.95	3.321	
		ISED	768.05	3.359	
		FCC/ISED	769.05	3.359	
		FCC/ISED	774.95	3.365	
		ISED	775.95	3.357	
		ISED	798.05	3.376	
		FCC/ISED	799.05	3.387	
		FCC/ISED	804.95	3.365	
		ISED	805.95	3.389	
		FCC/ISED	806.05	3.321	
		FCC/ISED	815.05	3.315	
		FCC/ISED	823.95	3.286	
		FCC/ISED	851.05	3.234	
		FCC/ISED	860.05	3.246	
		FCC/ISED	868.95	3.249	

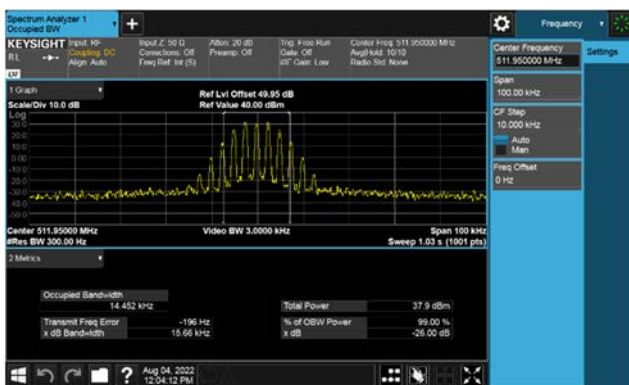
Emission	Channel Bandwidth (kHz)	Standard	Test Freq (MHz)	Result (kHz)	Limit (kHz)
4K00F2D	6.25	ISED	138.05	3.283	6.00
		FCC/ISED	150.05	3.291	
		FCC/ISED	162.05	3.289	
		FCC/ISED	173.95	3.280	
		FCC/ISED	406.15	3.294	
		FCC/ISED	429.95	3.291	
		FCC/ISED	469.95	3.301	
		FCC	511.95	3.303	
		ISED	768.05	3.303	
		FCC/ISED	769.05	3.307	
		FCC/ISED	774.95	3.306	
		ISED	775.95	3.309	
		ISED	798.05	3.308	
		FCC/ISED	799.05	3.307	
		FCC/ISED	804.95	3.309	
		ISED	805.95	3.309	
		FCC/ISED	806.05	3.298	
		FCC/ISED	815.05	3.300	
		FCC/ISED	823.95	3.299	
		FCC/ISED	851.05	3.288	
		FCC/ISED	860.05	3.289	
		FCC/ISED	868.95	3.294	

- Plots of 99% Bandwidth
- 16K0F3E(High Power)

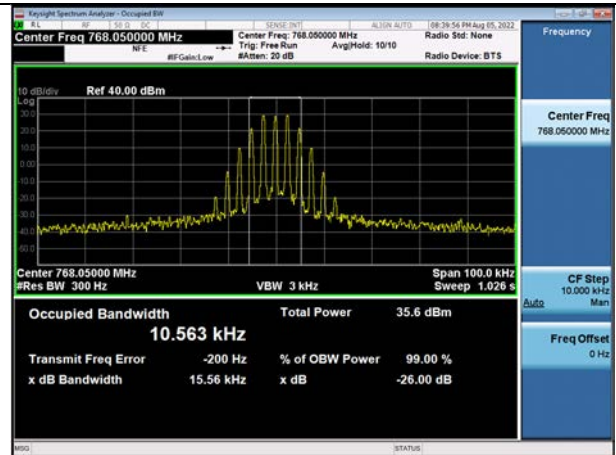




FCC 511.95 MHz



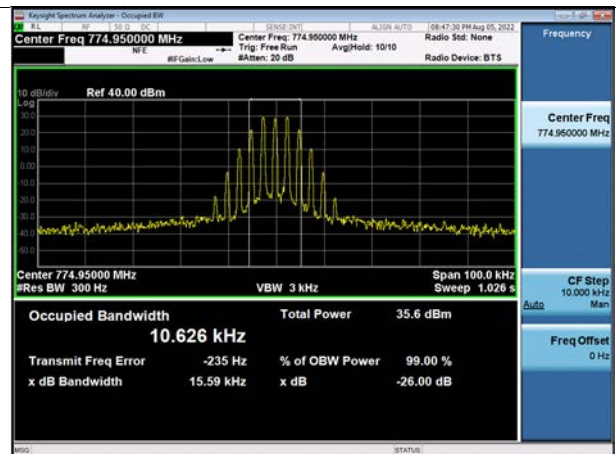
ISED 768.05 MHz



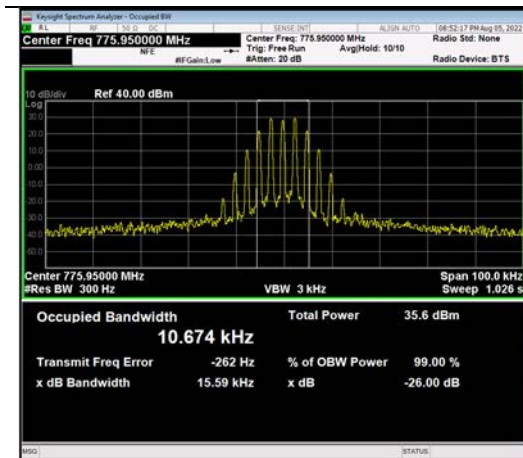
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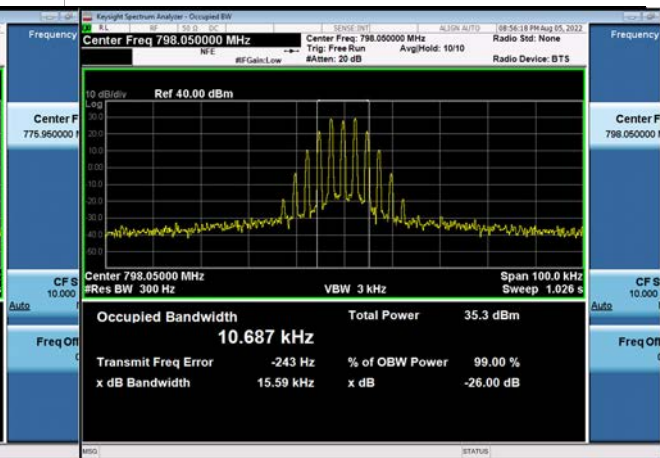
FCC/ISED 774.95 MHz



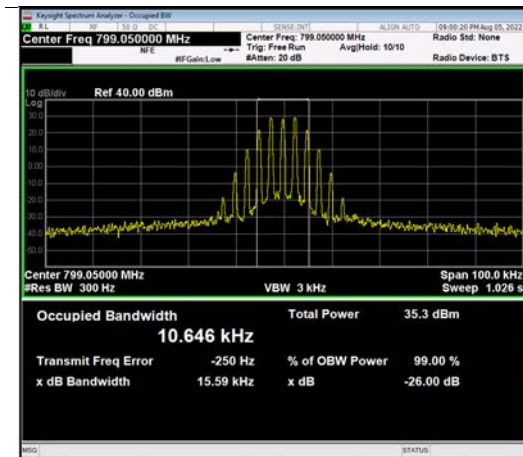
ISED 775.95 MHz



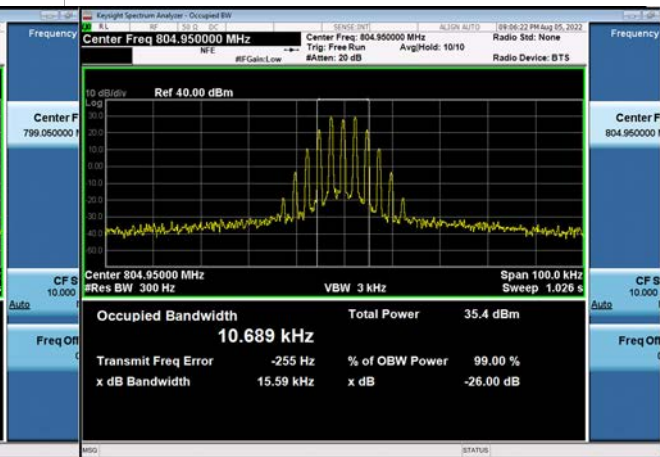
ISED 798.05 MHz



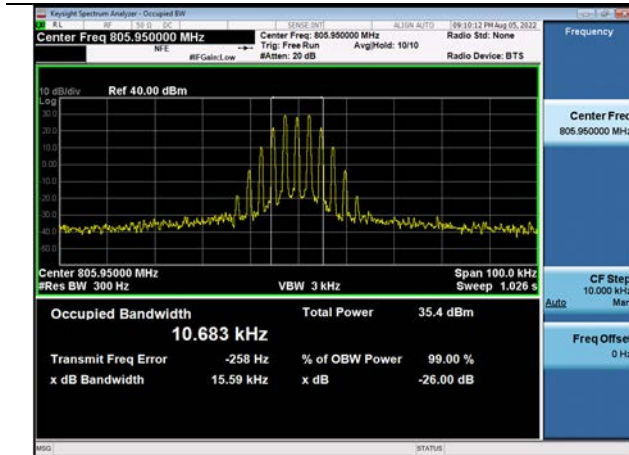
FCC/ISED 799.05 MHz



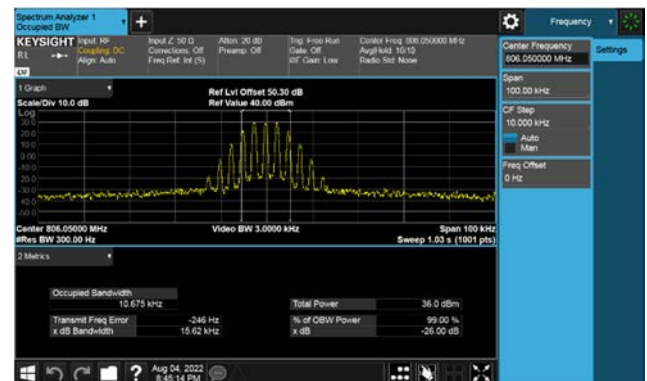
FCC/ISED 804.95 MHz



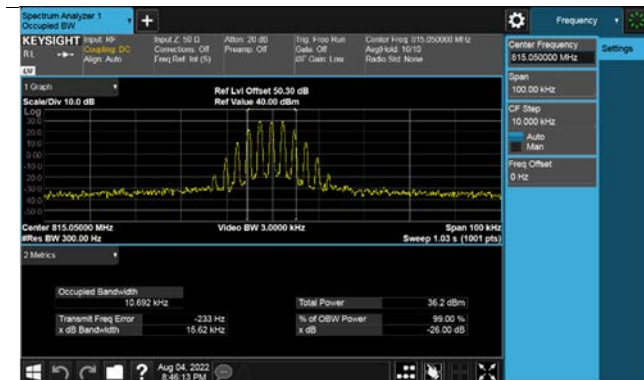
ISED 805.95 MHz



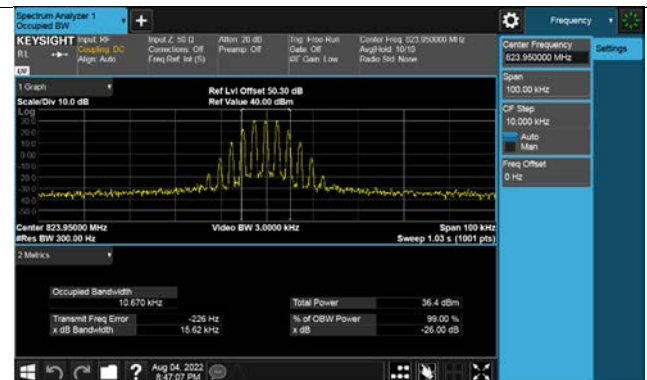
FCC/ISED 806.05 MHz



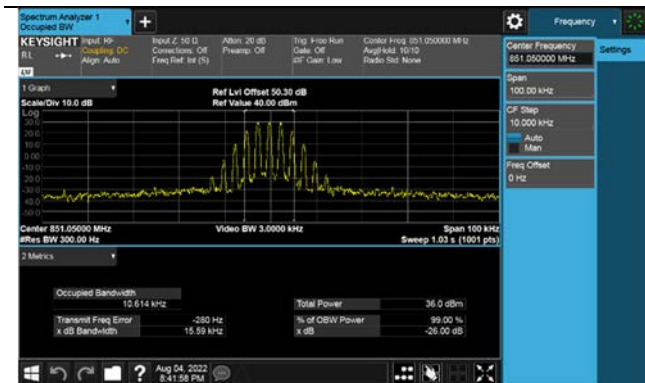
FCC/ISED 815.05 MHz



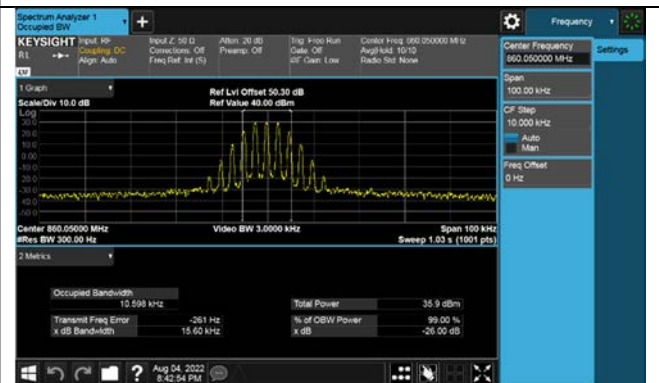
FCC/ISED 823.95 MHz



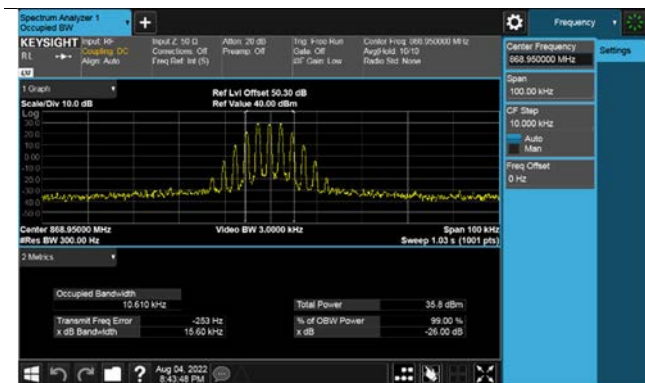
FCC/ISED 851.05 MHz



FCC/ISED 860.05 MHz

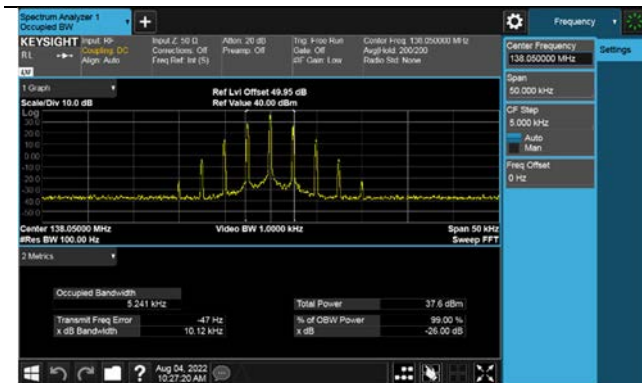


FCC/ISED 868.95 MHz

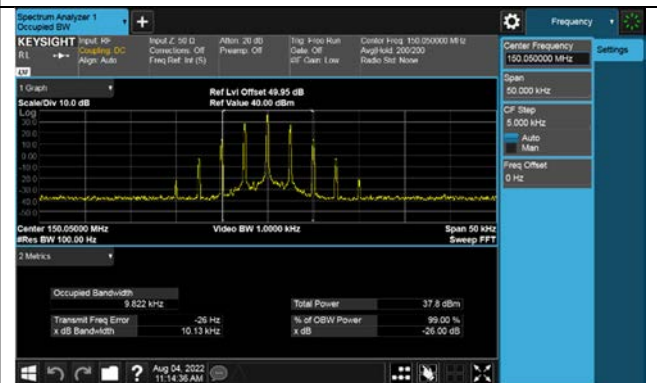


11K0F3E(High Power)

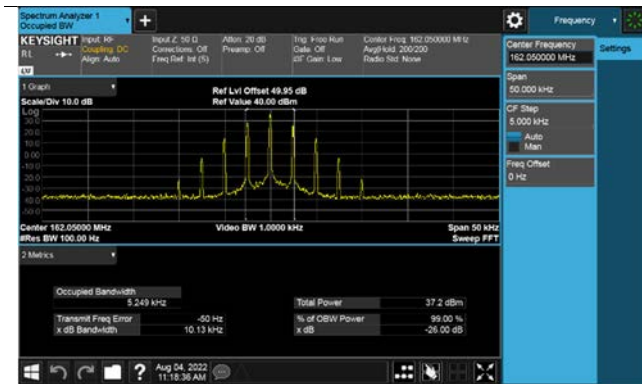
ISED 138.05 MHz



FCC/ISED 150.05 MHz



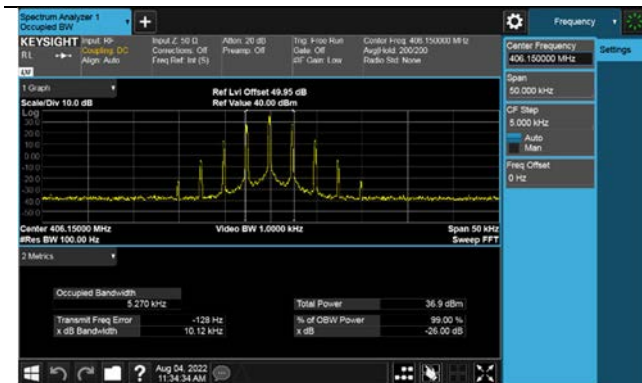
FCC/ISED 162.05 MHz



FCC/ISED 173.95 MHz



FCC/ISED 406.15 MHz



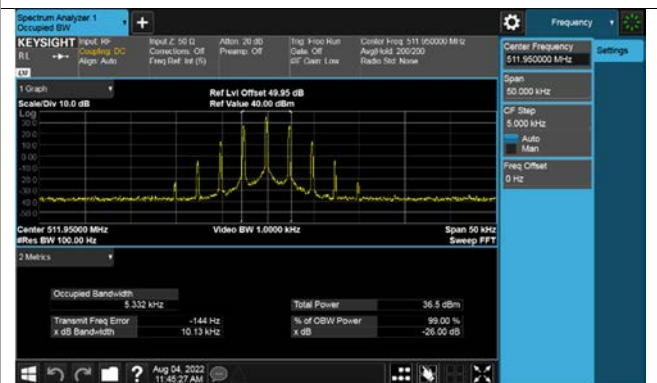
FCC/ISED 429.95 MHz



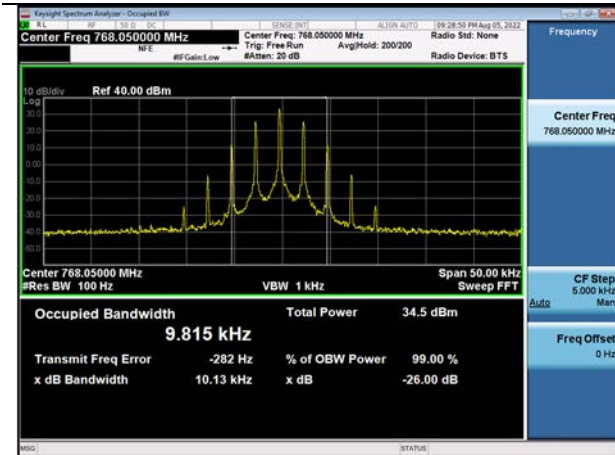
FCC/ISED 469.95 MHz



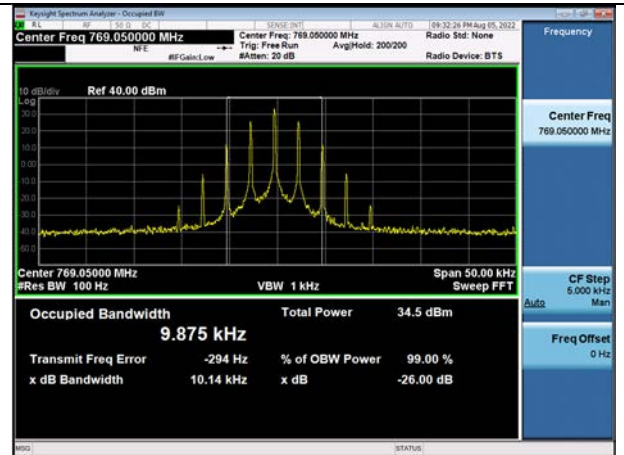
FCC 511.95 MHz



ISED 768.05 MHz



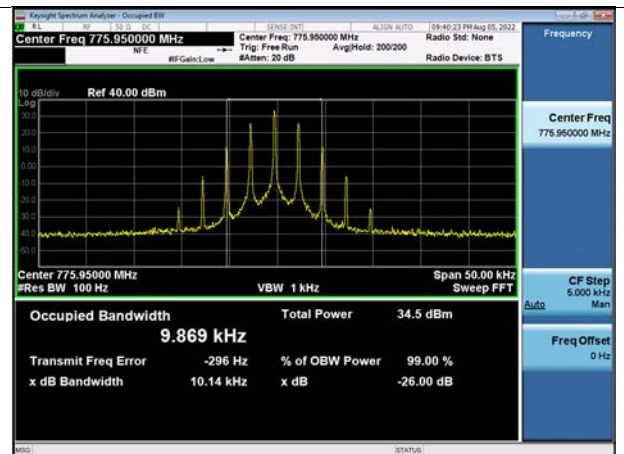
FCC/ISED 769.05 MHz



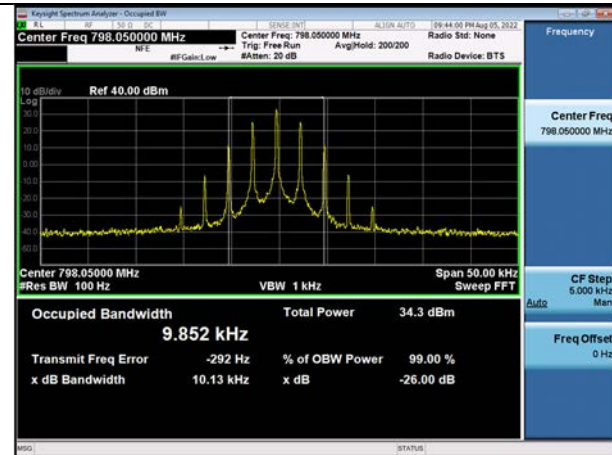
FCC/ISED 774.95 MHz



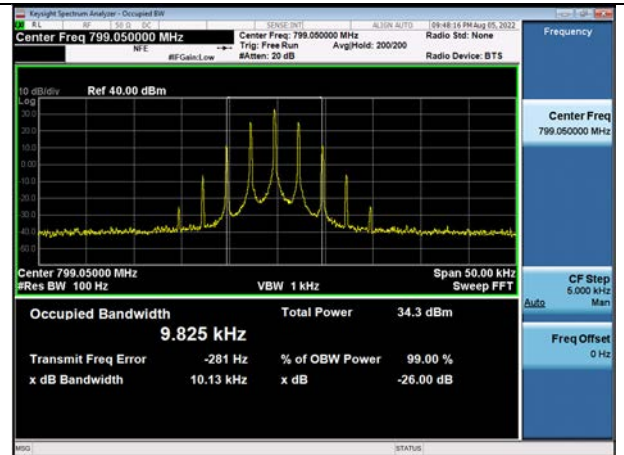
ISED 775.95 MHz



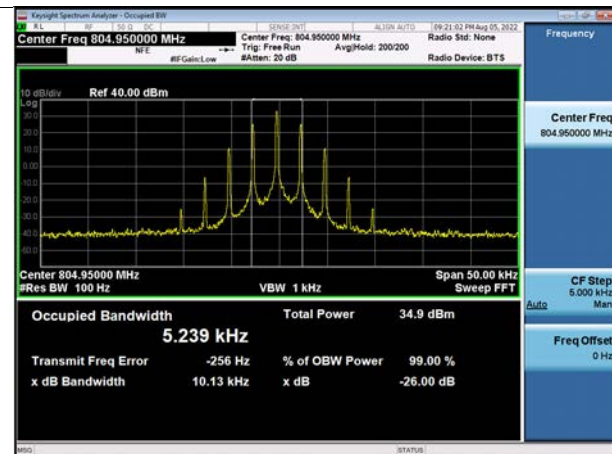
ISED 798.05 MHz



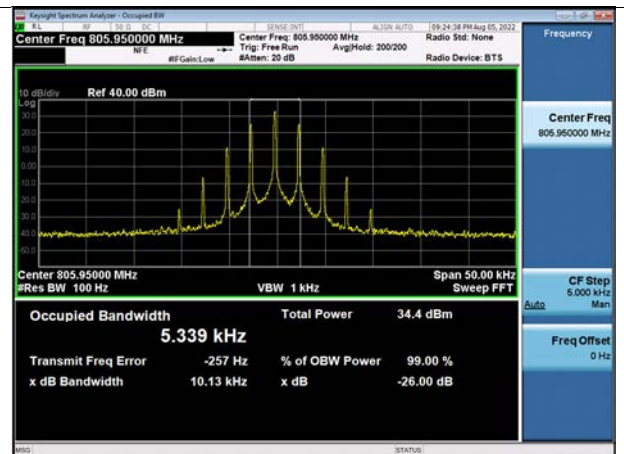
FCC/ISED 799.05 MHz



FCC/ISED 804.95 MHz



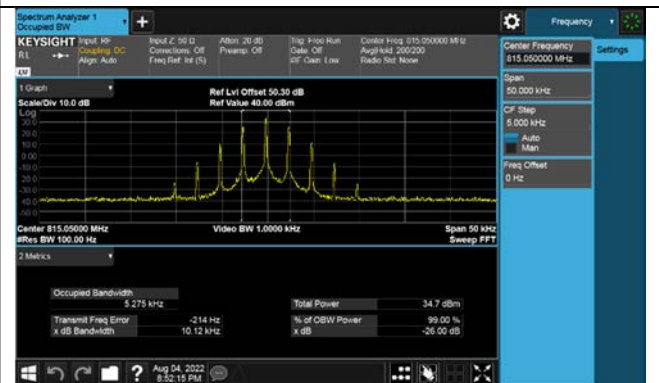
ISED 805.95 MHz



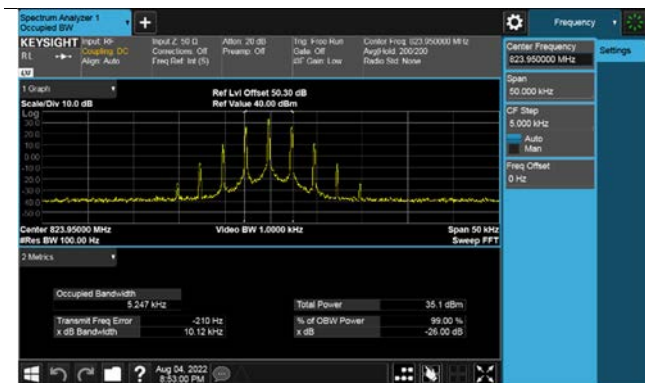
FCC/ISED 806.05 MHz



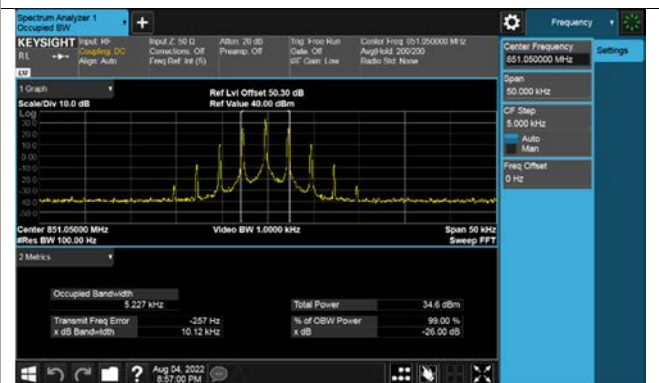
FCC/ISED 815.05 MHz



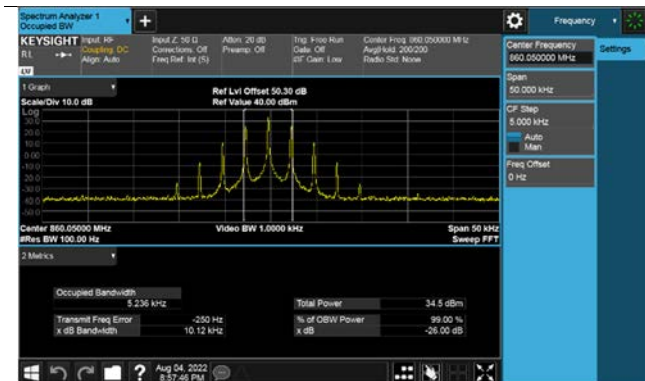
FCC/ISED 823.95 MHz



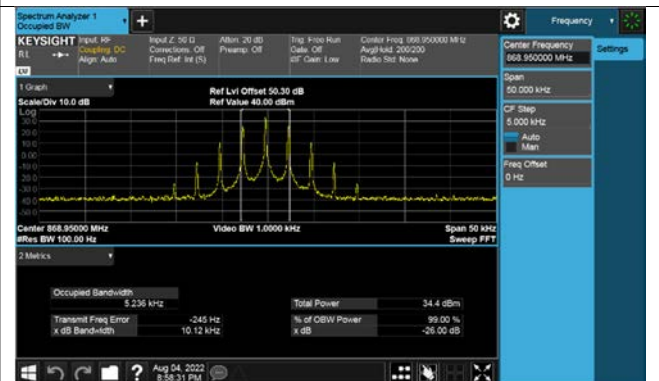
FCC/ISED 851.05 MHz



FCC/ISED 860.05 MHz



FCC/ISED 868.95 MHz

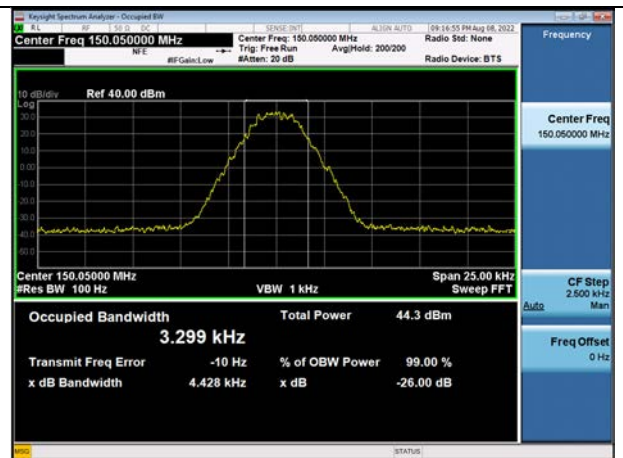


4K00F1E, 4K00F1D, 4K00F7W(High Power)

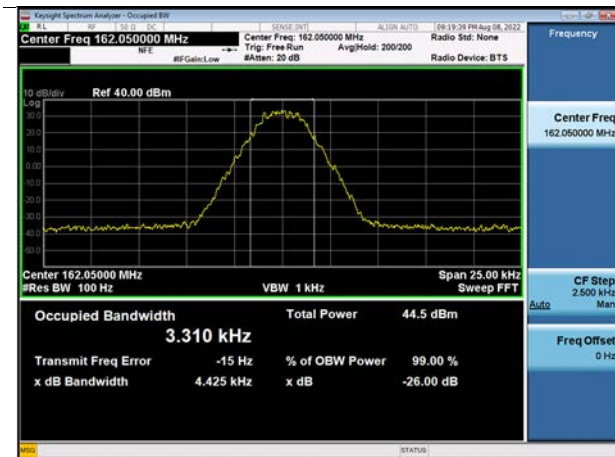
ISED 138.05 MHz



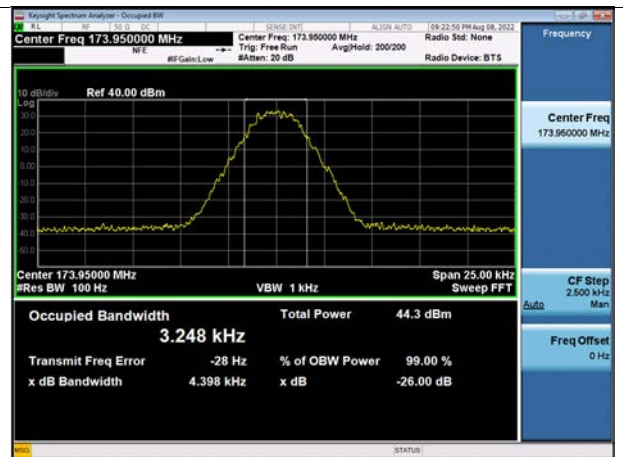
FCC/ISED 150.05 MHz



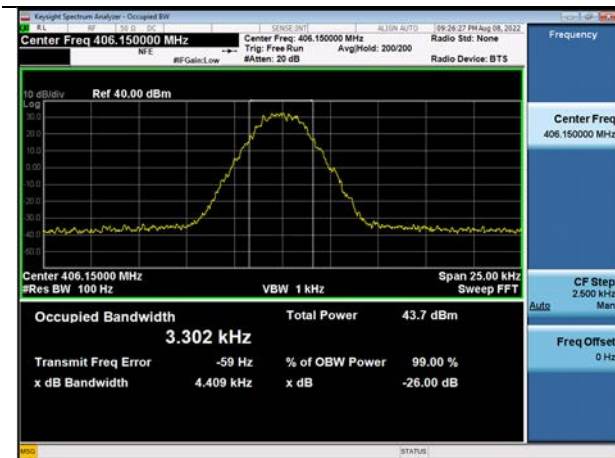
FCC/ISED 162.05 MHz



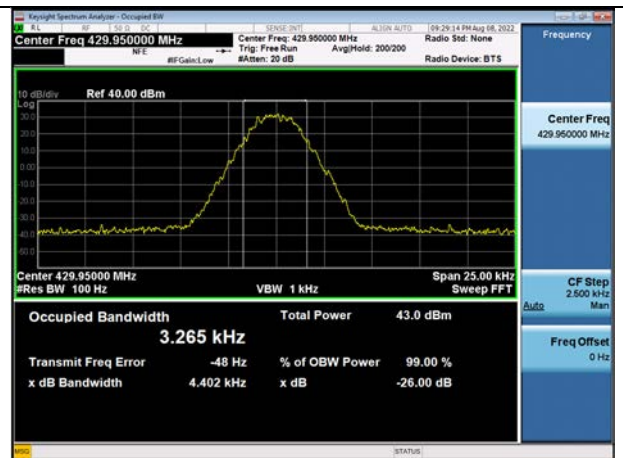
FCC/ISED 173.95 MHz



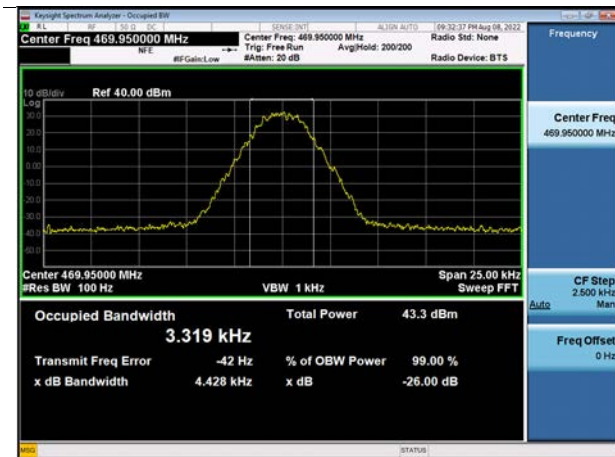
FCC/ISED 406.15 MHz



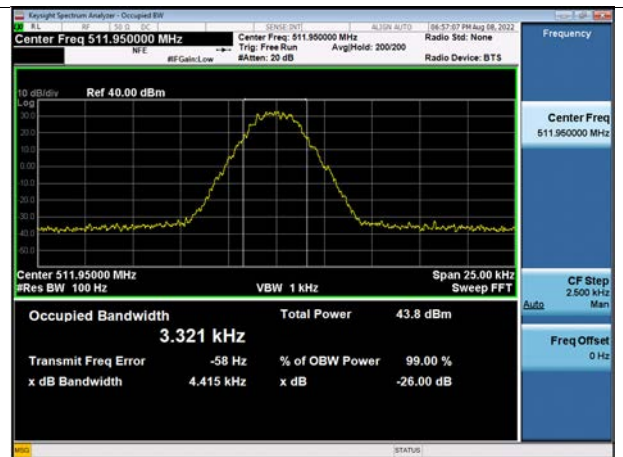
FCC/ISED 429.95 MHz



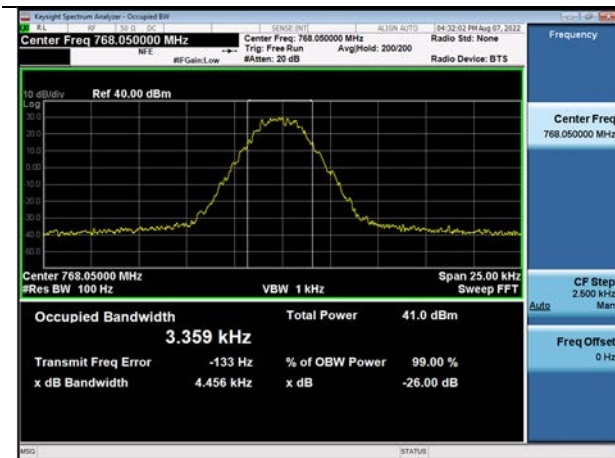
FCC/ISED 469.95 MHz



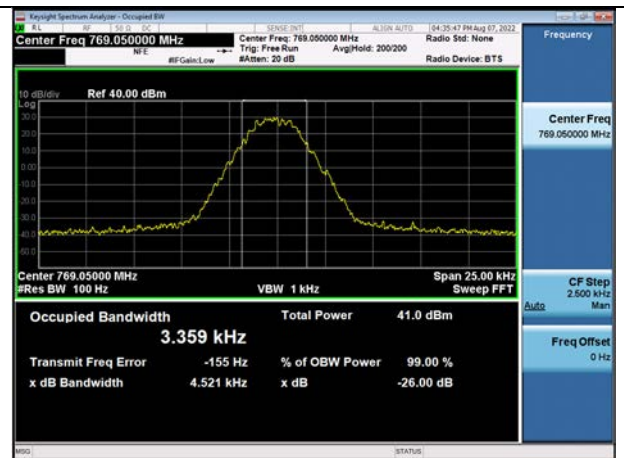
FCC 511.95 MHz



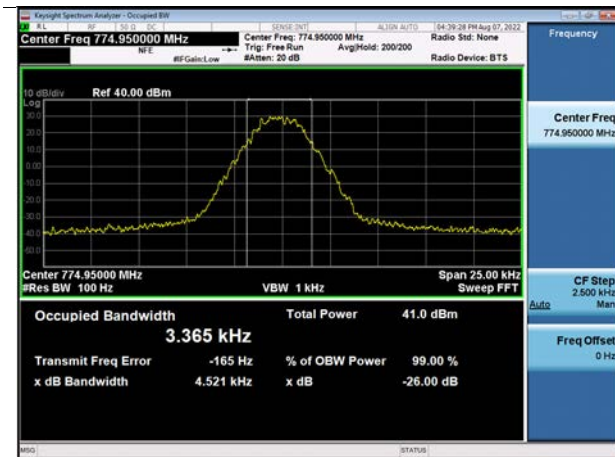
ISED 768.05 MHz



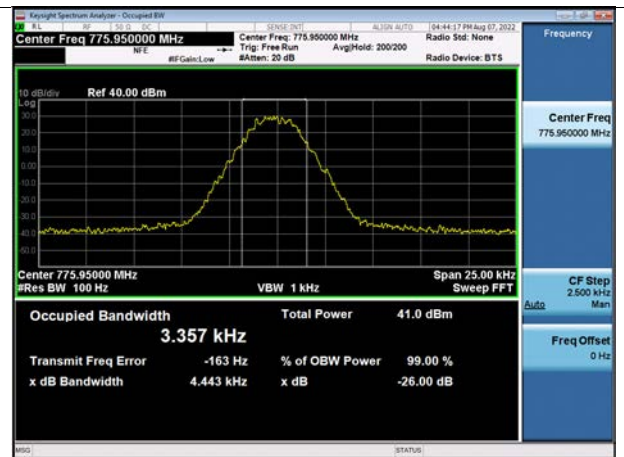
FCC/ISED 769.05 MHz



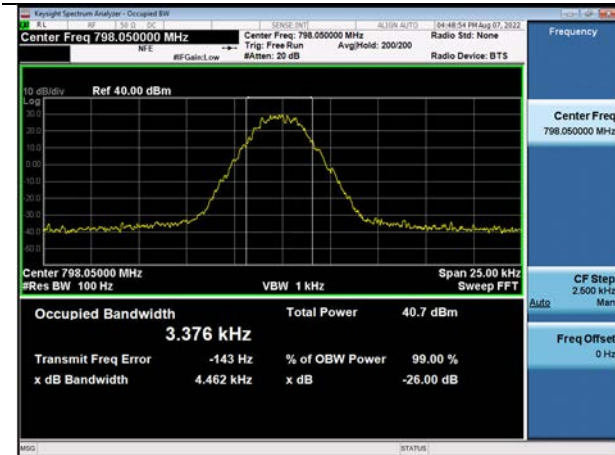
FCC/ISED 774.95 MHz



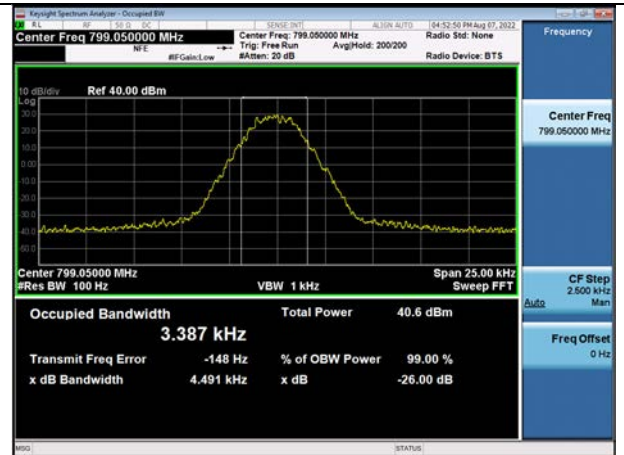
ISED 775.95 MHz



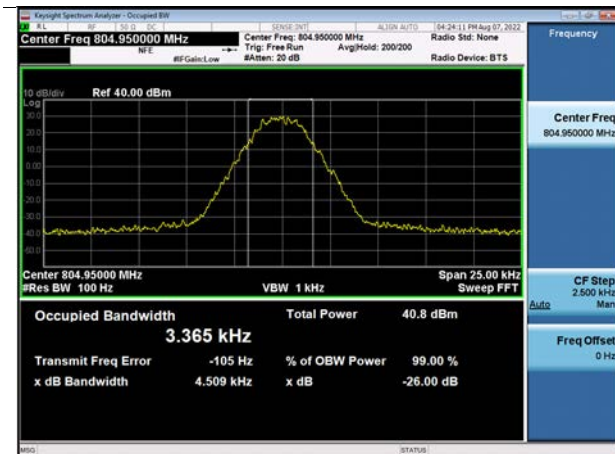
ISED 798.05 MHz



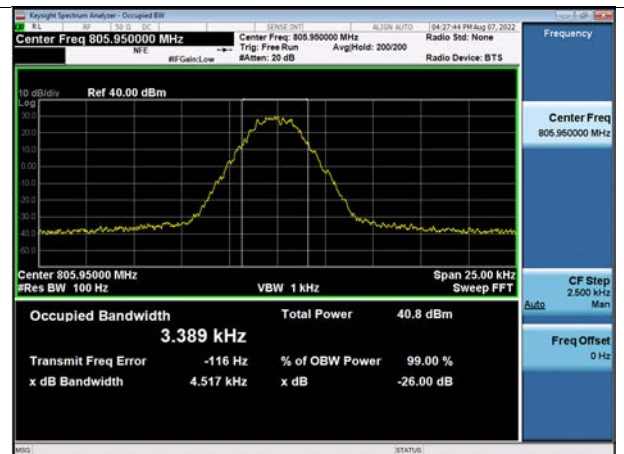
FCC/ISED 799.05 MHz



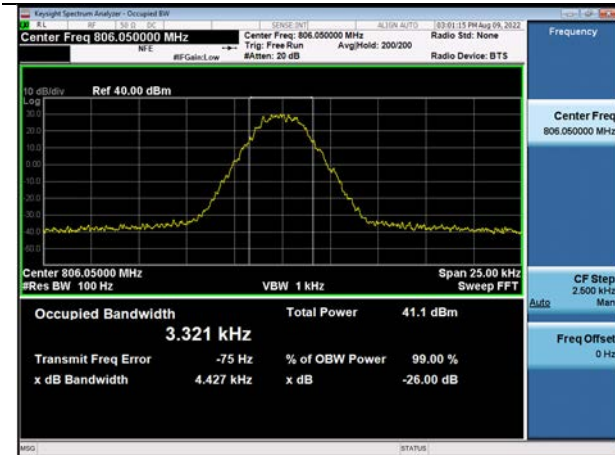
FCC/ISED 804.95 MHz



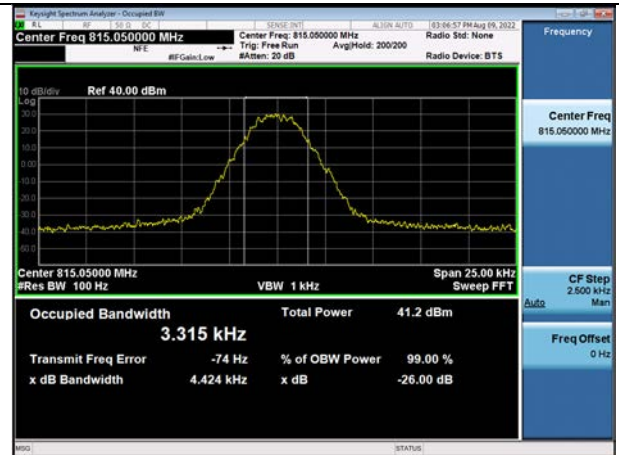
ISED 805.95 MHz



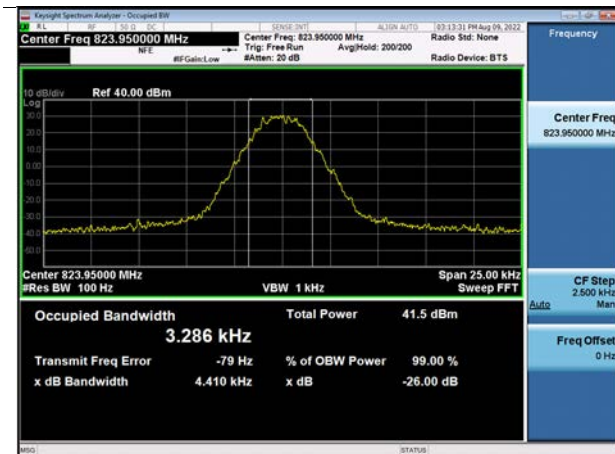
FCC/ISED 806.05 MHz



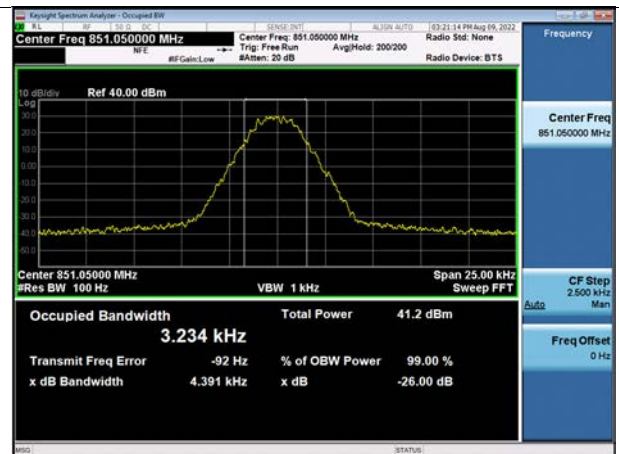
FCC/ISED 815.05 MHz



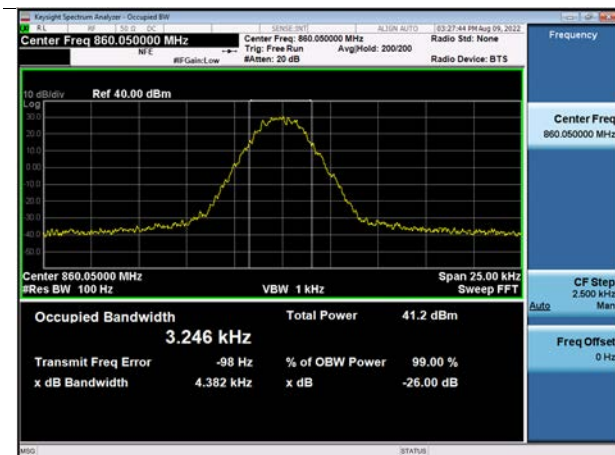
FCC/ISED 823.95 MHz



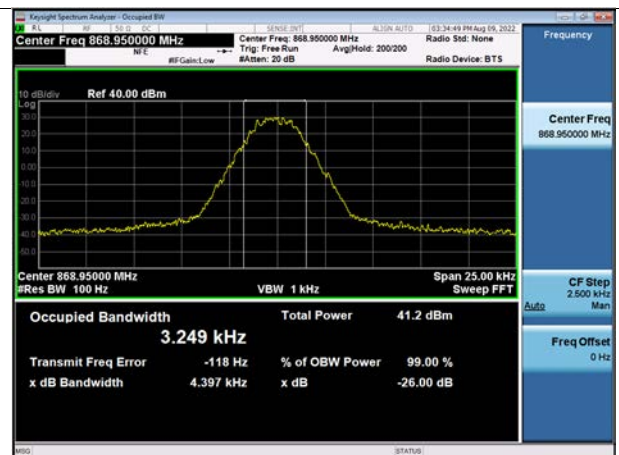
FCC/ISED 851.05 MHz



FCC/ISED 860.05 MHz



FCC/ISED 868.95 MHz

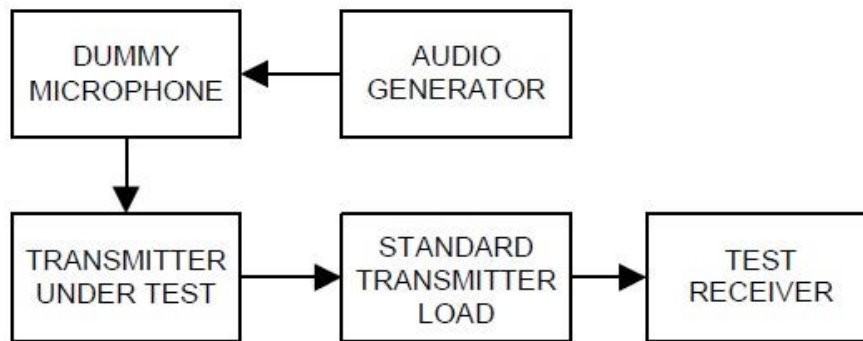


8.4 Modulation Limiting

■ Definition

Modulation limiting is the transmitter circuit's ability to limit the transmitter from producing deviations in excess of a rated system deviation.

■ TEST CONFIGURATION



■ TEST PROCEDURE

According to 2.2.3 in TIA-603-E Standard.

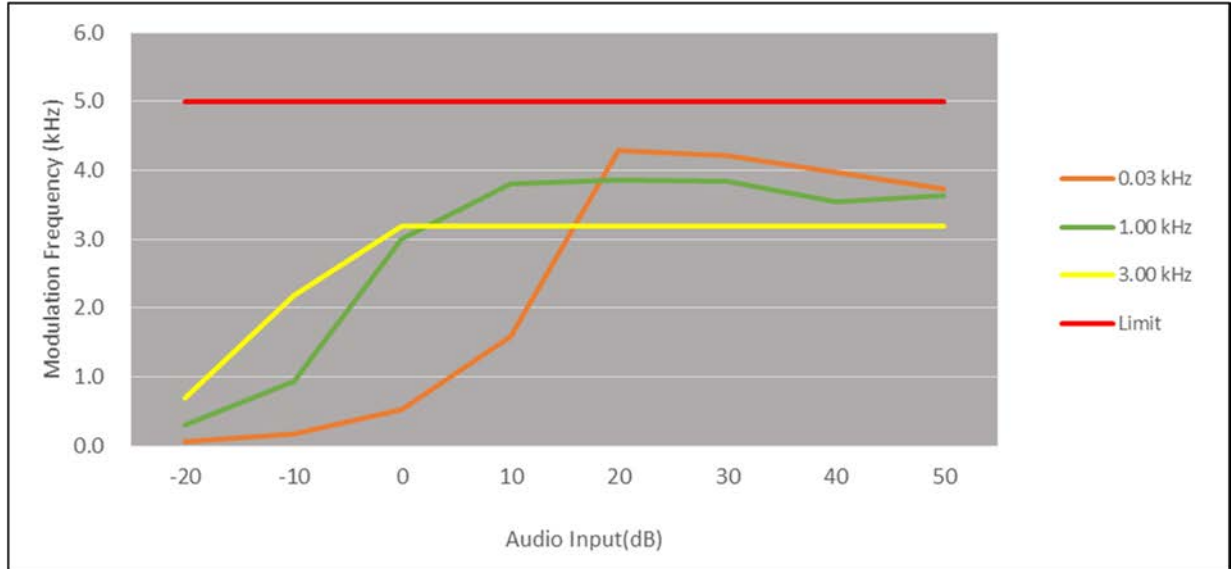
- a) Connect the equipment as illustrated.
- b) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
- c) Set the test receiver to measure peak positive deviation.
Set the audio bandwidth for ≤ 0.25 Hz to $\geq 15,000$ Hz.
Turn the de-emphasis function off.
- d) Apply a 1000 Hz modulating signal to the transmitter from the audio frequency generator, and adjust the level obtain 60% of full rated system deviation.
- e) 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).
- f) Measure both the instantaneous and steady-state deviation at and after the time of increasing the audio input level.
- g) With the level from the audio frequency generator held constant at the level obtained in step e), Slowly vary the audio frequency from 300 Hz to 3000 Hz and observe the steady-state deviation. Record the maximum deviation.
- h) Set the test receiver to measure peak negative deviation and repeat steps d) through g).
- i) The values recorded in steps g) and h) are the modulation limiting.

TEST RESULTS

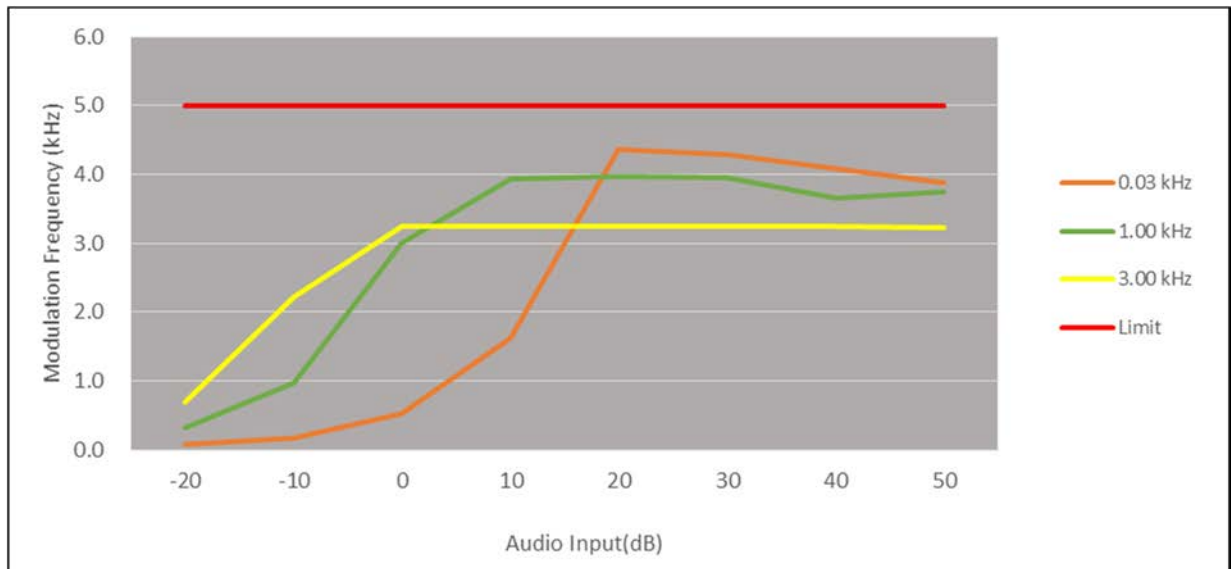
16K0F3E_HIGH POWER

Positive Peaks

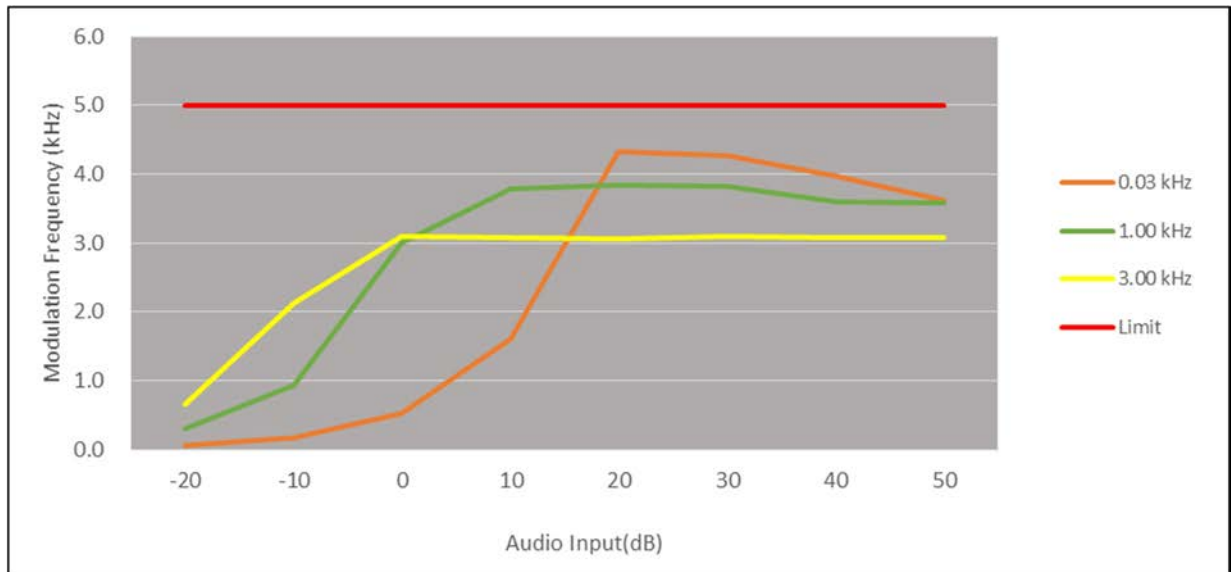
138.05 MHz



150.05 MHz

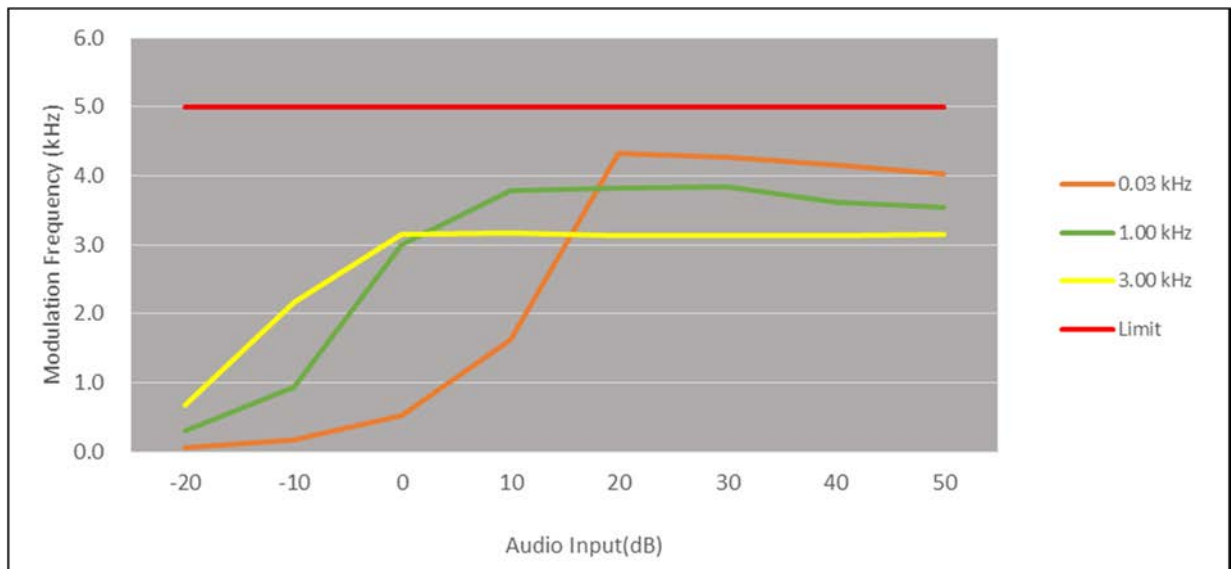


173.95 MHz

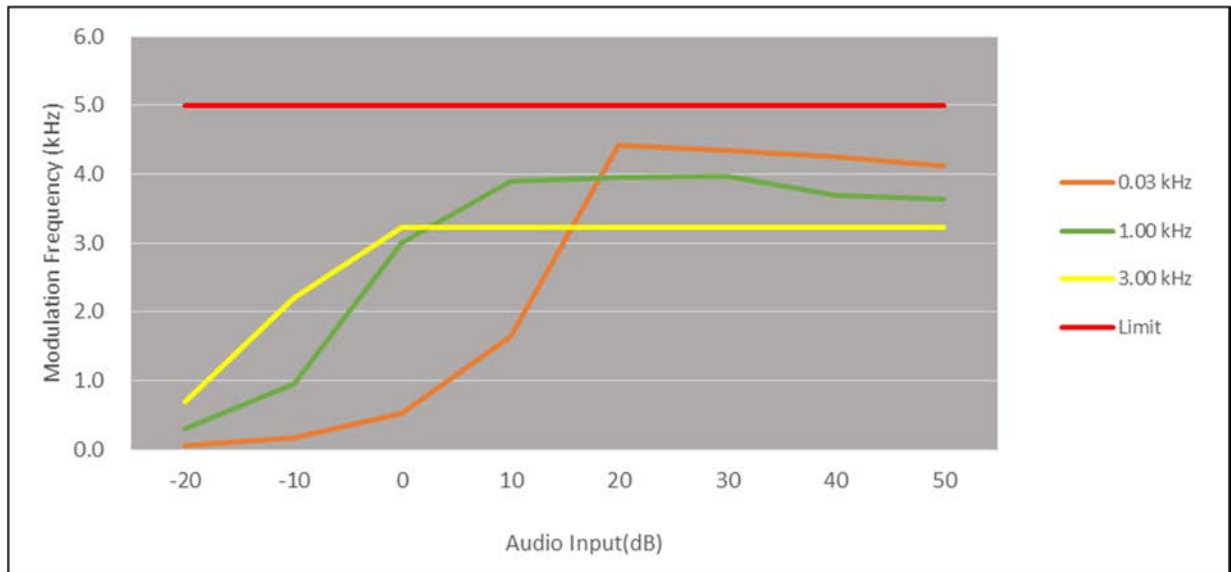


Negative Peaks

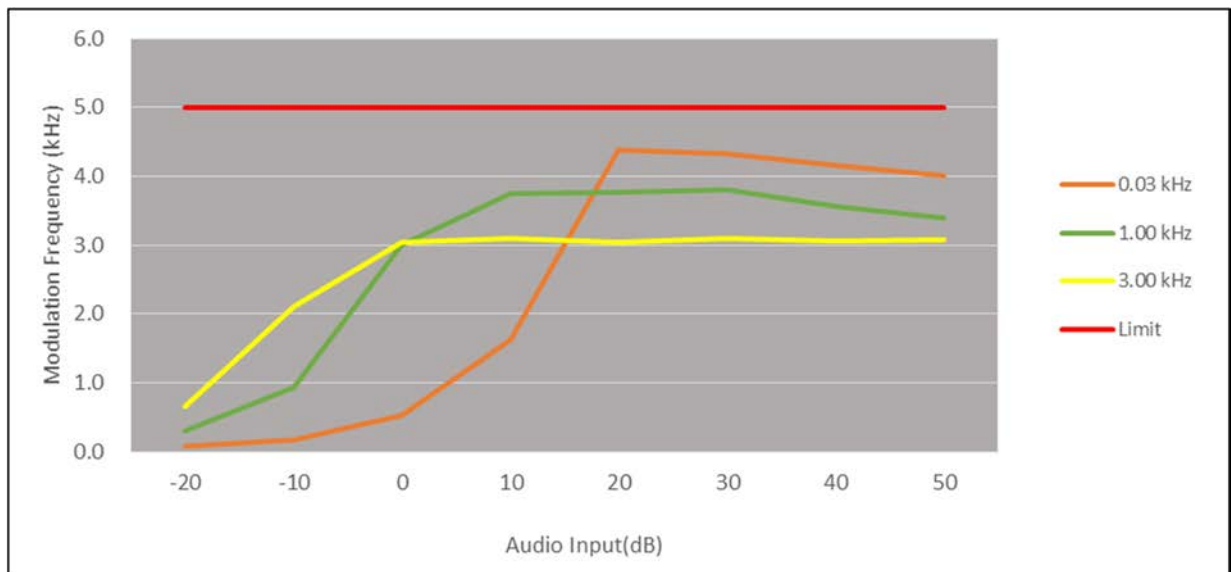
138.05 MHz



150.05 MHz

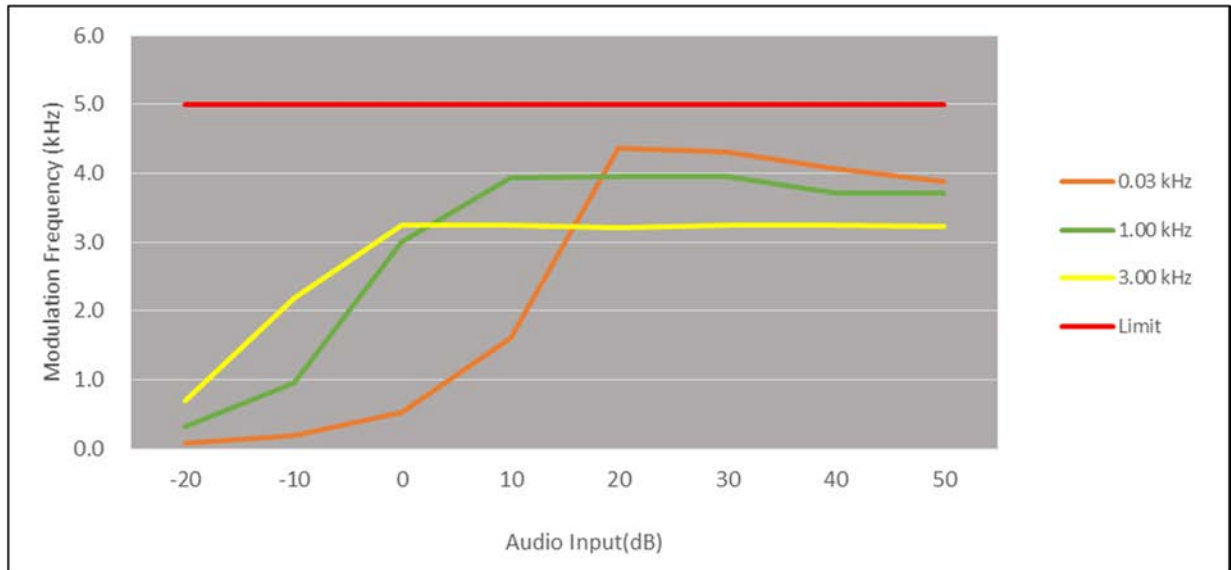


173.95 MHz

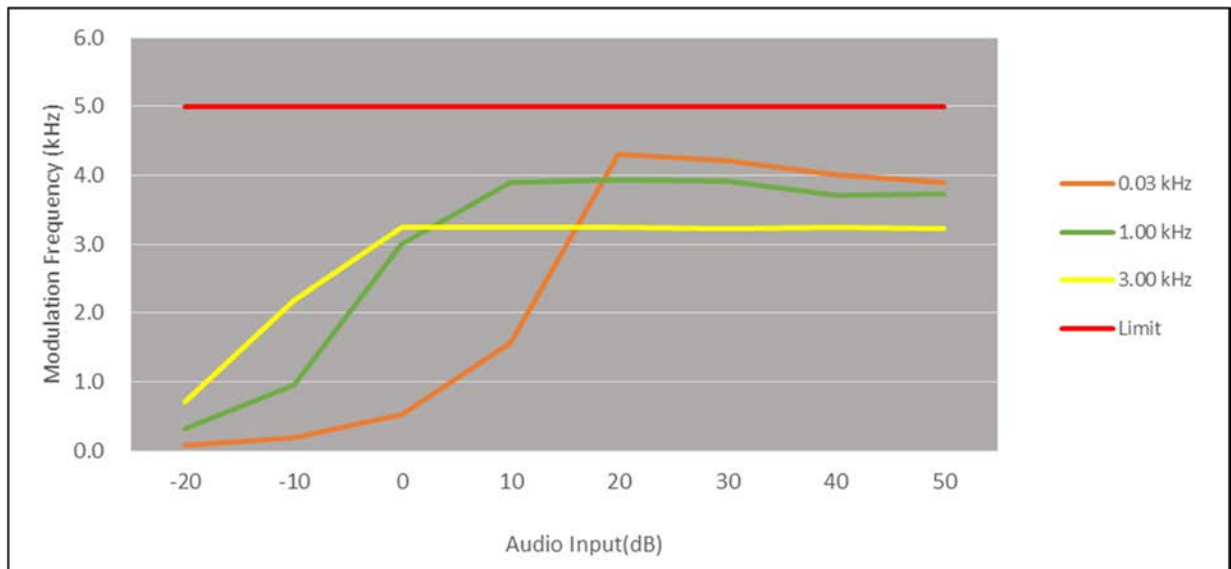


Positive Peaks

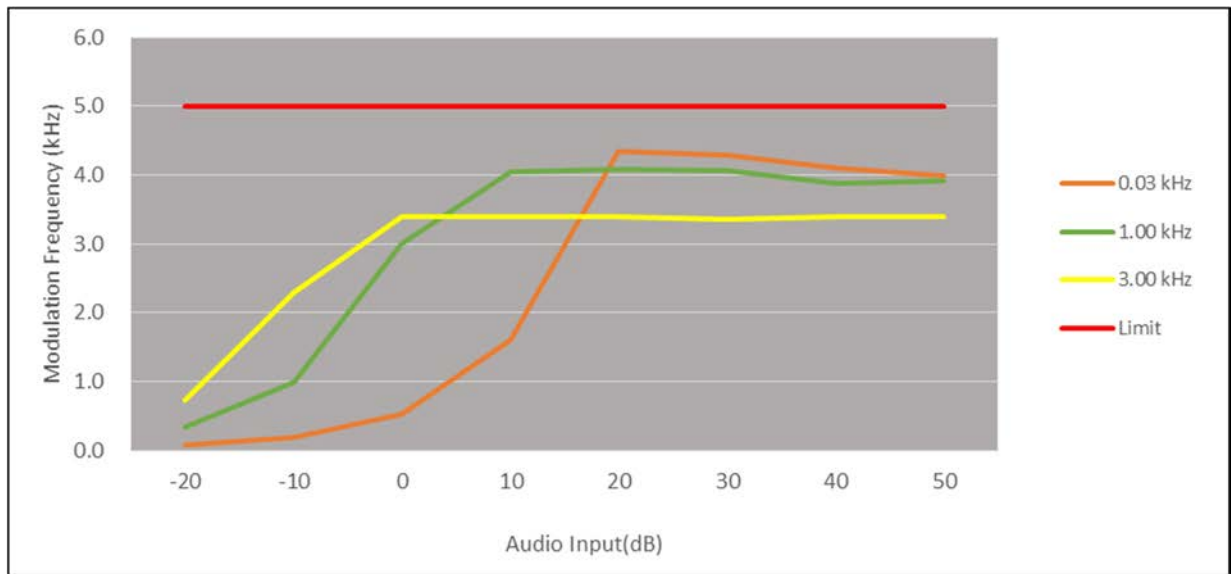
406.15 MHz



429.95 MHz

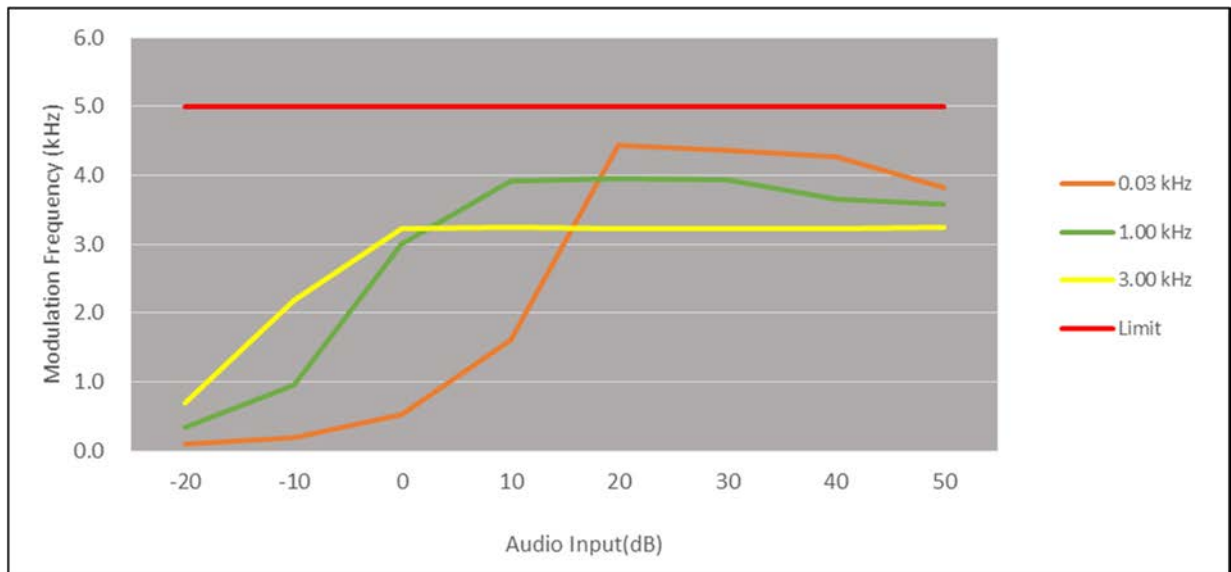


469.95 MHz

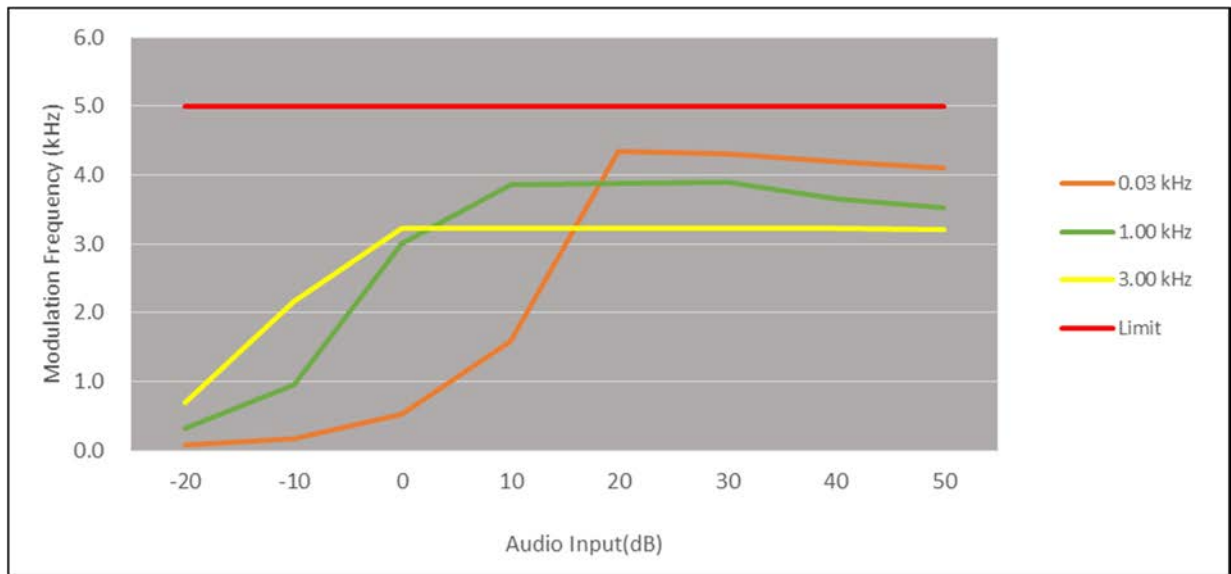


Negative Peaks

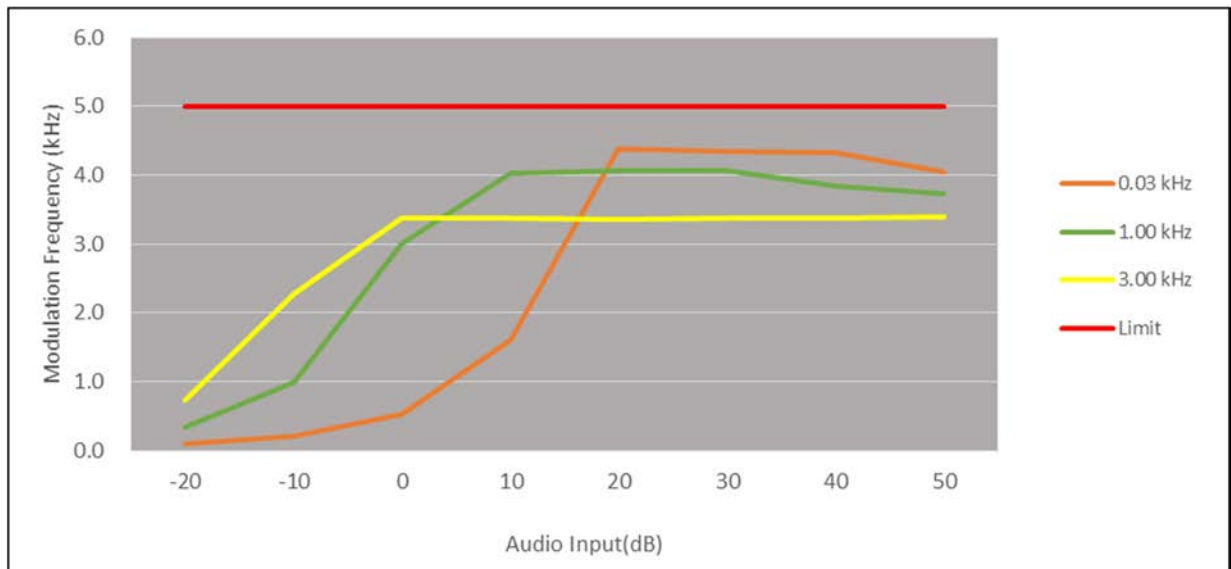
406.15 MHz



429.95 MHz

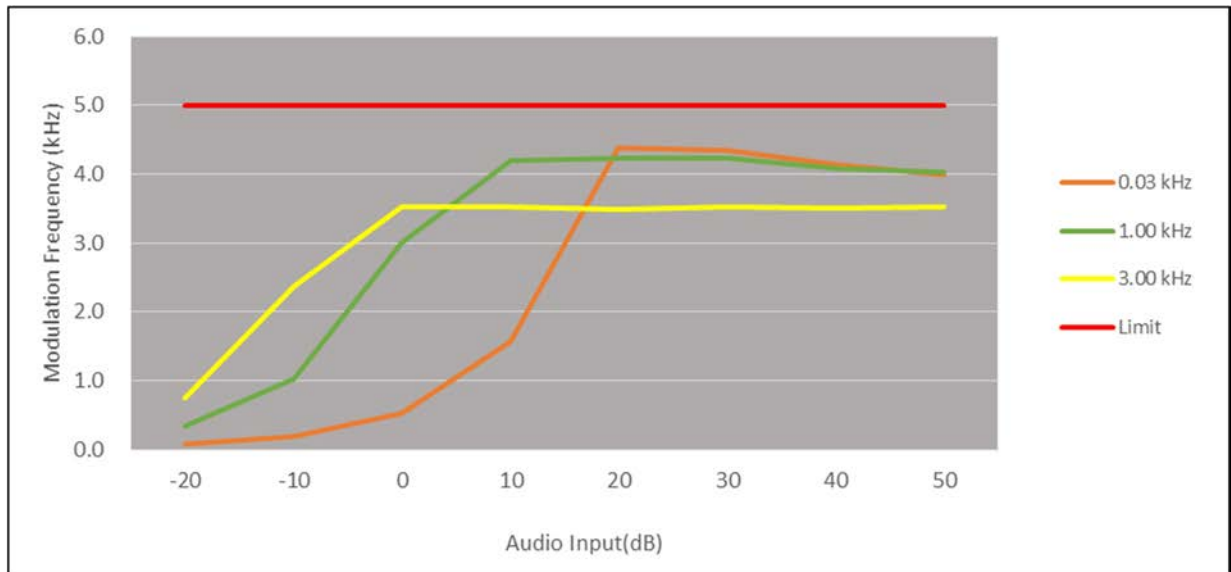


469.95 MHz

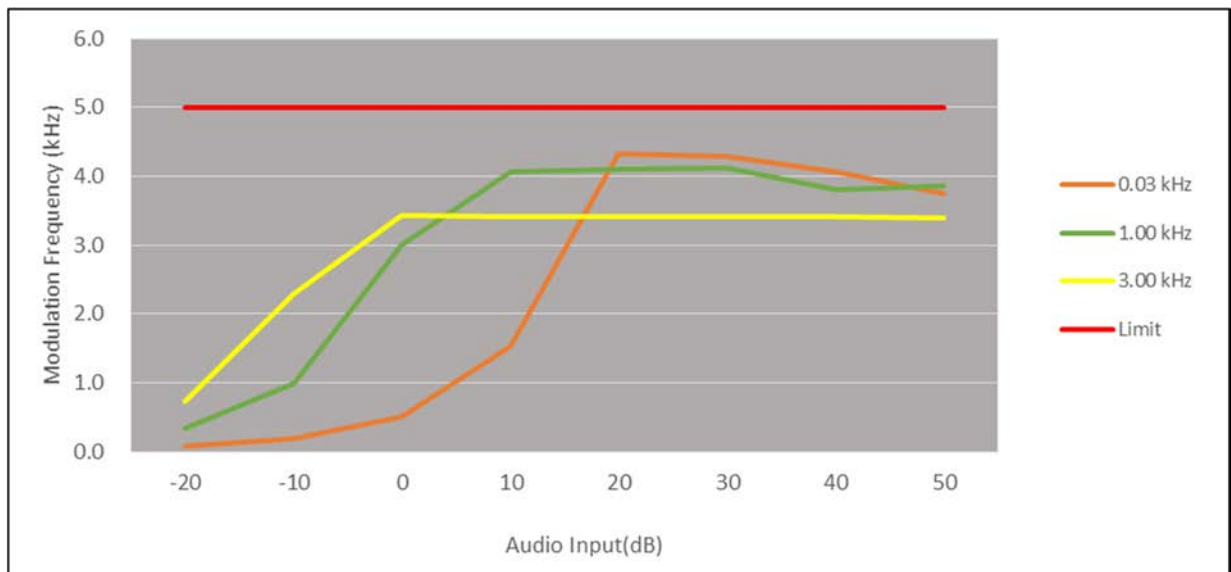


Positive Peaks

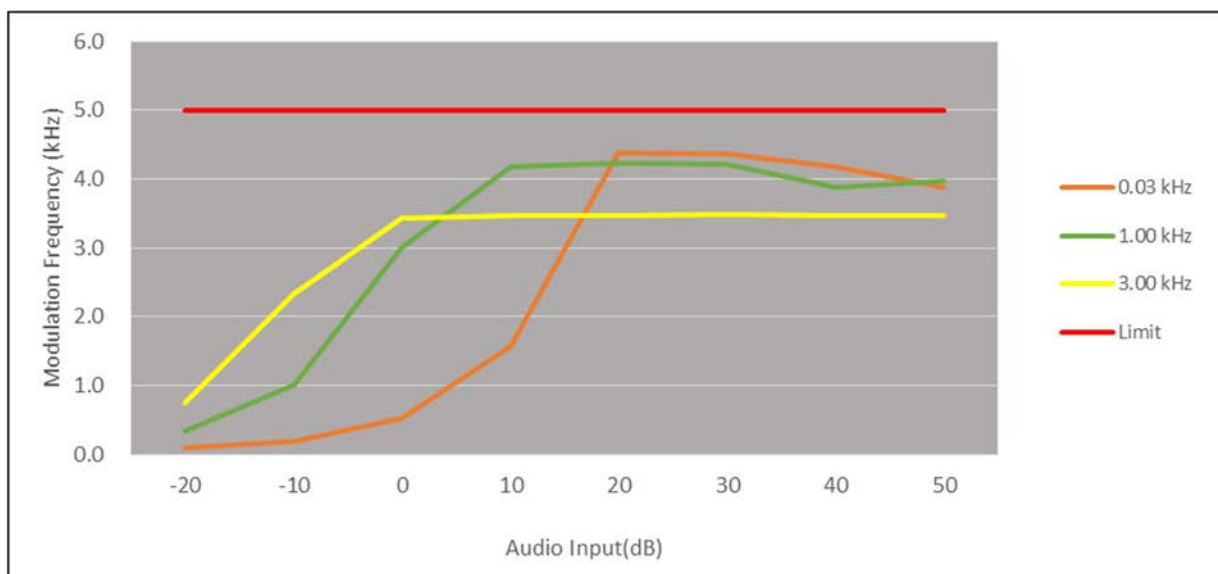
470.05 MHz



491.05 MHz

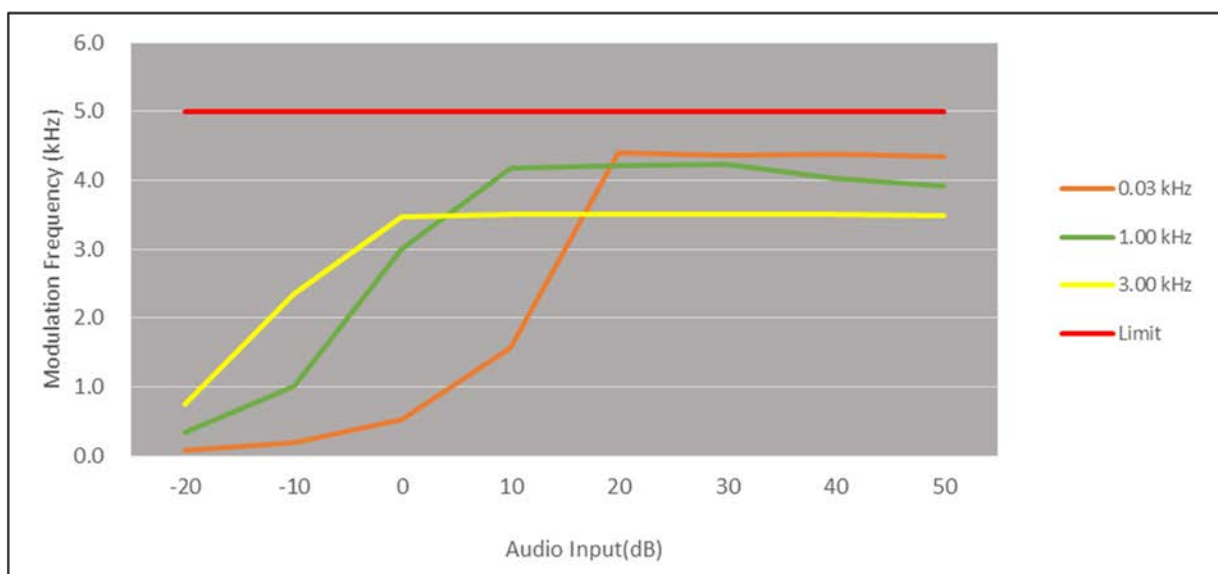


511.95 MHz

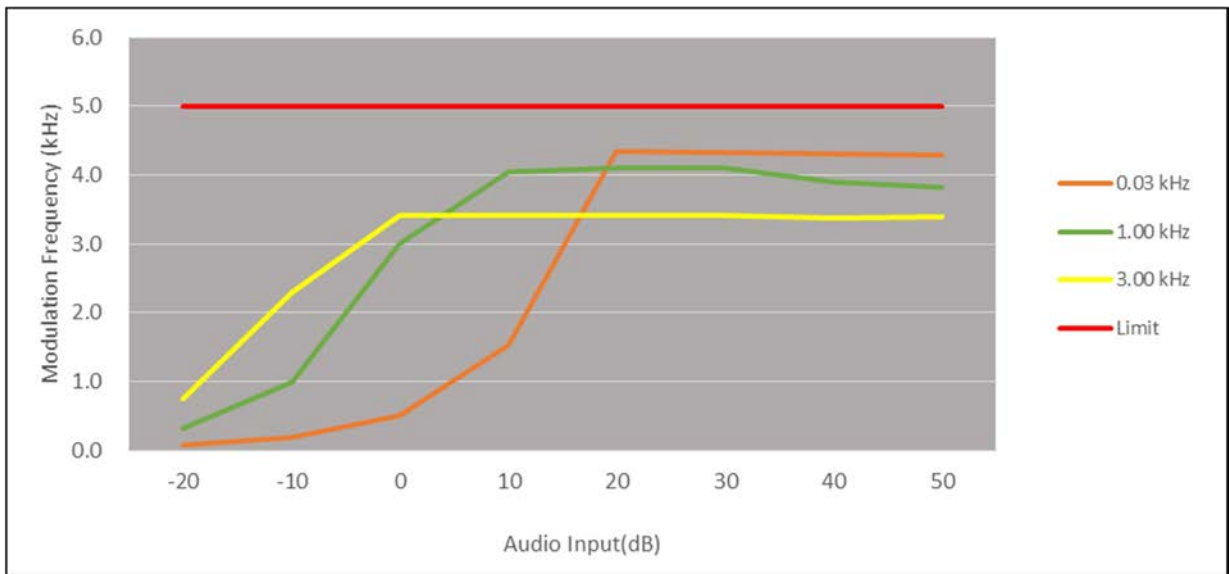


Negative Peaks

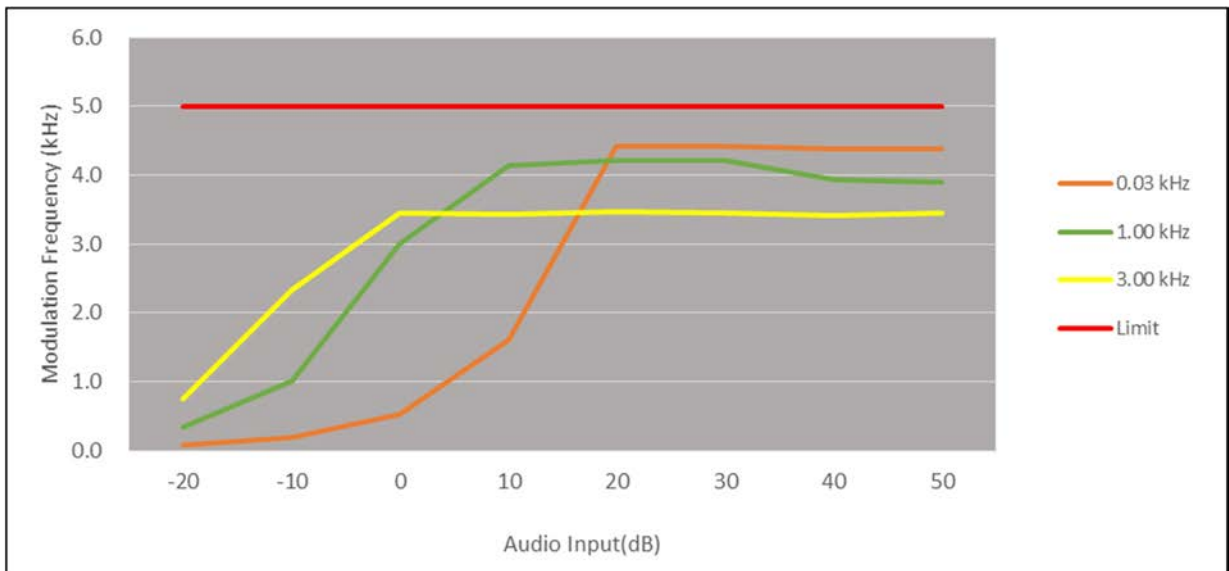
470.05 MHz



491.05 MHz

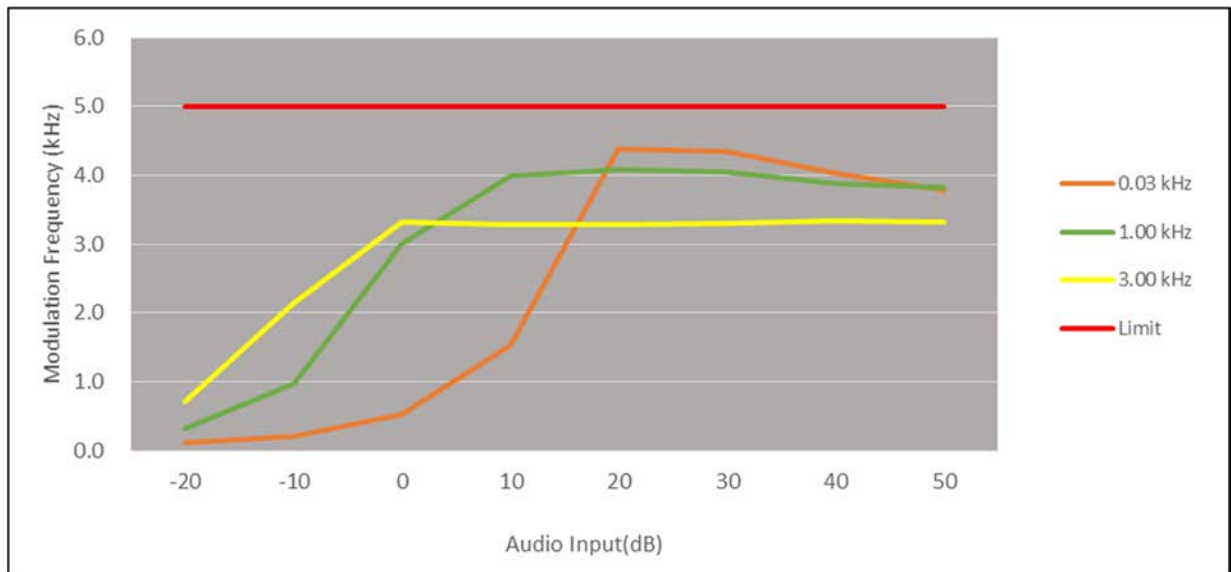


511.95 MHz

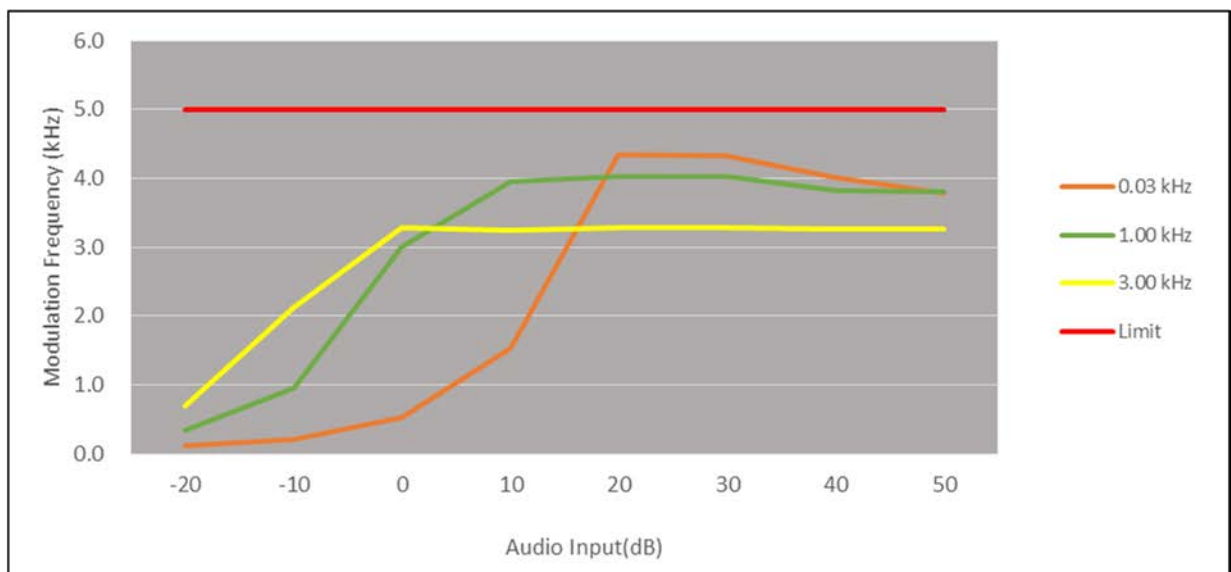


Positive Peaks

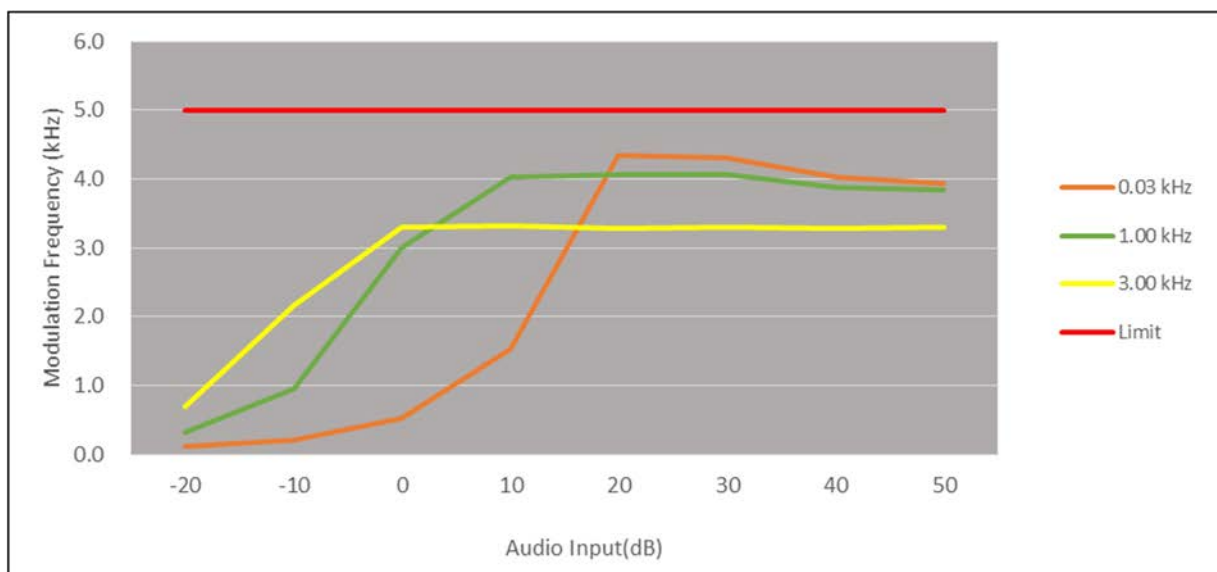
768.05 MHz



769.06 MHz

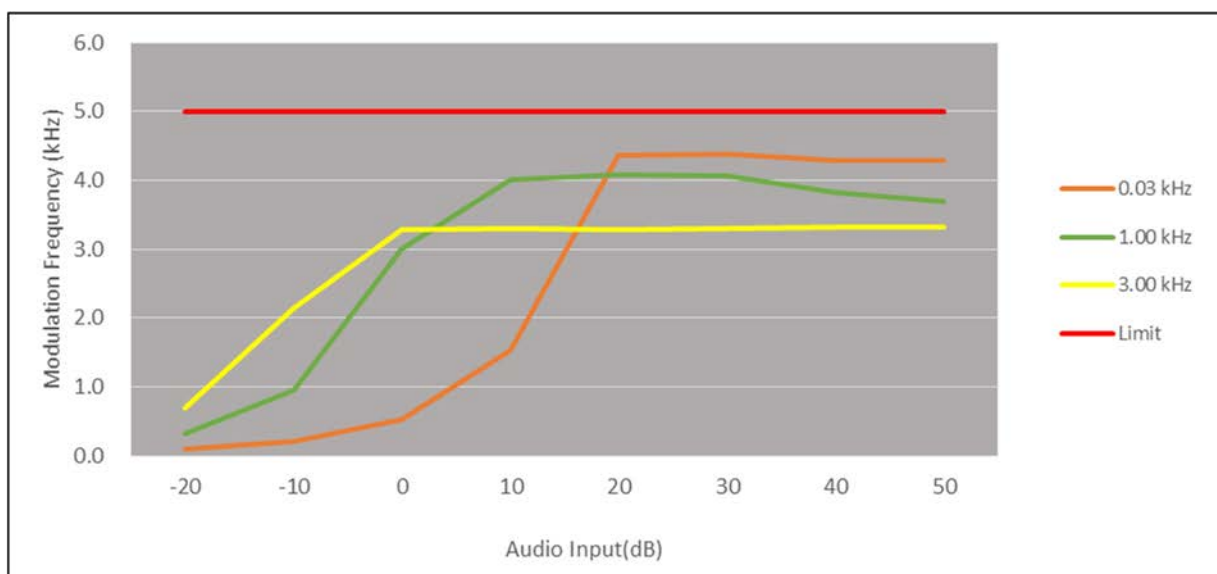


774.95 MHz

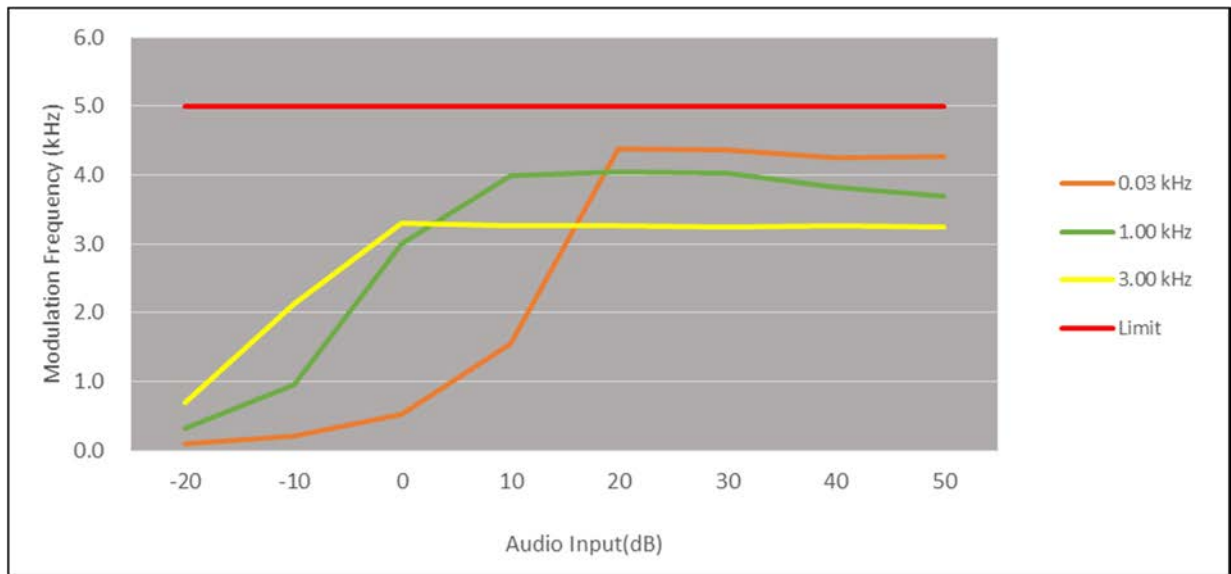


Negative Peaks

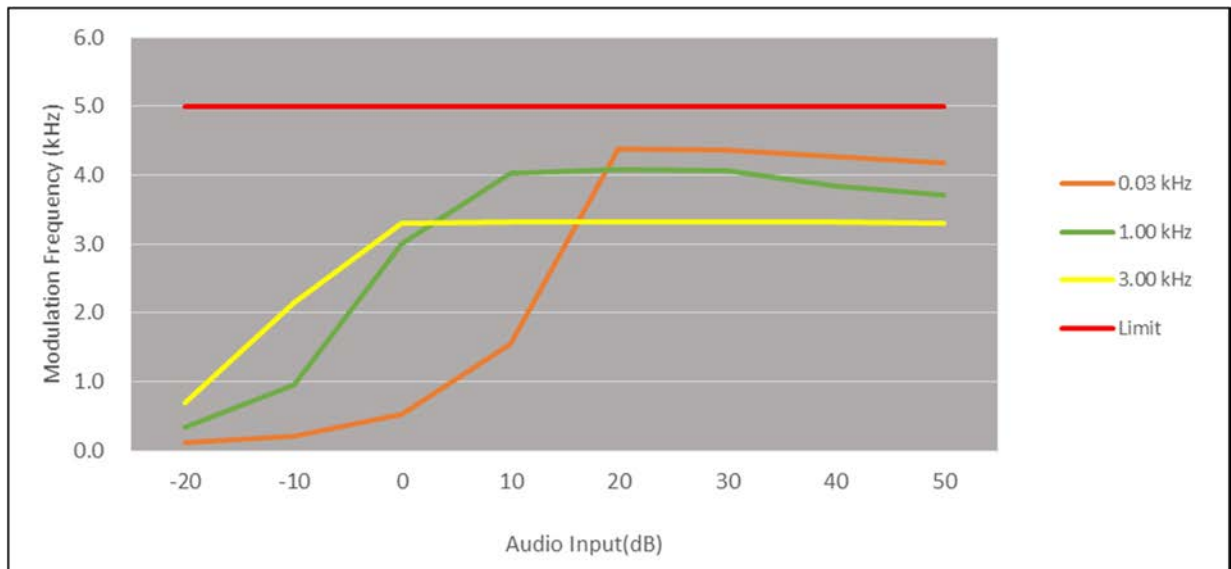
768.05 MHz



769.06 MHz

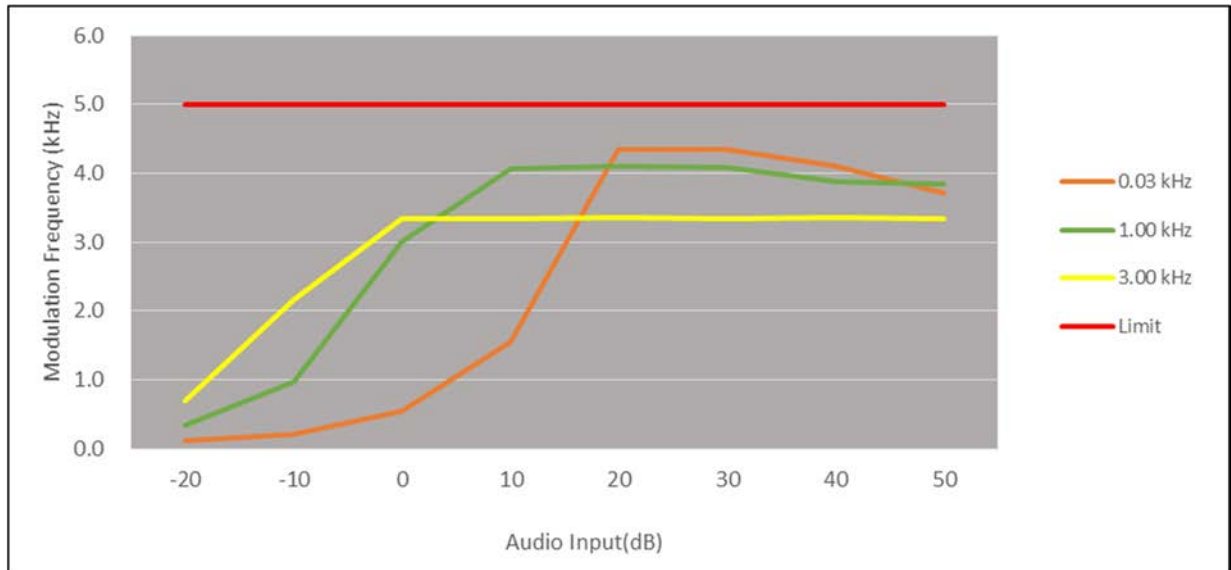


774.95 MHz

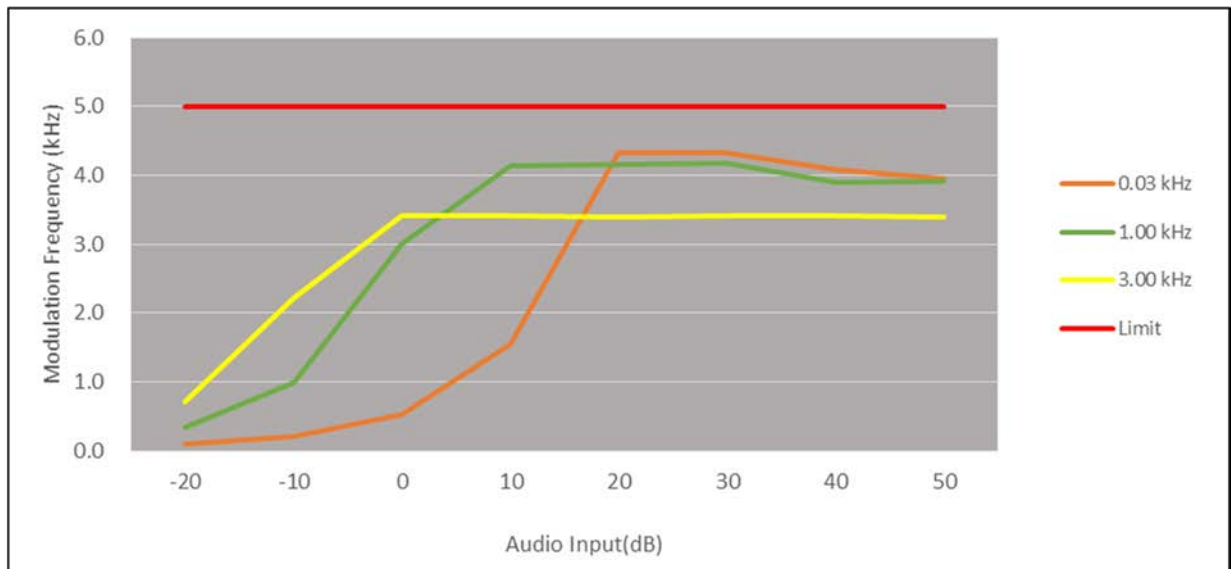


Positive Peaks

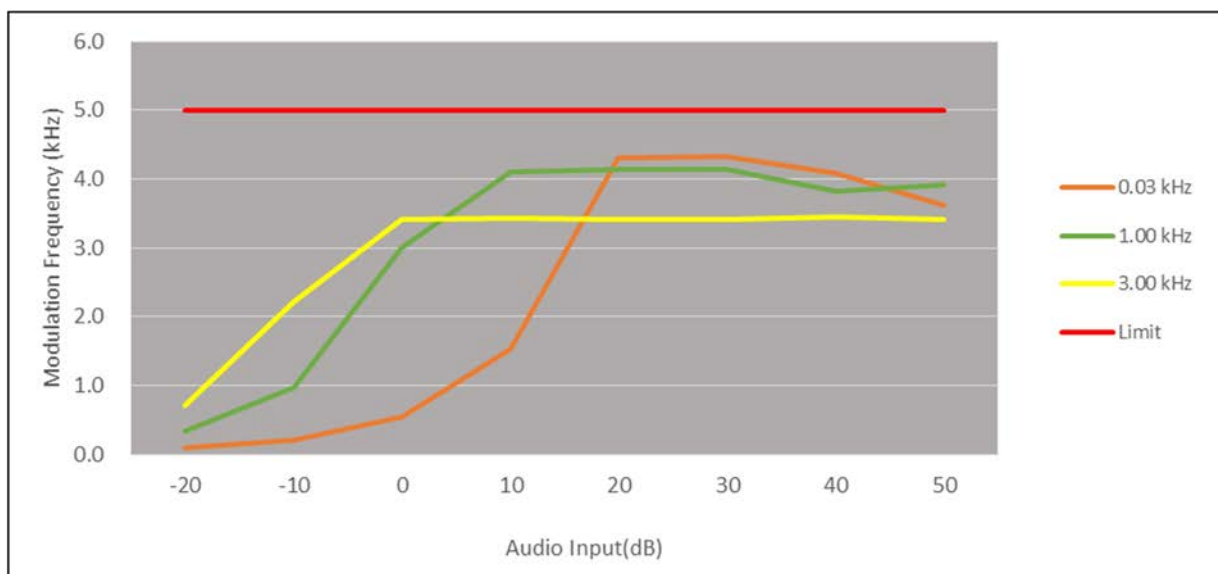
775.95 MHz



798.05 MHz

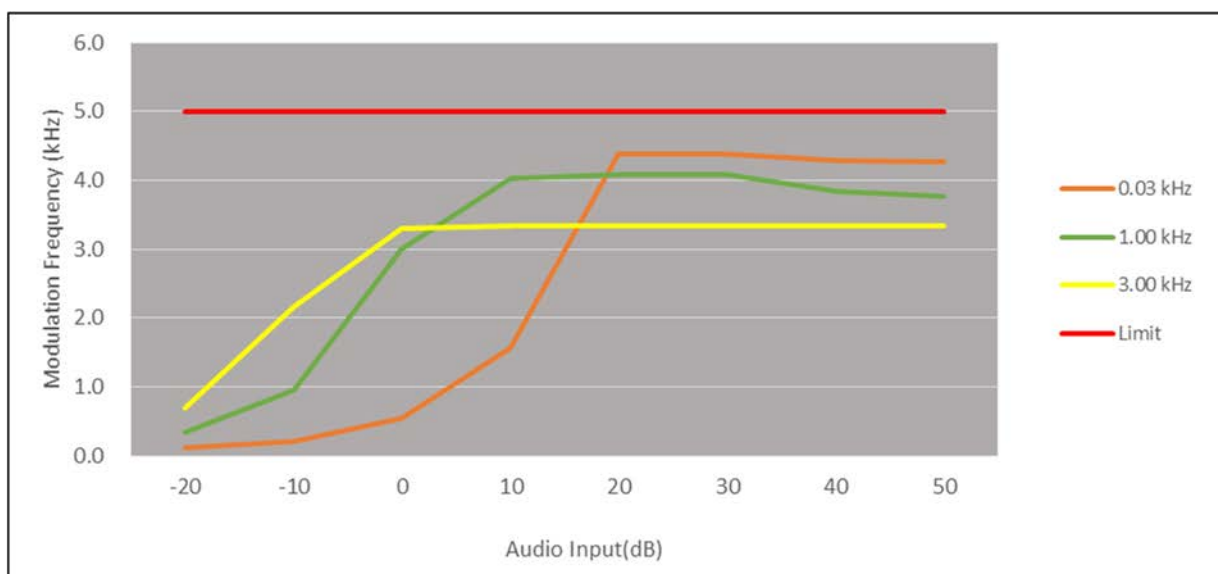


799.05 MHz

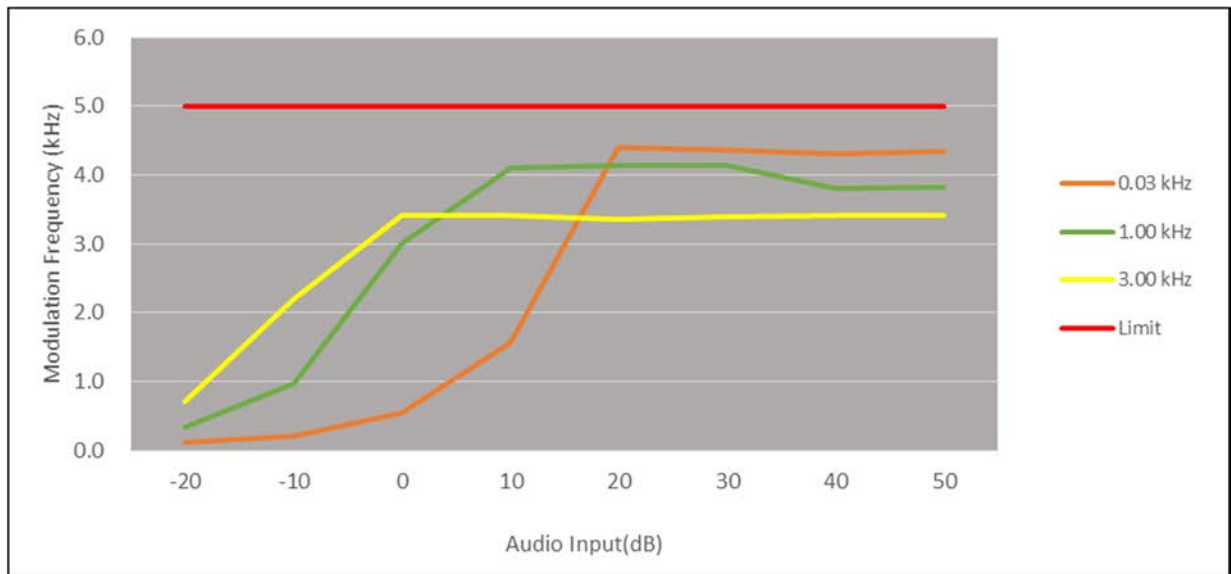


Negative Peaks

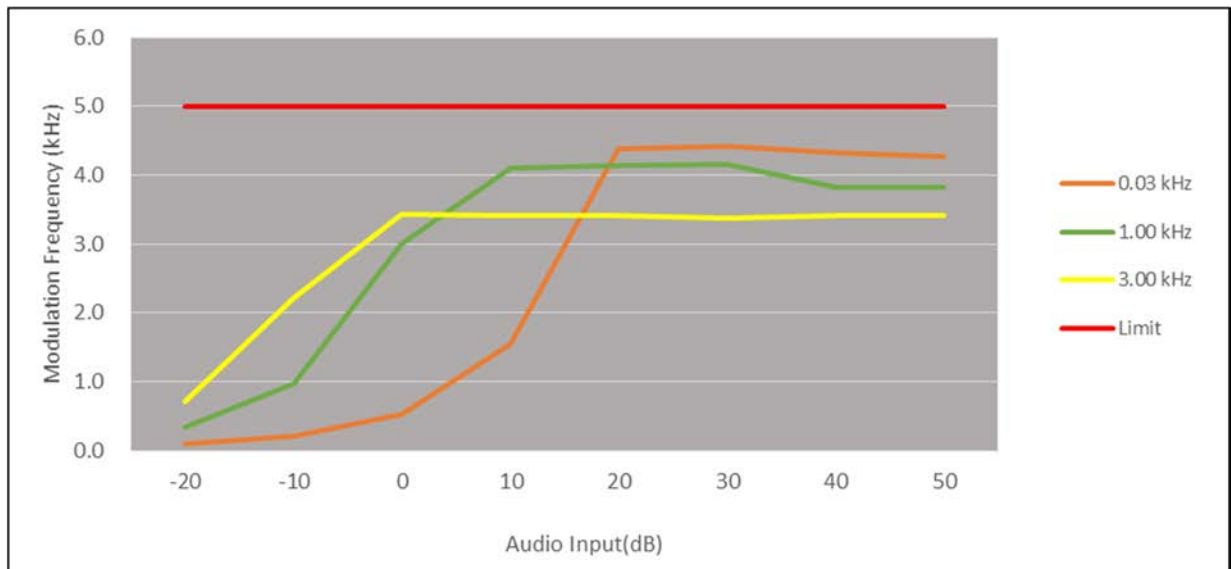
775.95 MHz



798.05 MHz

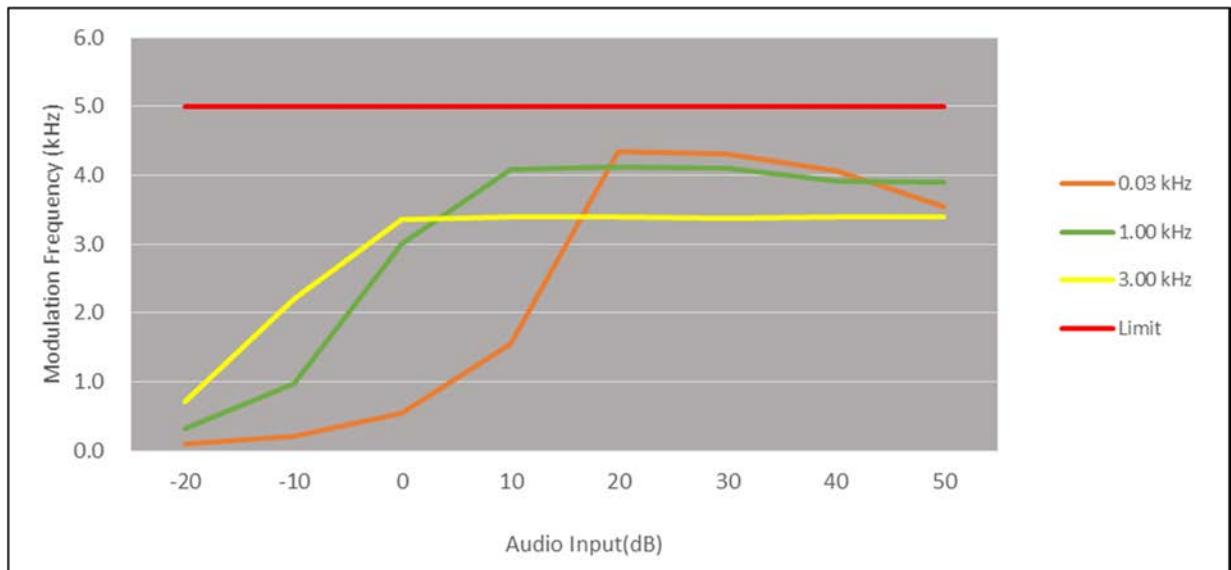


799.05 MHz

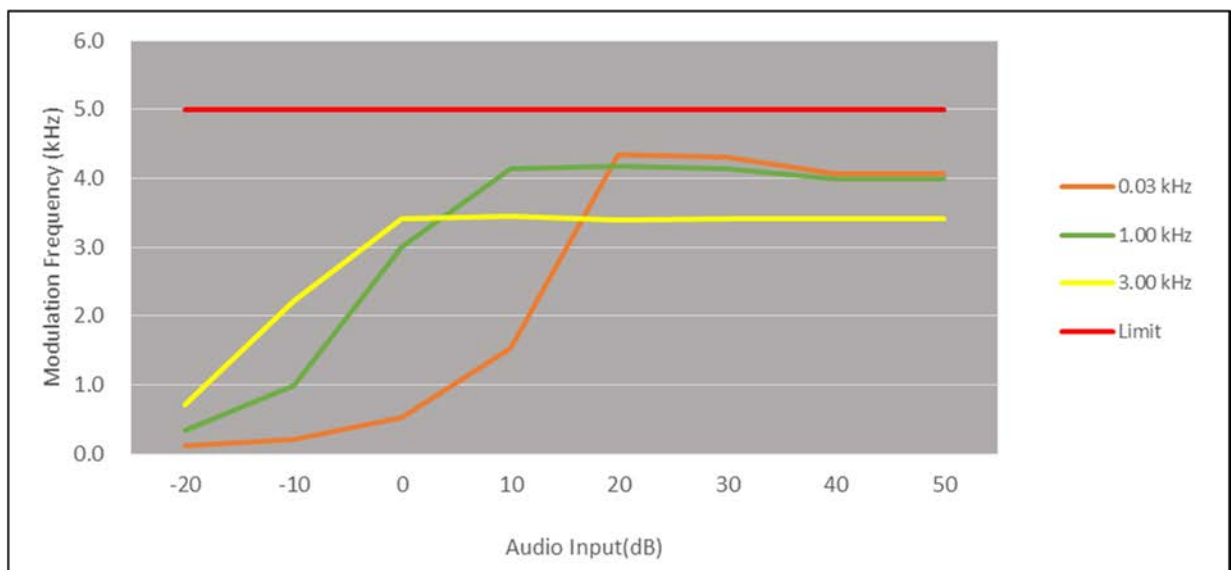


Positive Peaks

804.95MHz

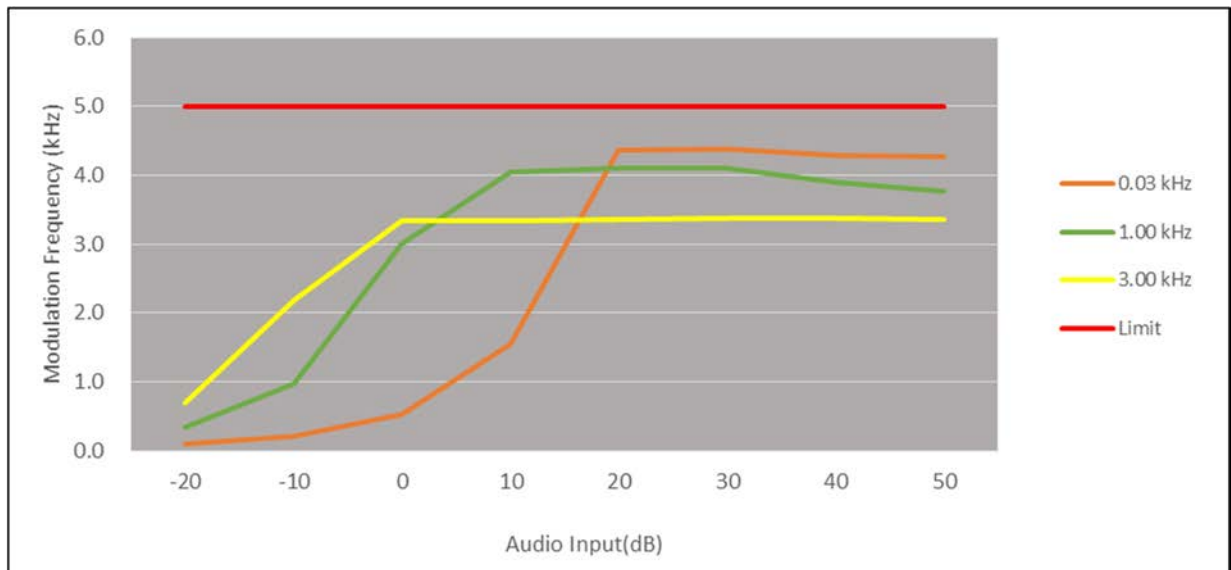


805.95 MHz

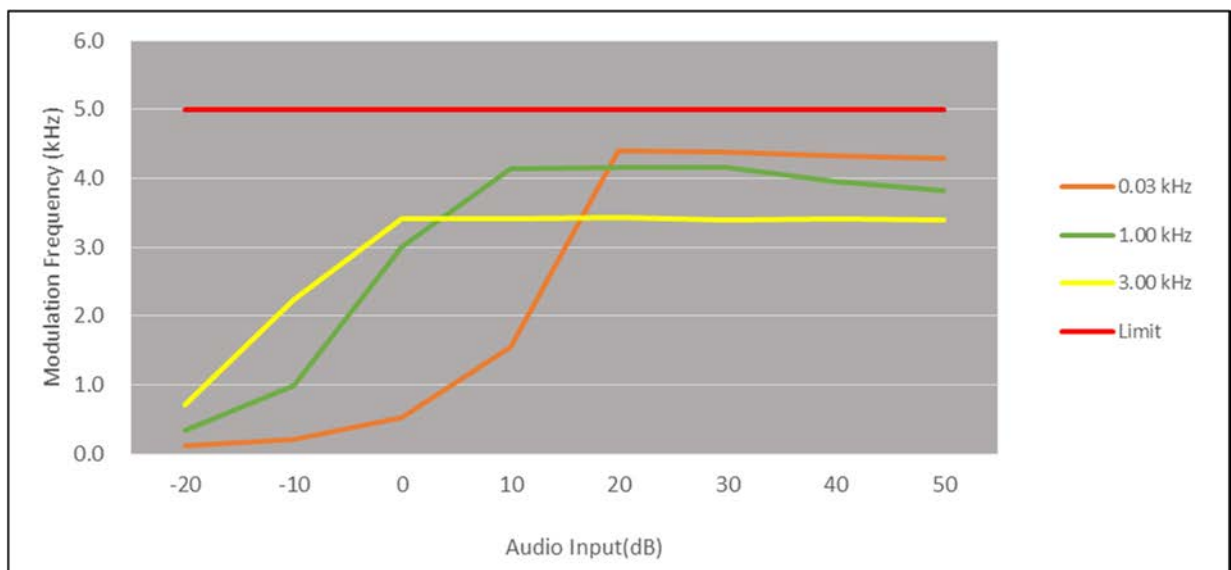


Negative Peaks

804.95MHz

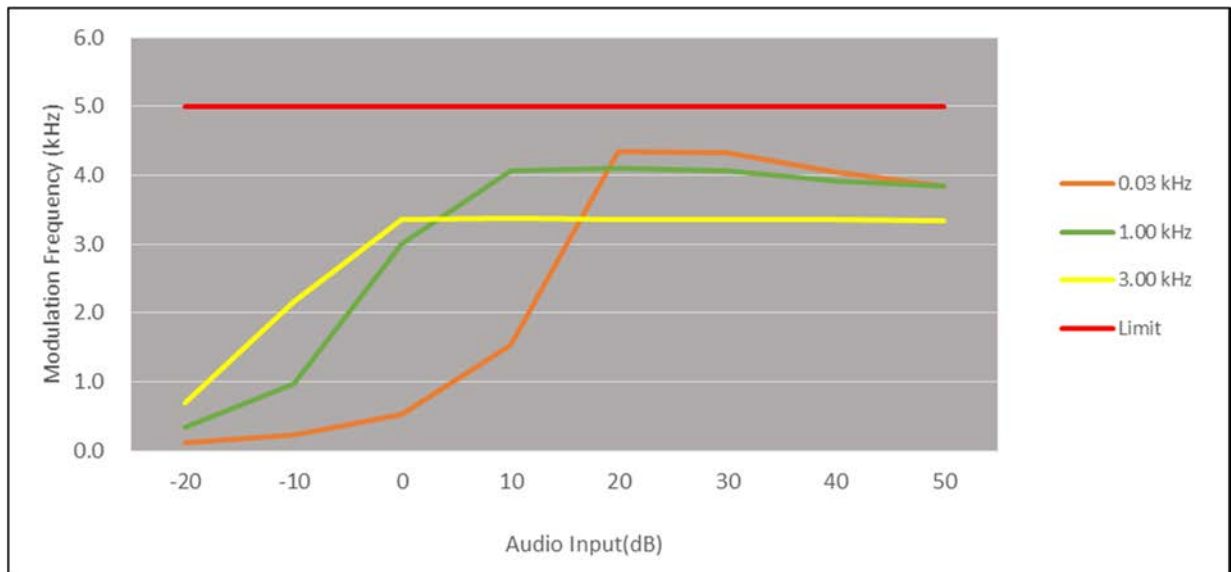


805.95 MHz

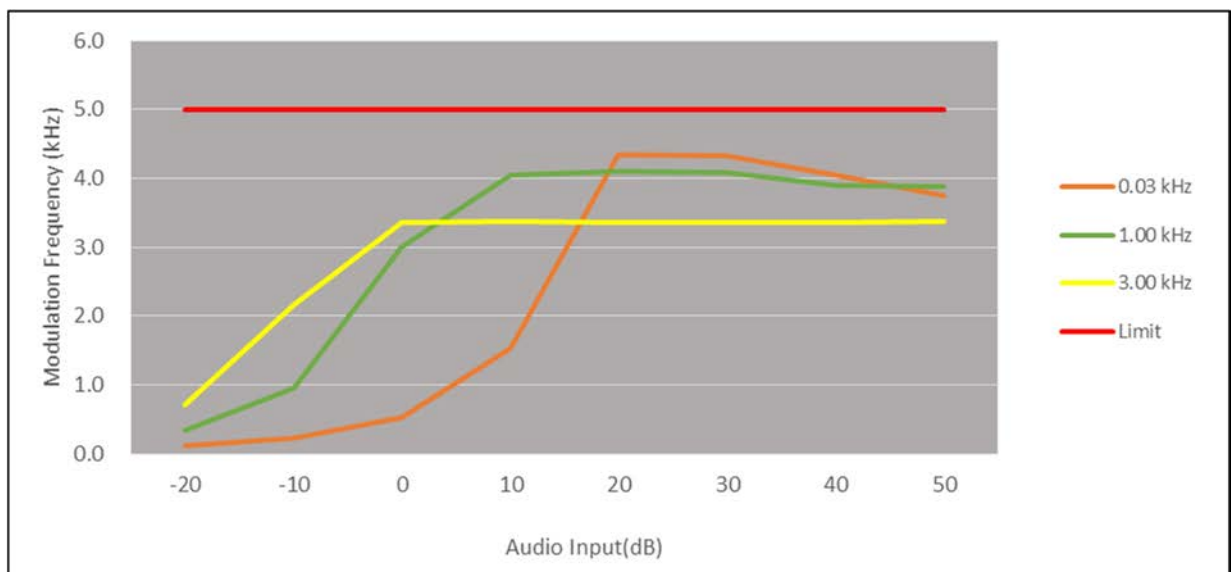


Positive Peaks

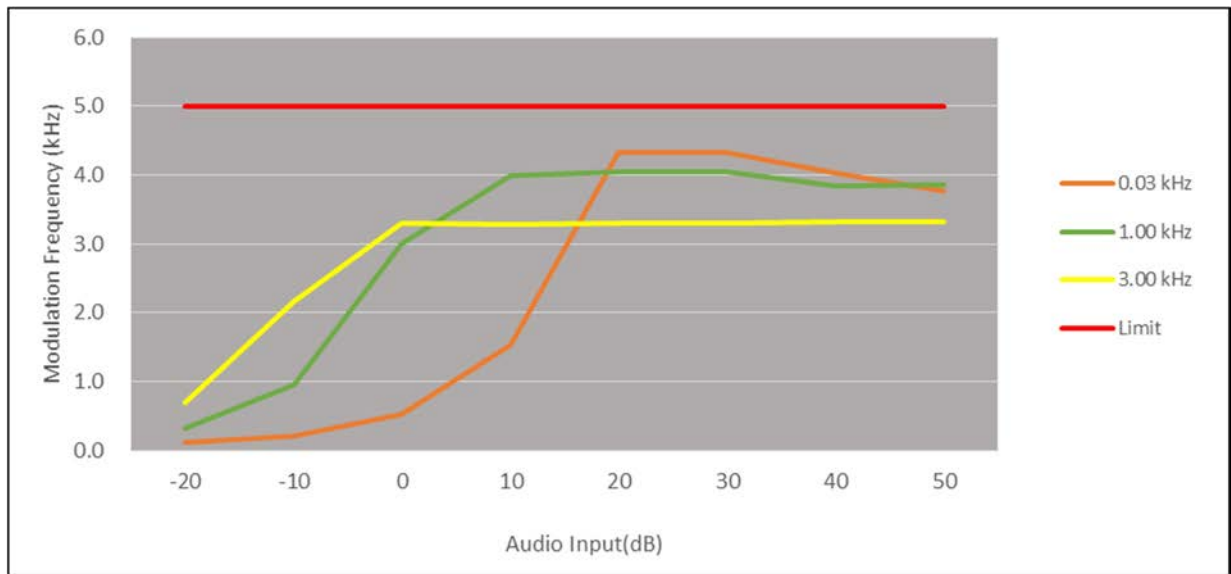
806.05 MHz



815.05 MHz

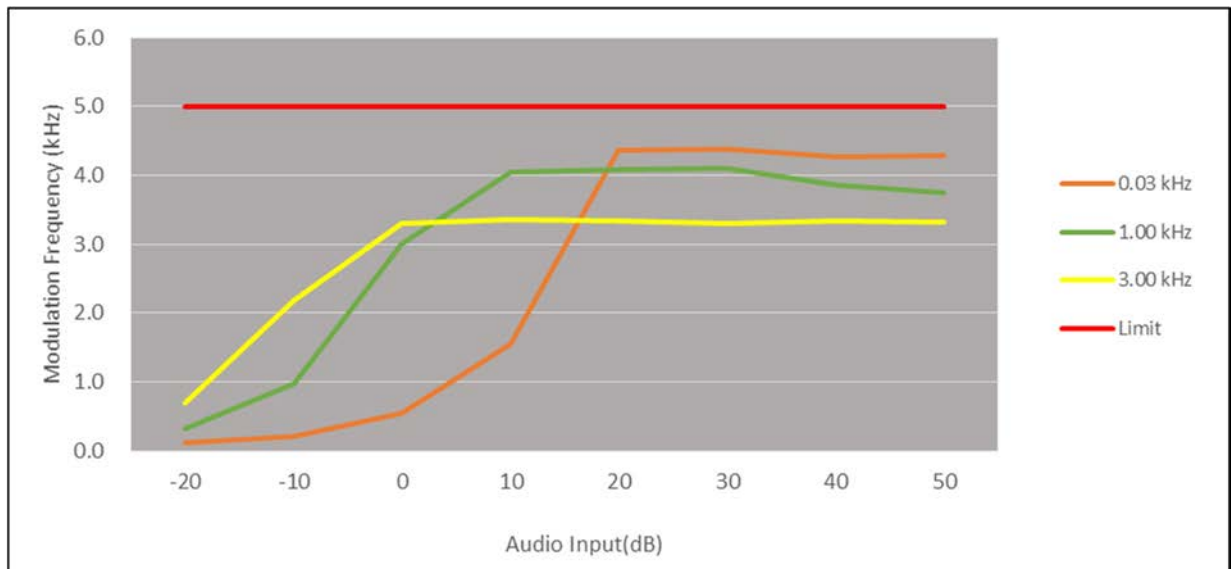


823.95 MHz

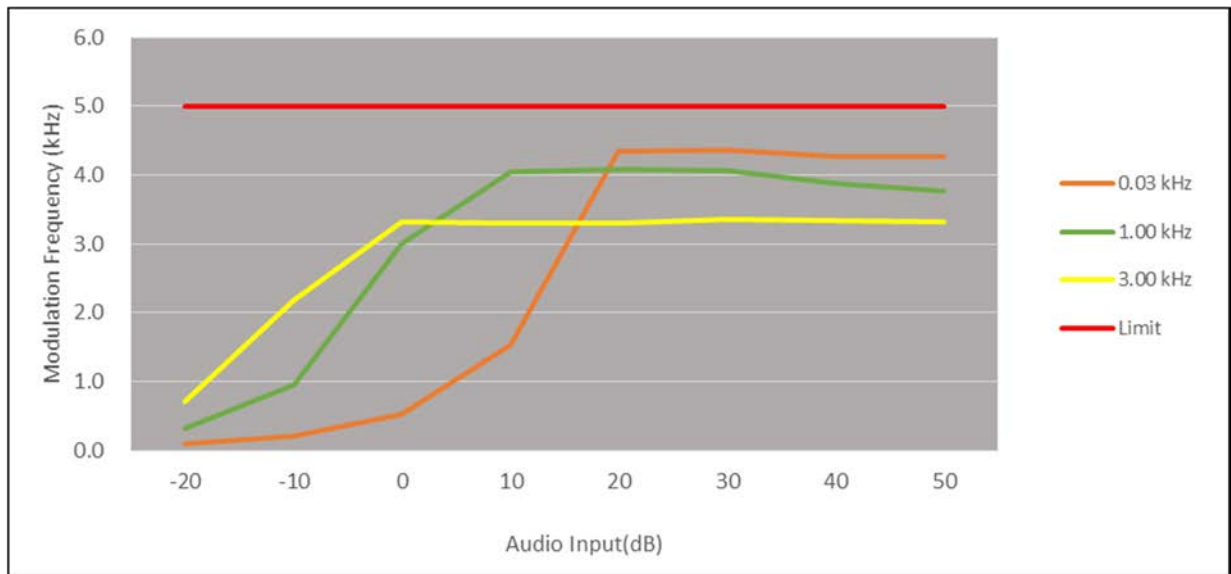


Negative Peaks

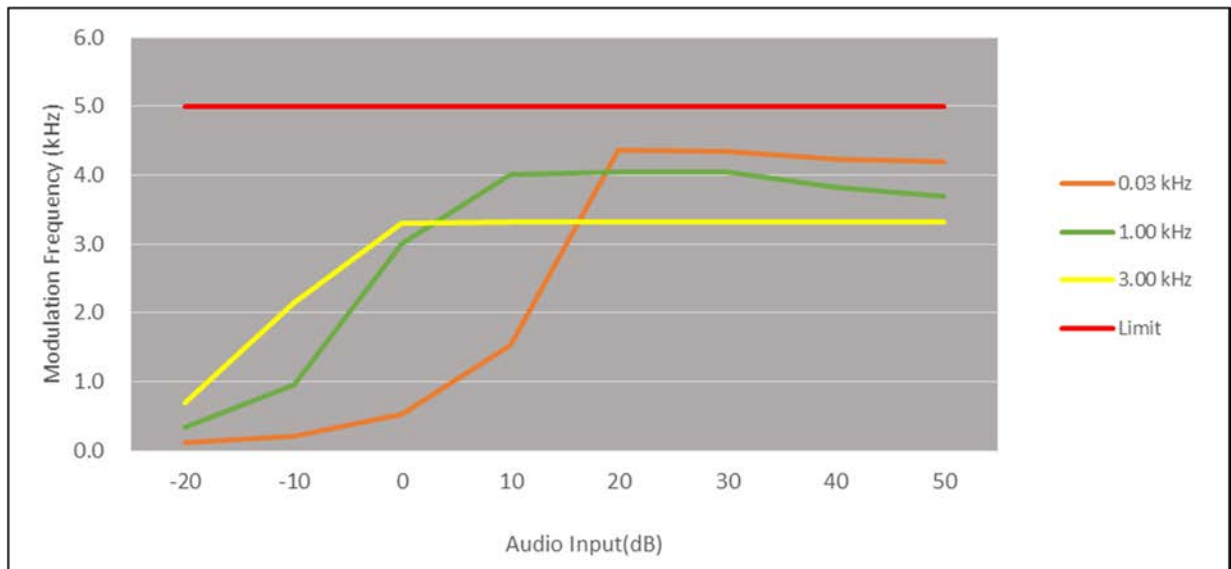
806.05 MHz



815.05 MHz

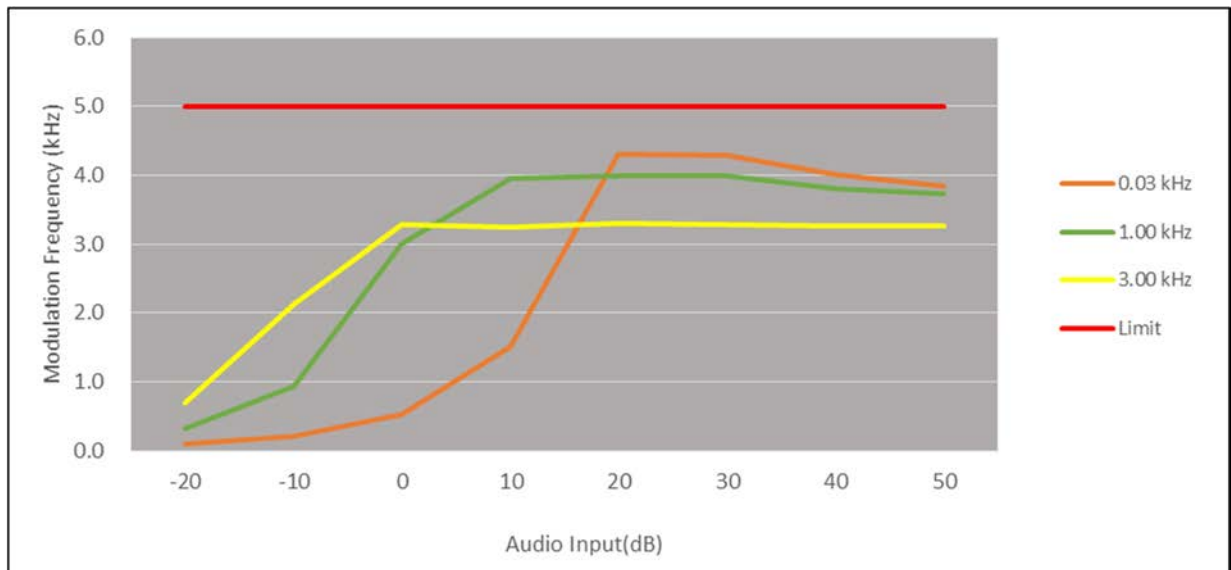


823.95 MHz

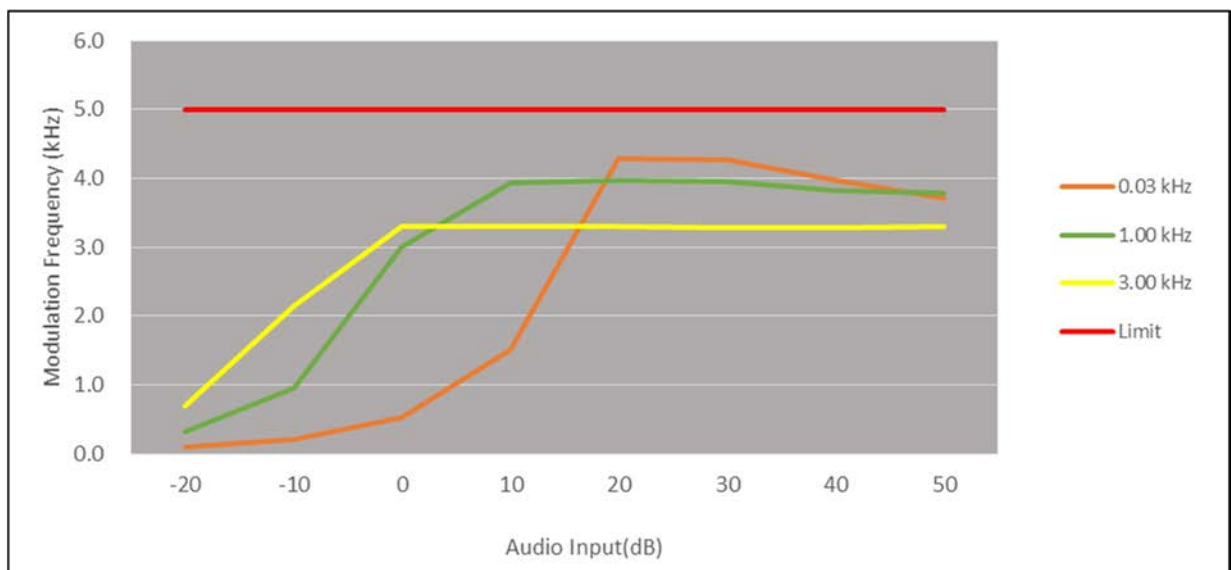


Positive Peaks

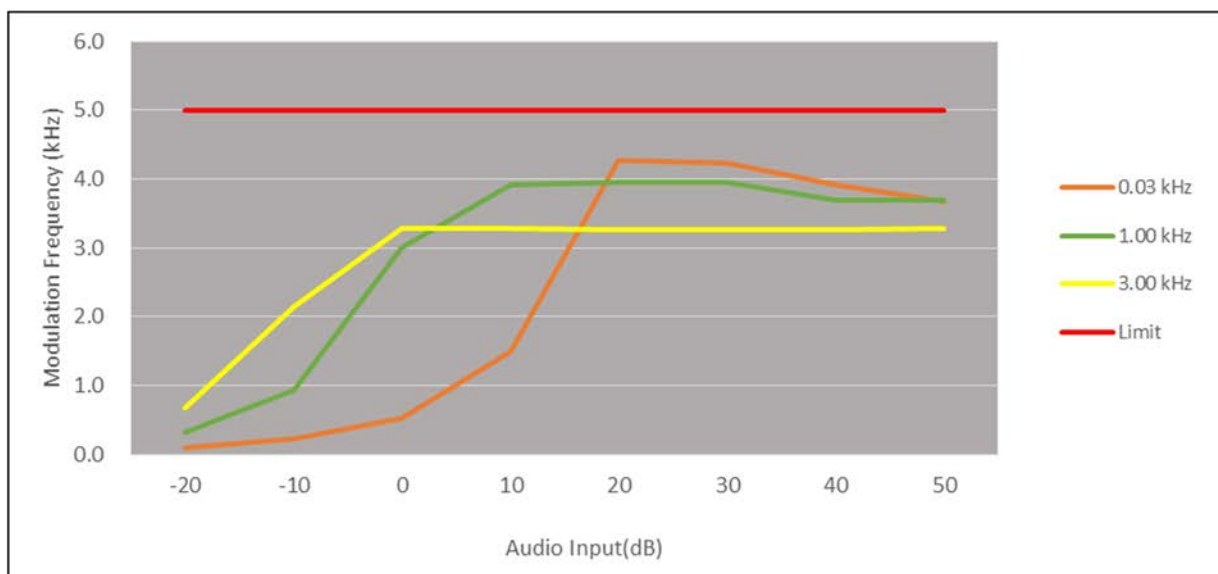
851.05 MHz



860.05 MHz

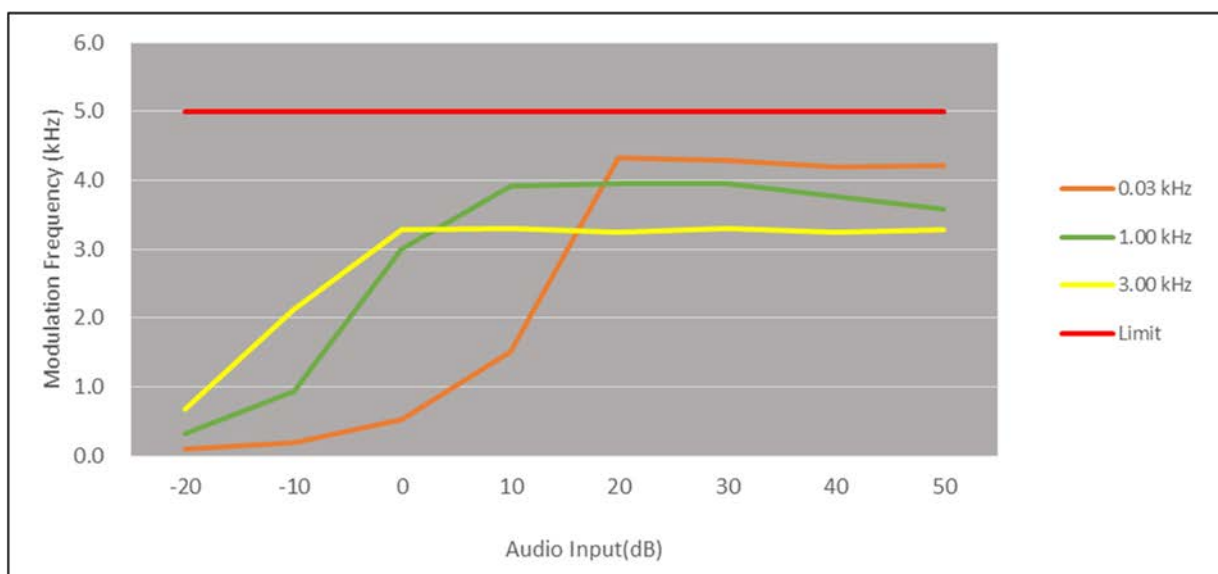


868.95 MHz

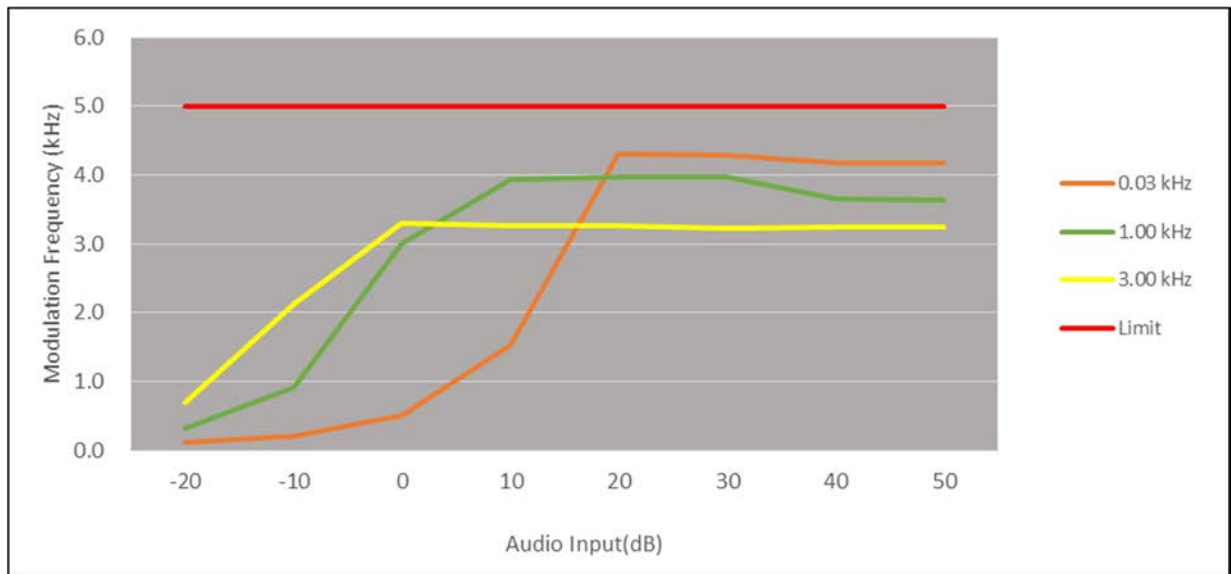


Negative Peaks

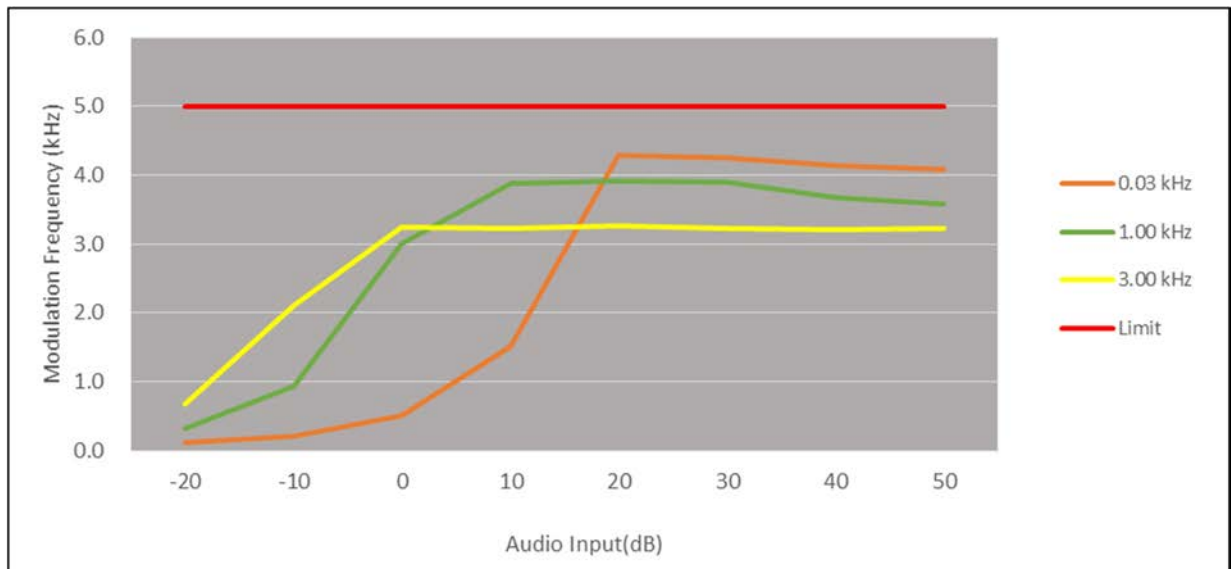
851.05 MHz



860.05 MHz



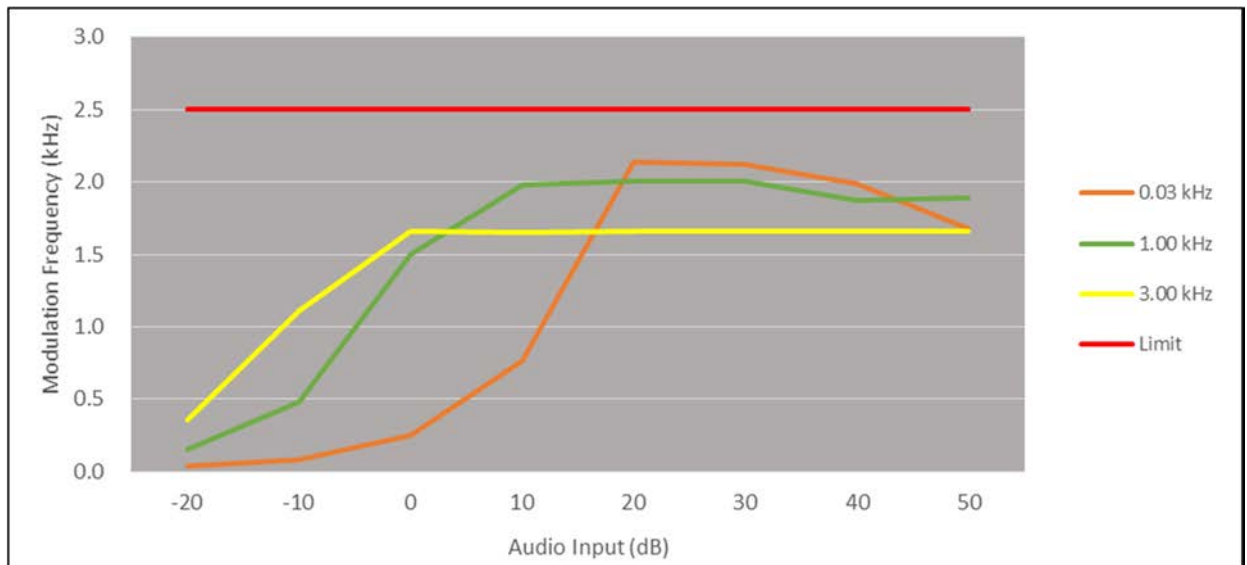
868.95 MHz



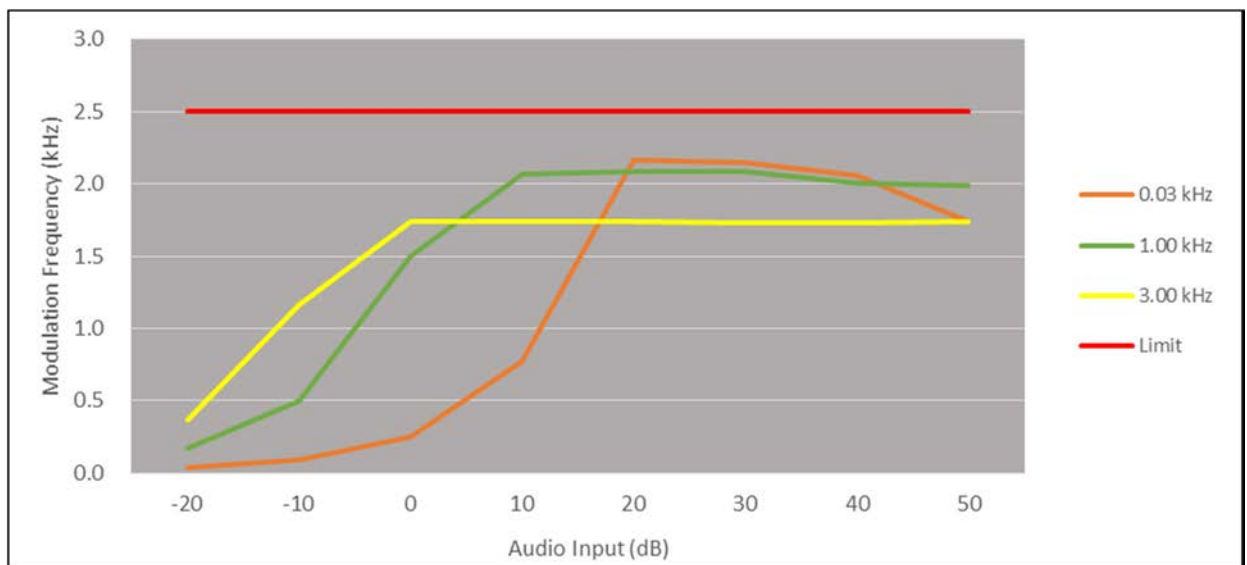
11K0F3E_HIGH POWER

Positive Peaks

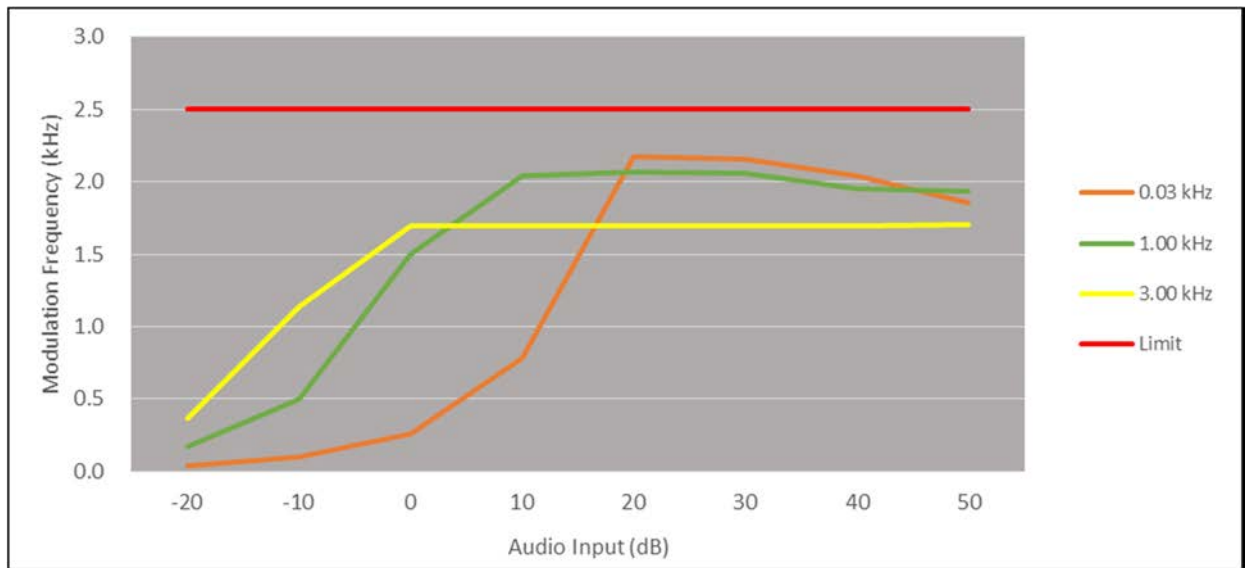
138.05 MHz



150.05 MHz

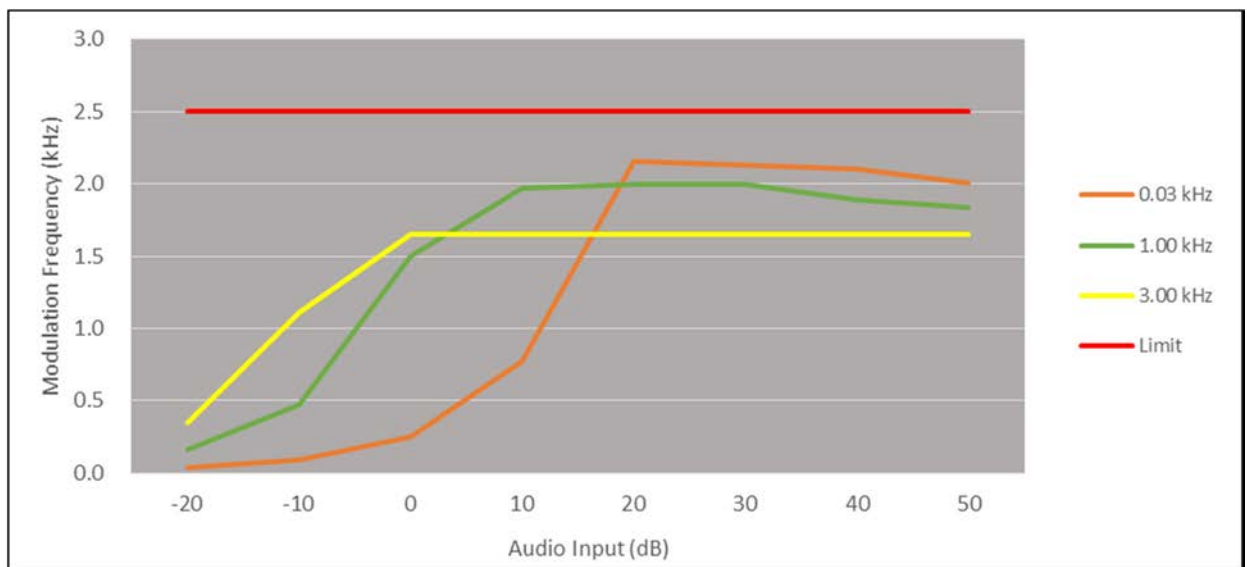


162.05 MHz

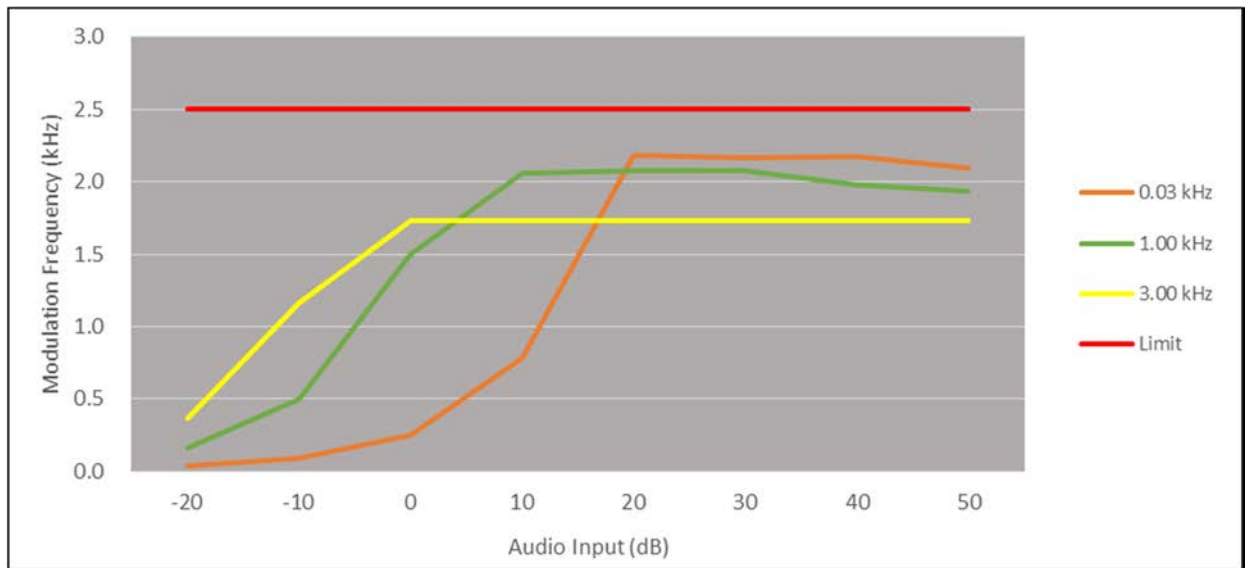


Negative Peaks

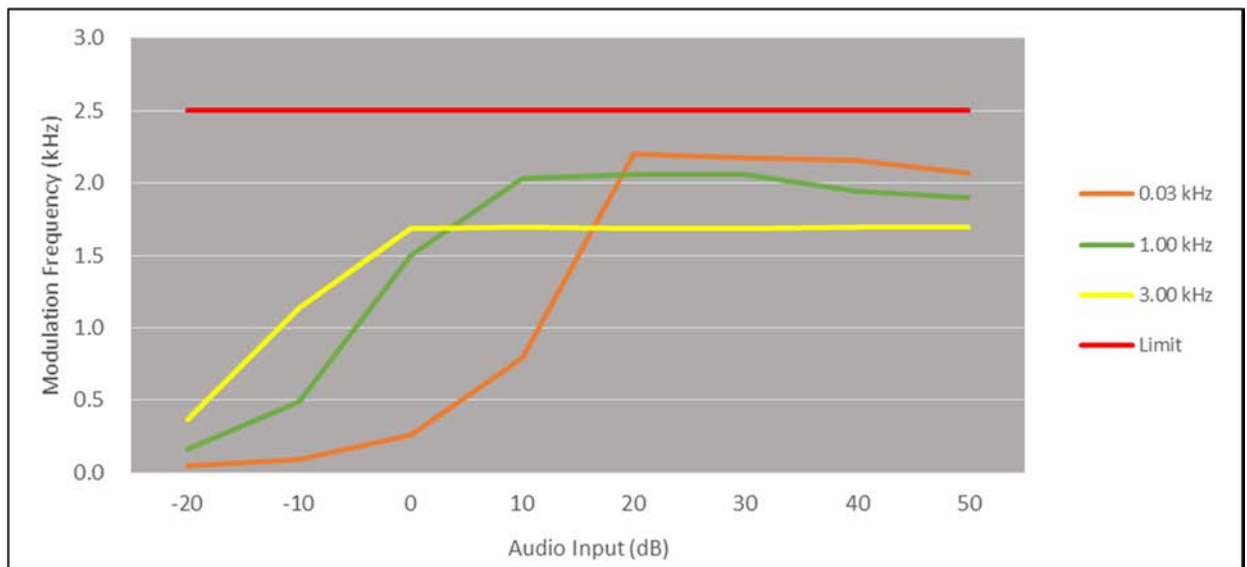
138.05 MHz



150.05 MHz

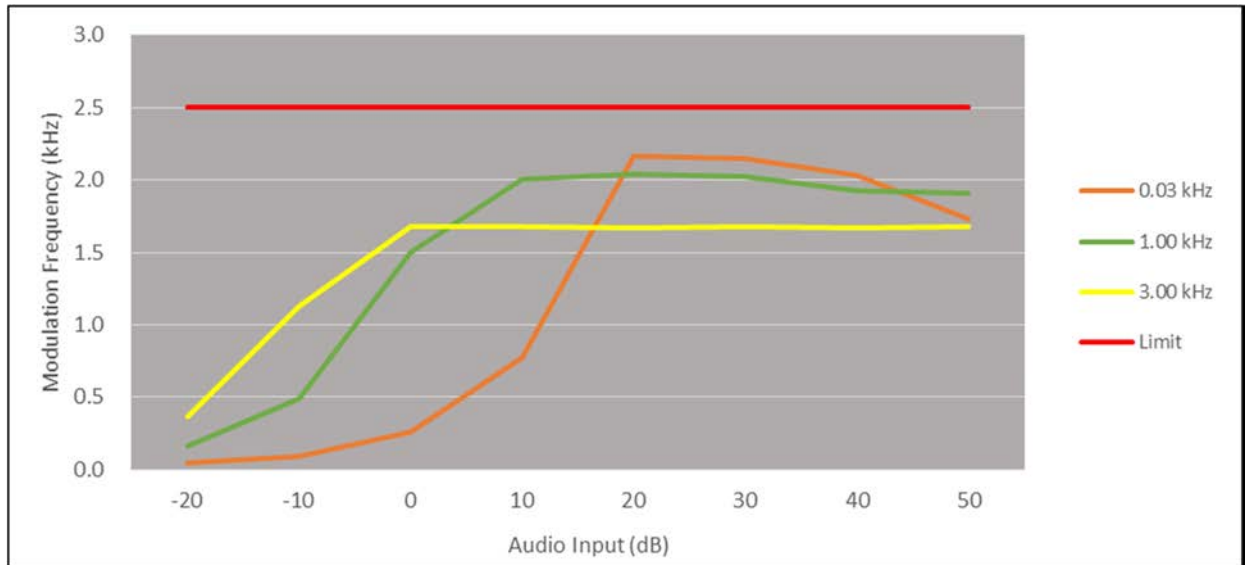


162.05 MHz



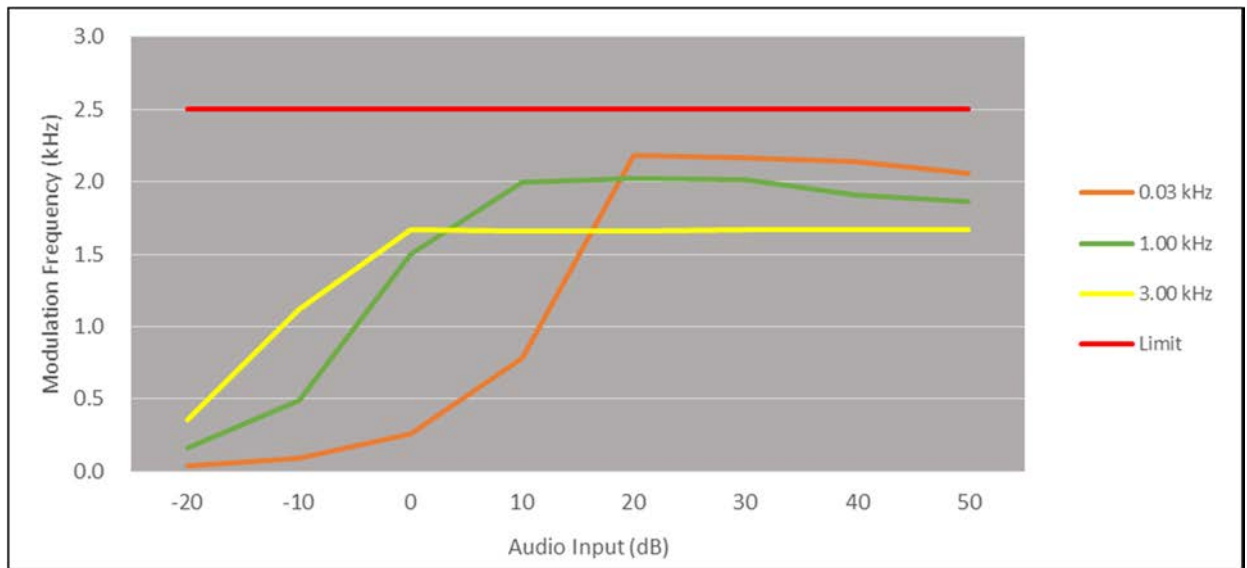
Positive Peaks

173.95MHz



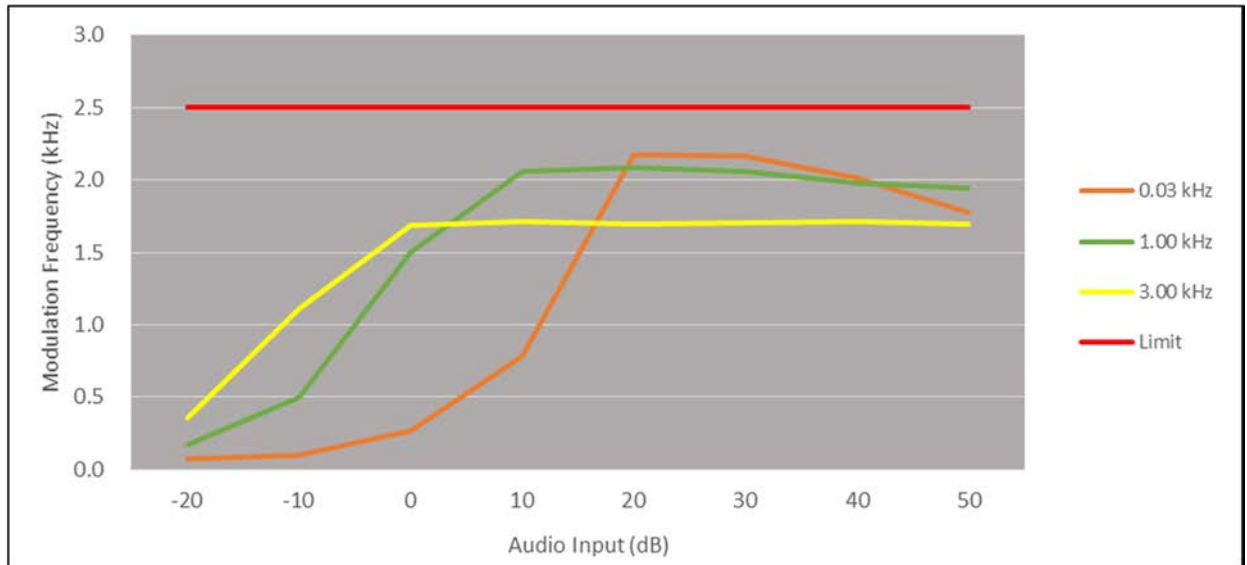
Negative Peaks

173.95MHz

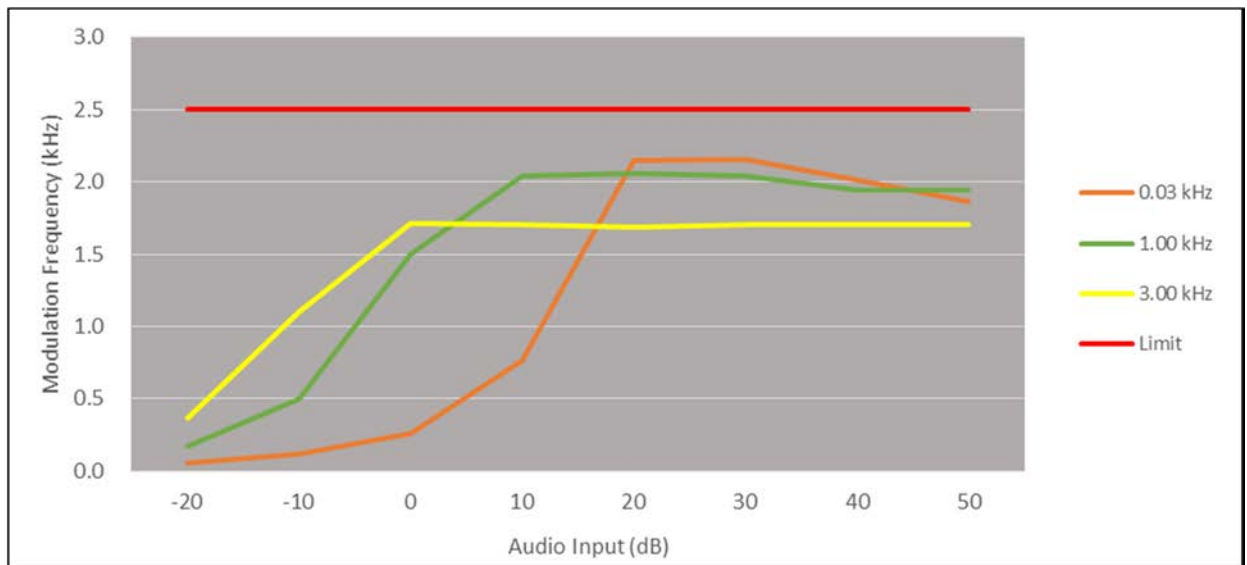


Positive Peaks

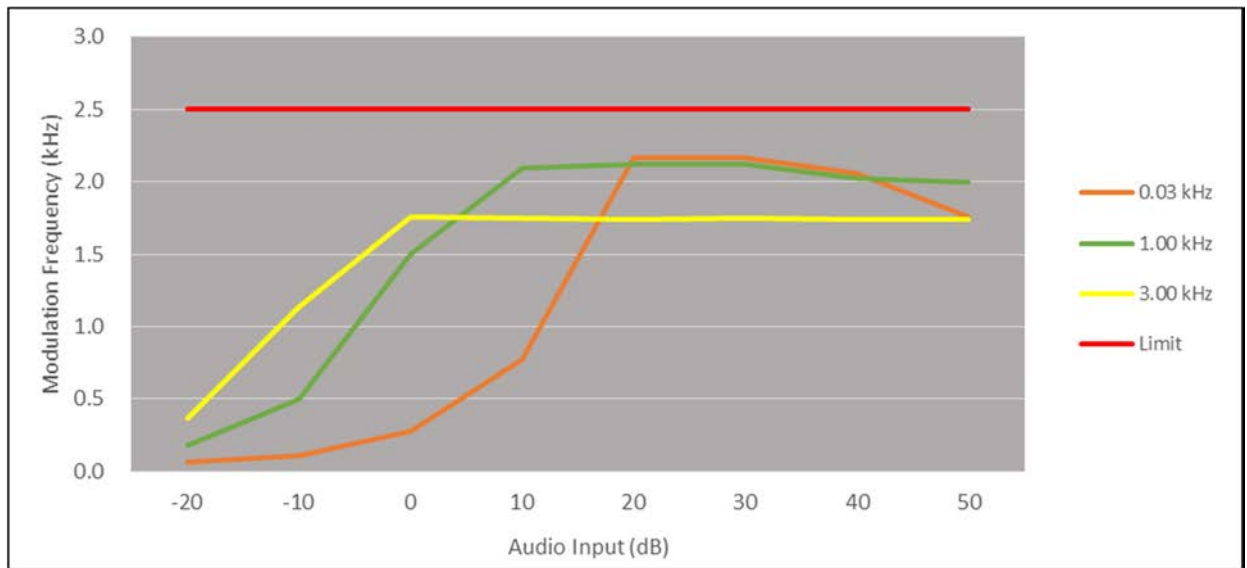
406.15 MHz



429.95 MHz

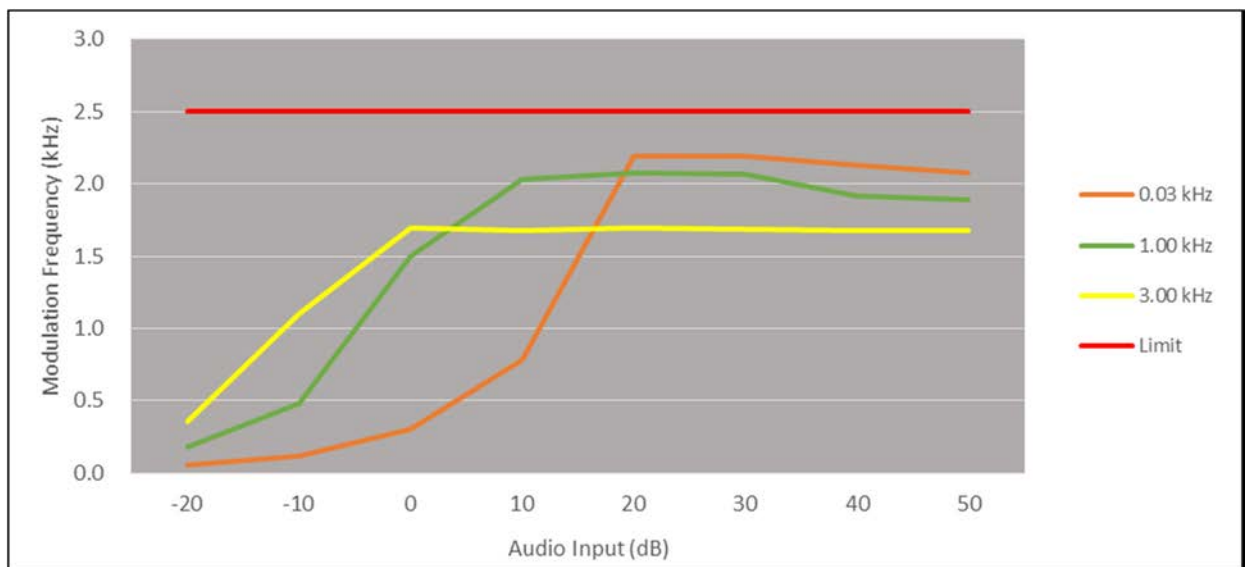


469.95 MHz

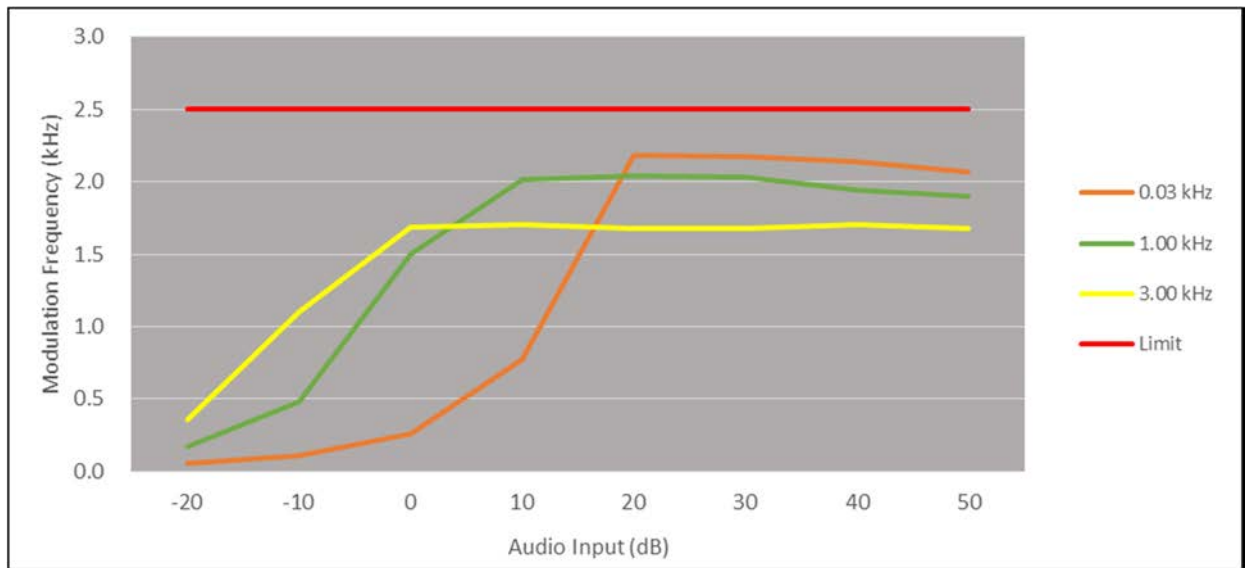


Negative Peaks

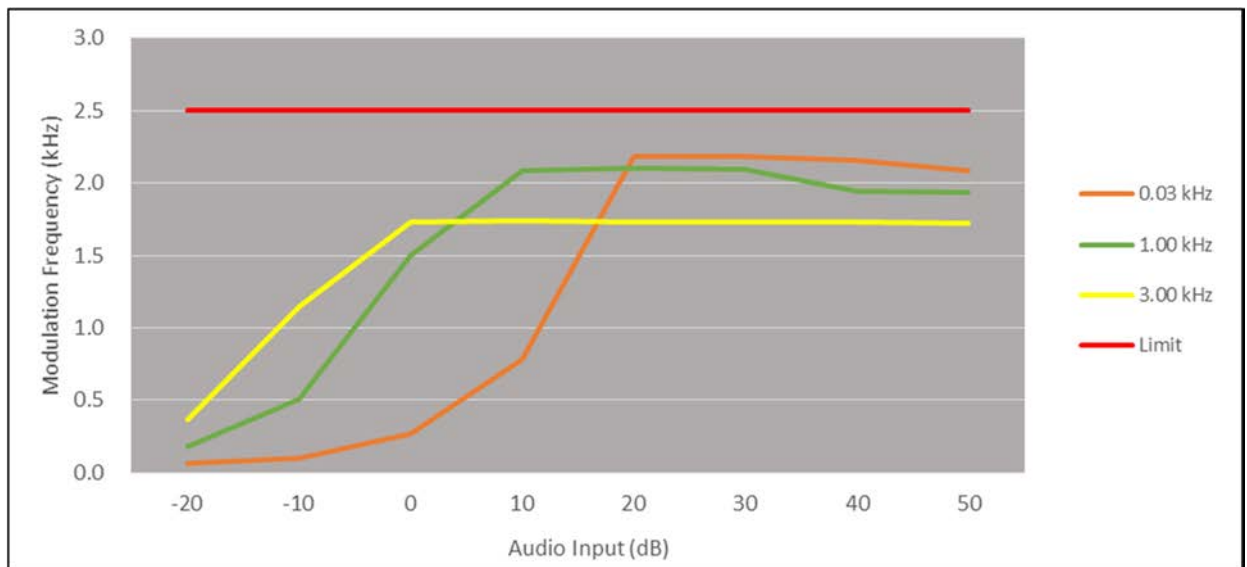
406.15 MHz



429.95 MHz

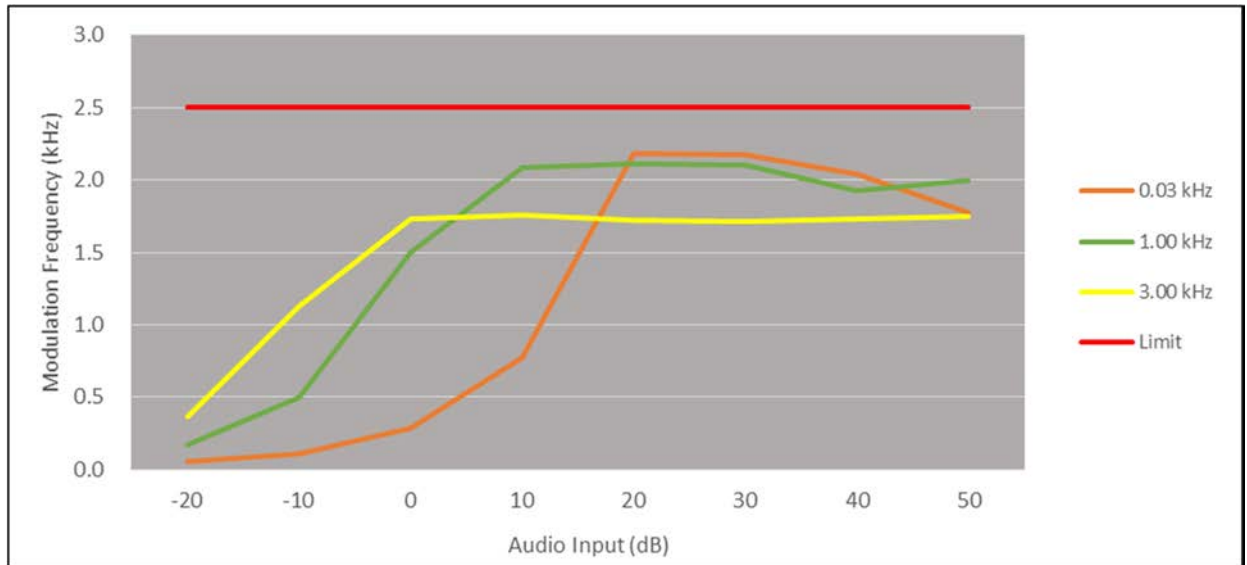


469.95 MHz



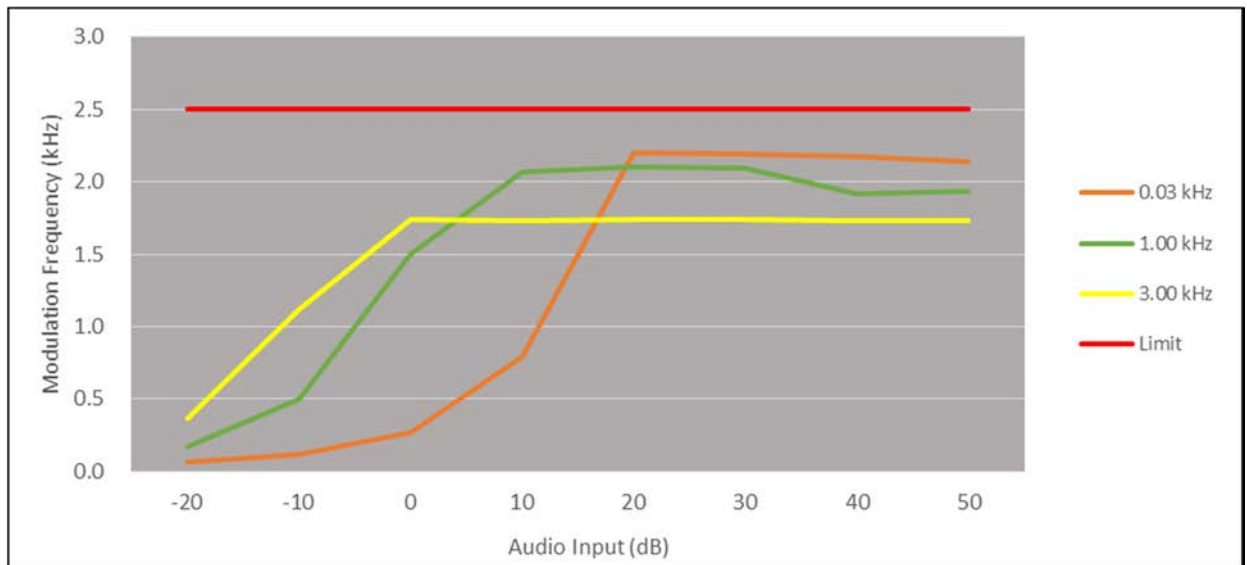
Positive Peaks

511.95 MHz



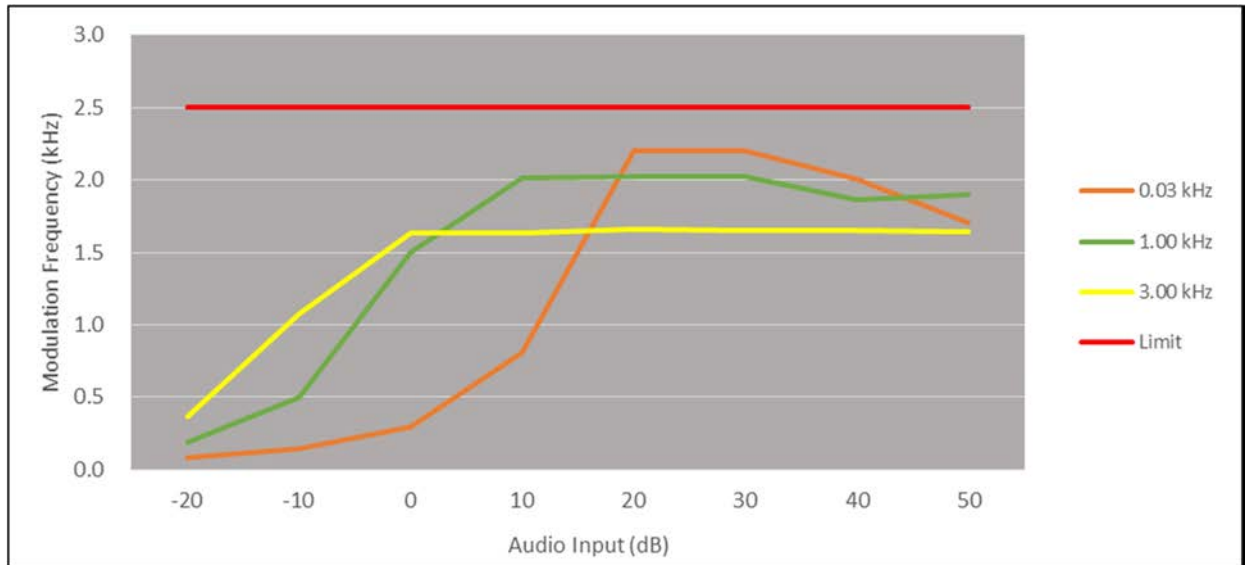
Negative Peaks

511.95 MHz

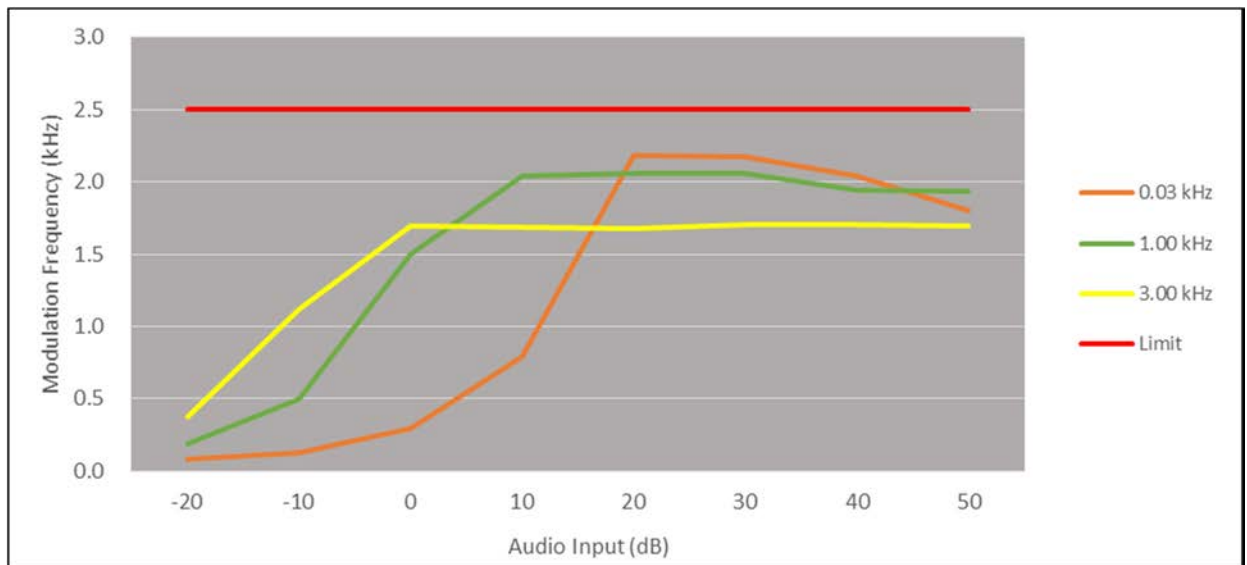


Positive Peaks

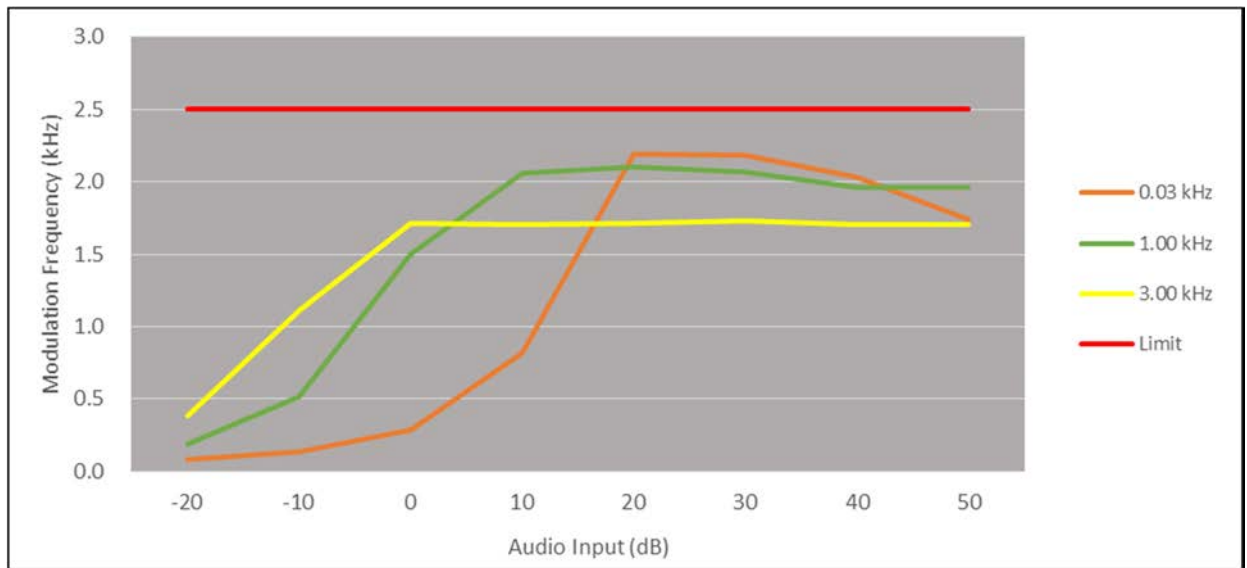
768.05 MHz



769.06 MHz

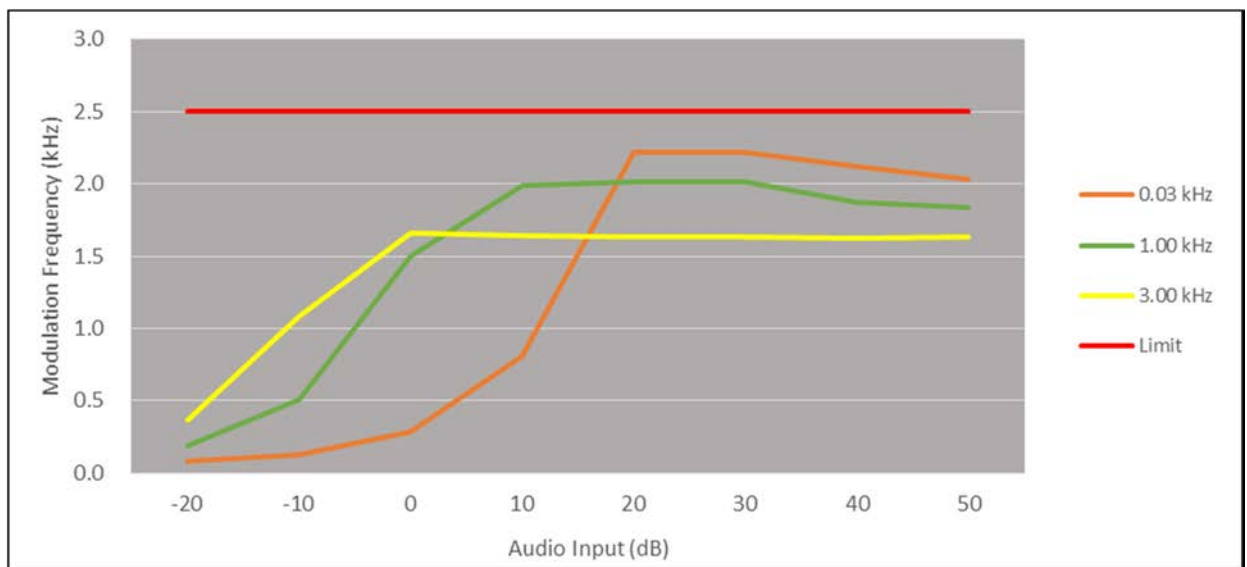


774.95 MHz

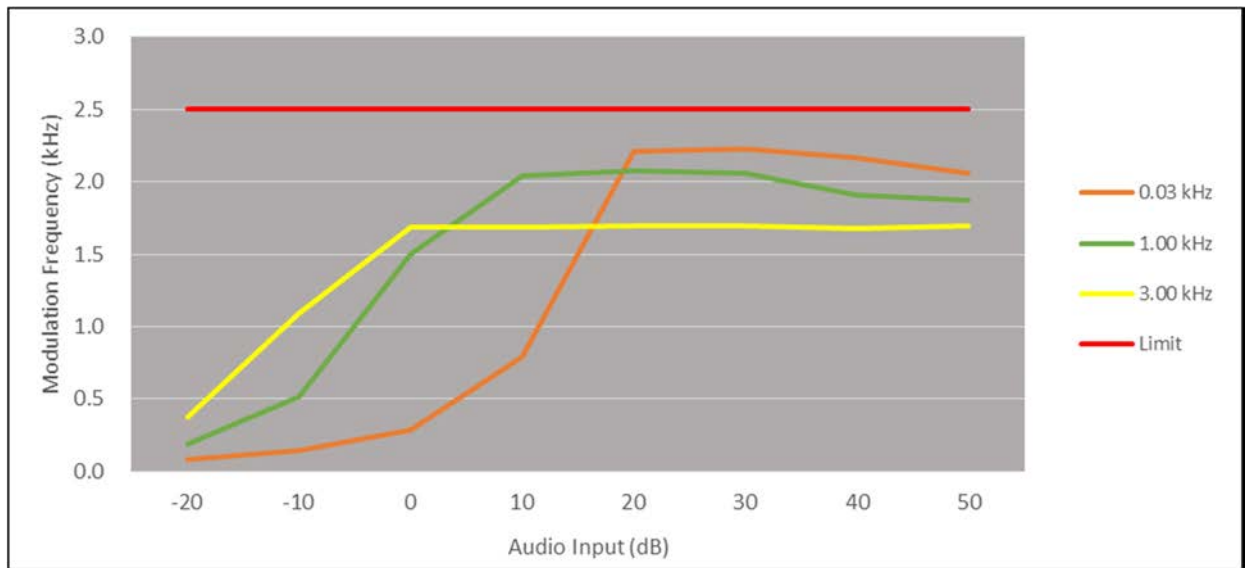


Negative Peaks

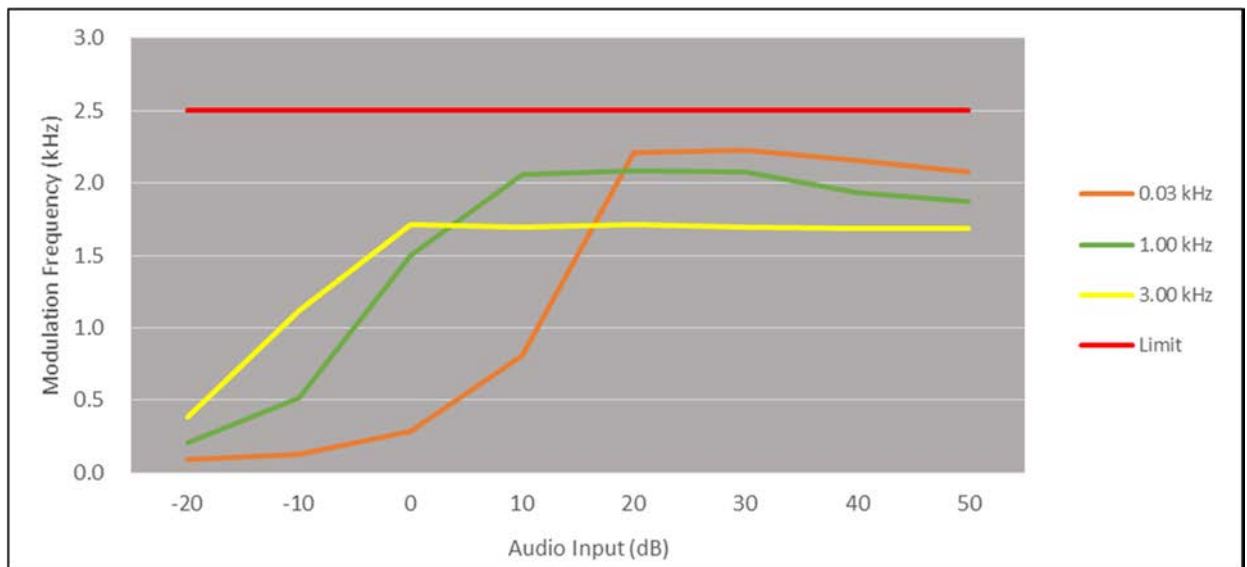
768.05 MHz



769.06 MHz

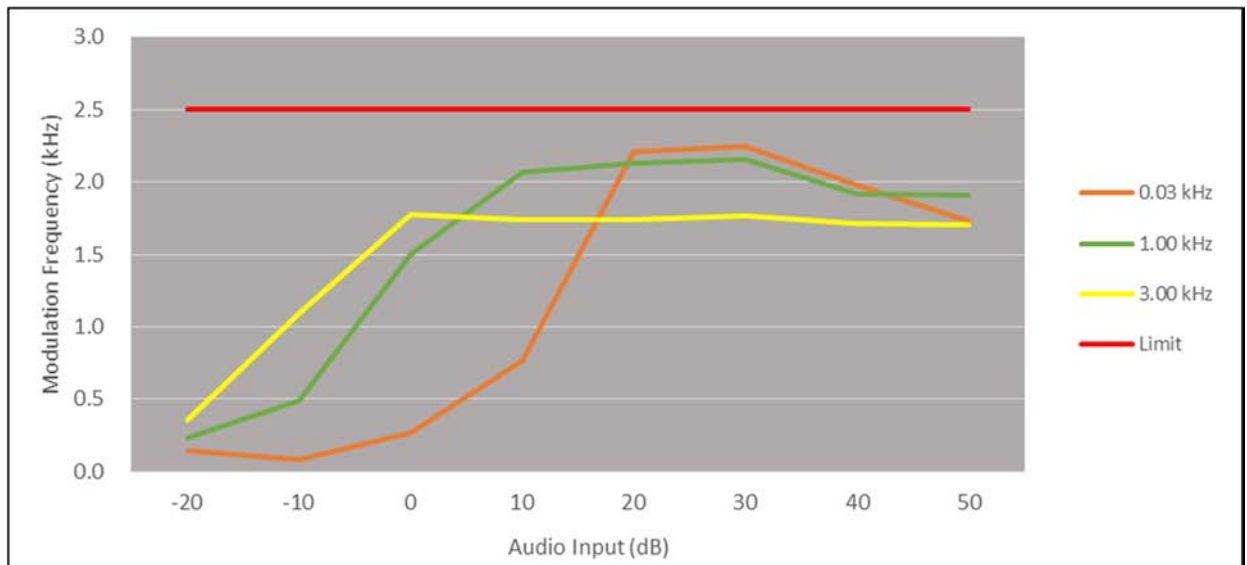


774.95 MHz

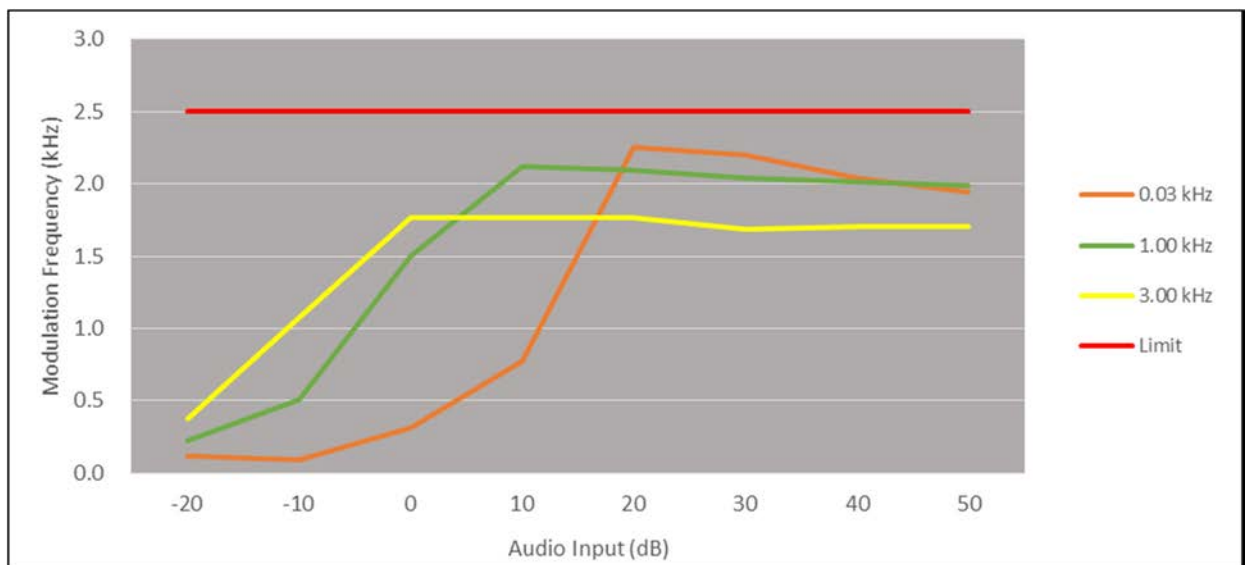


Positive Peaks

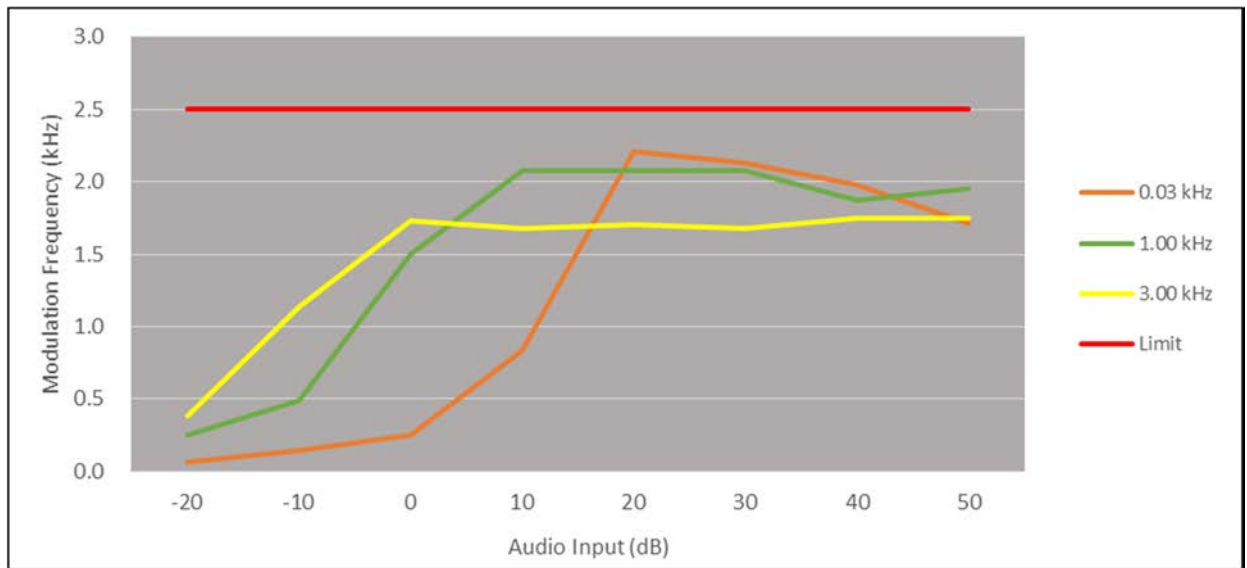
775.95 MHz



798.05 MHz

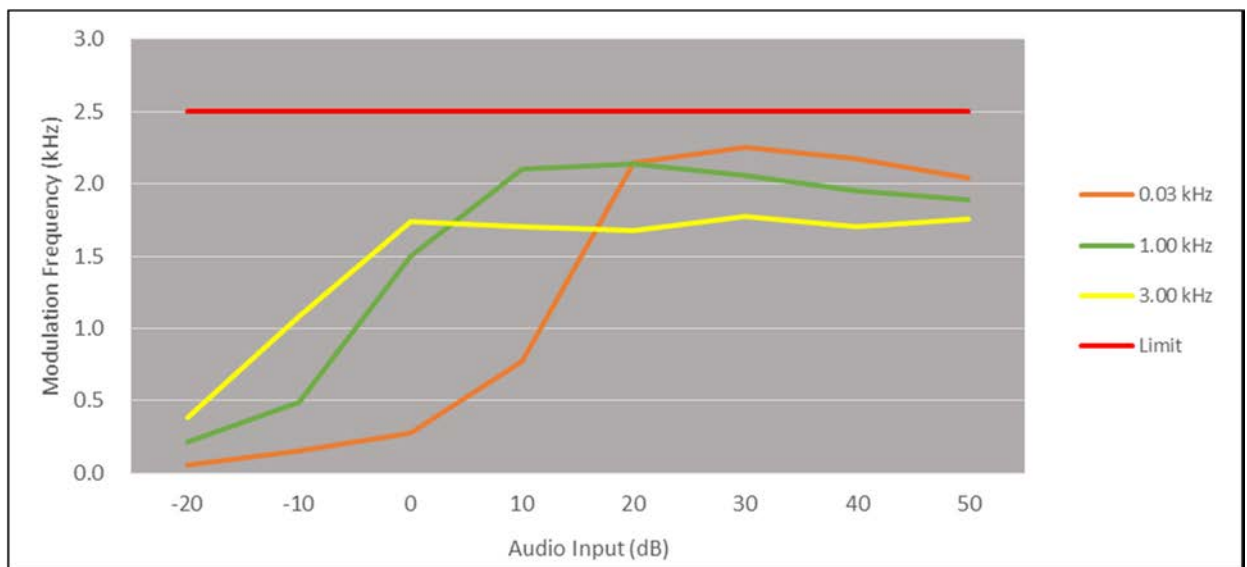


799.05 MHz

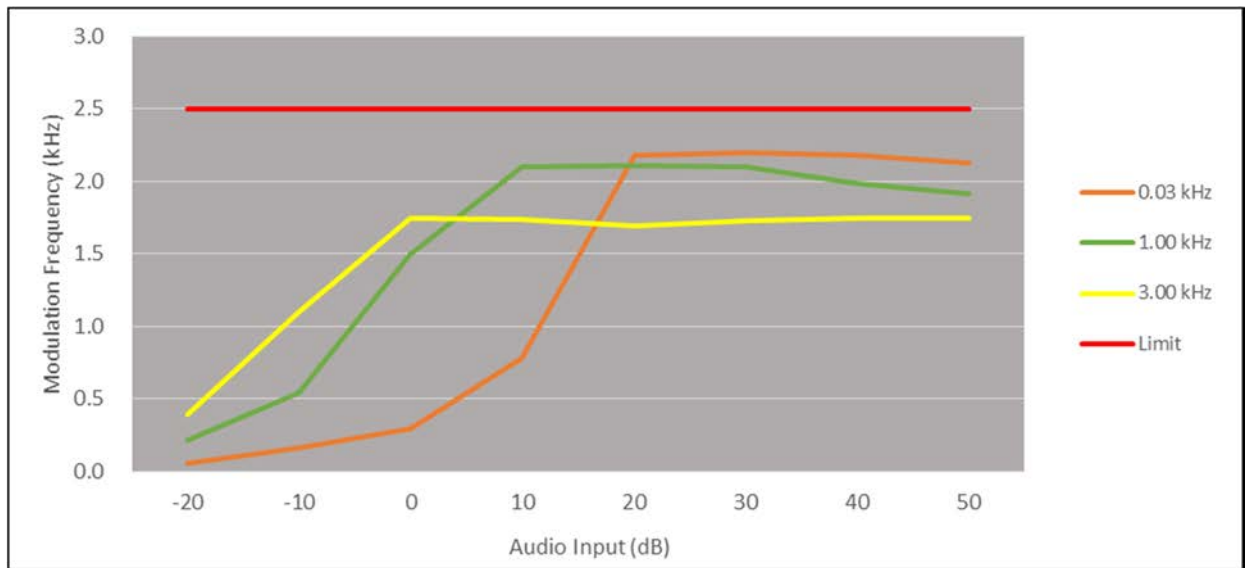


Negative Peaks

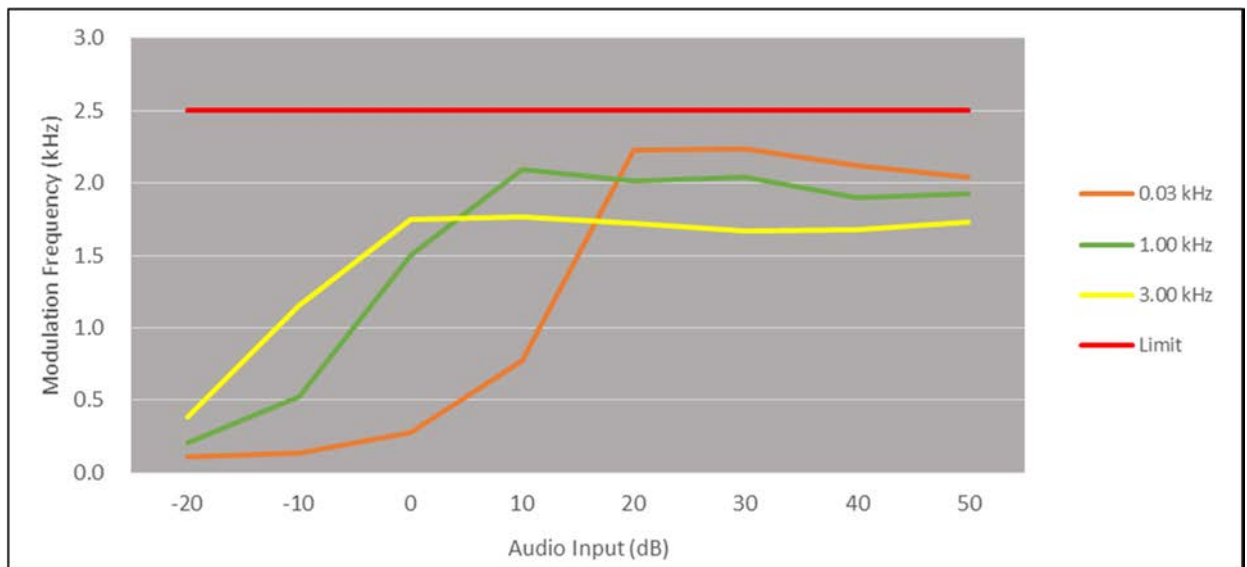
775.95 MHz



798.05 MHz

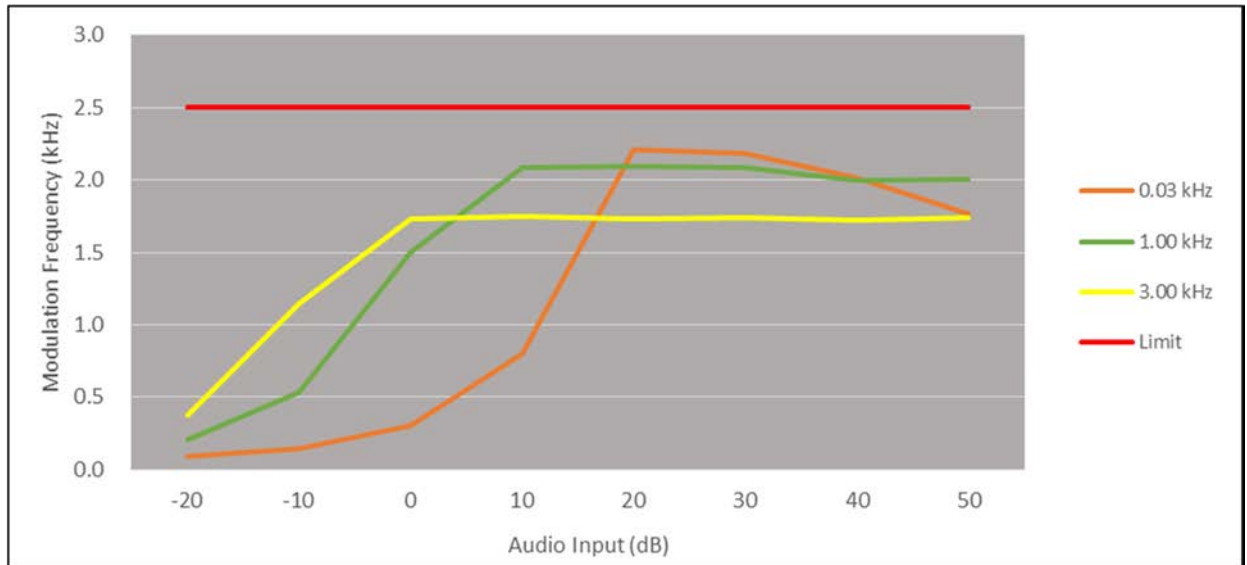


799.05 MHz

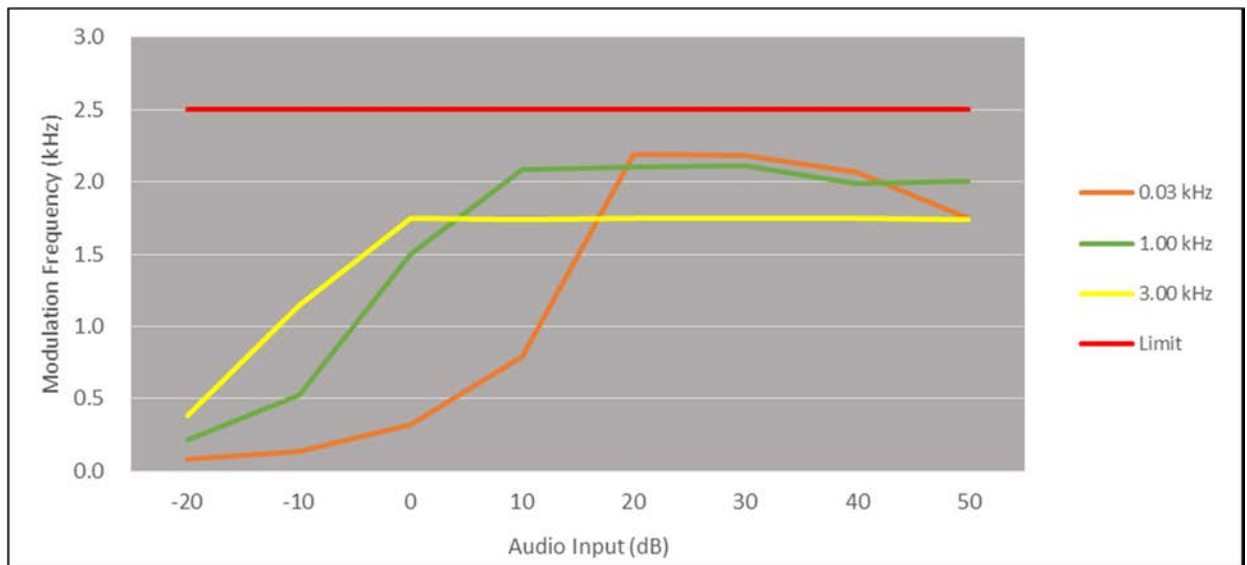


Positive Peaks

804.95MHz

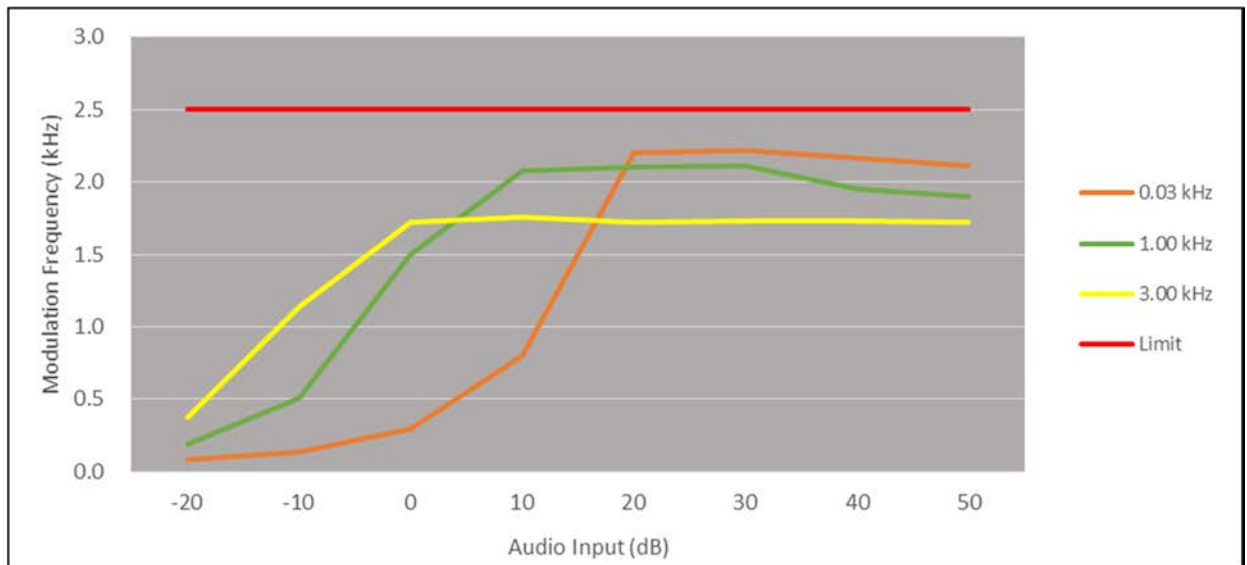


805.95MHz

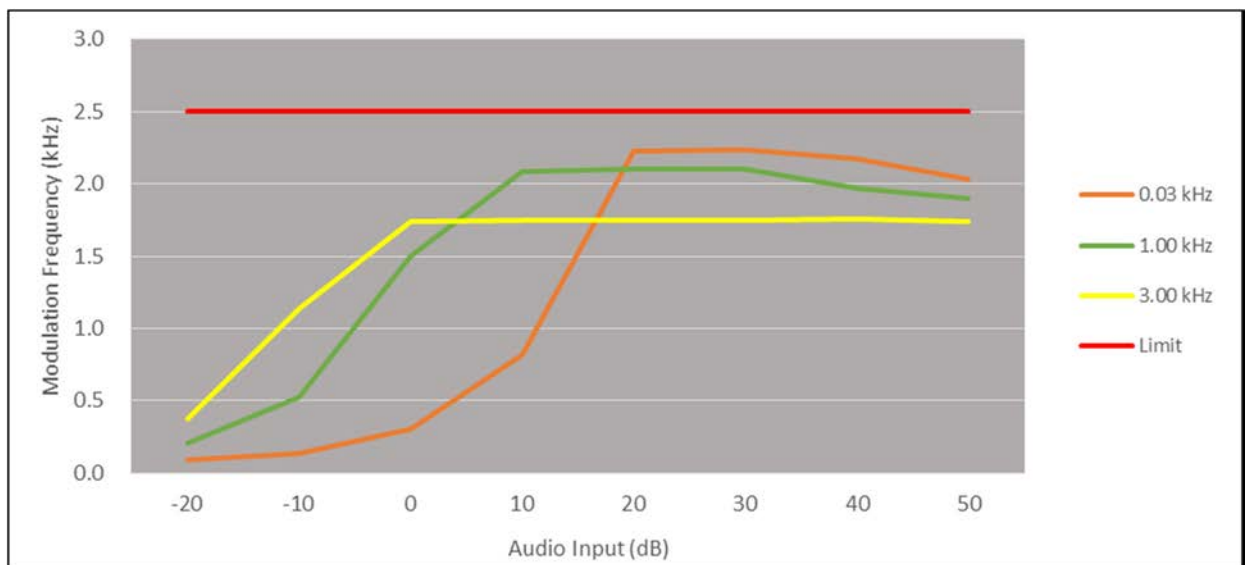


Negative Peaks

804.95MHz

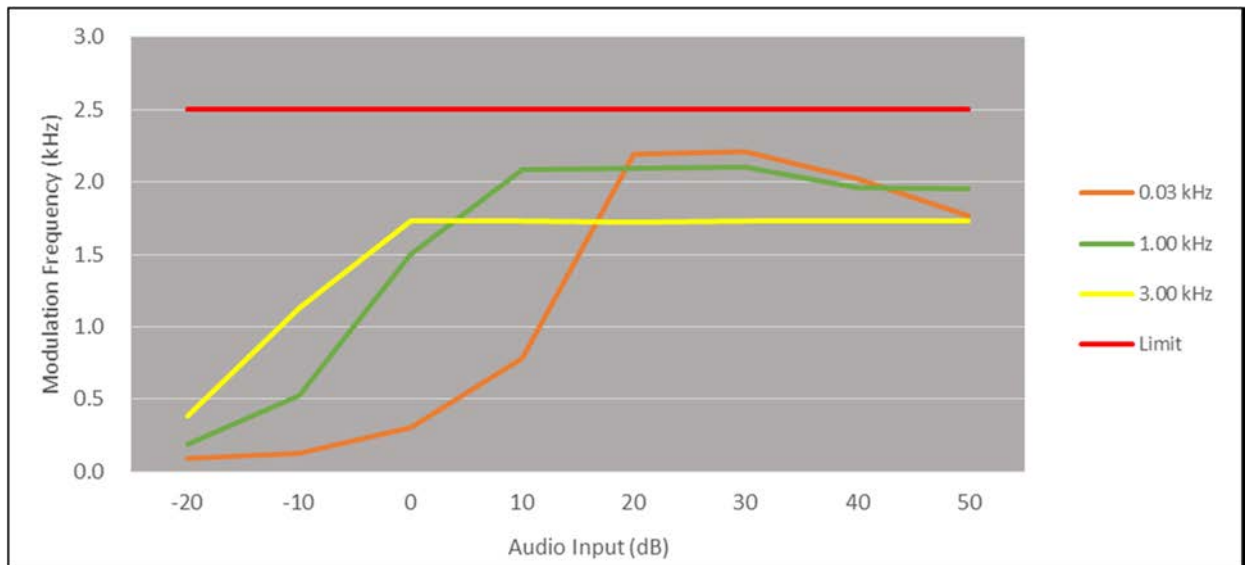


805.95MHz

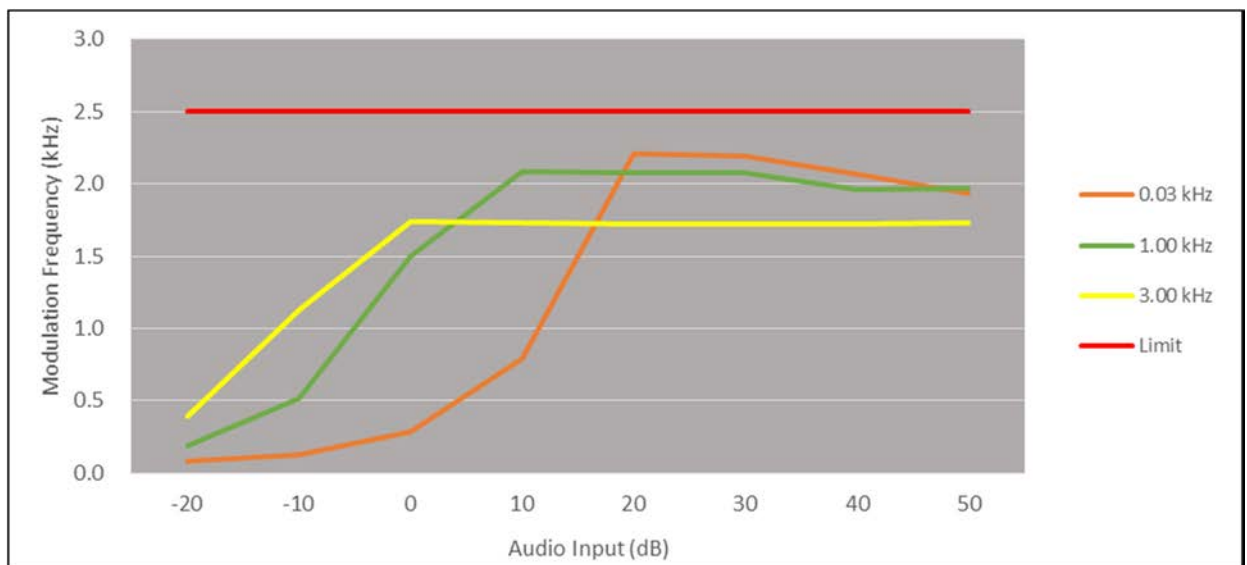


Positive Peaks

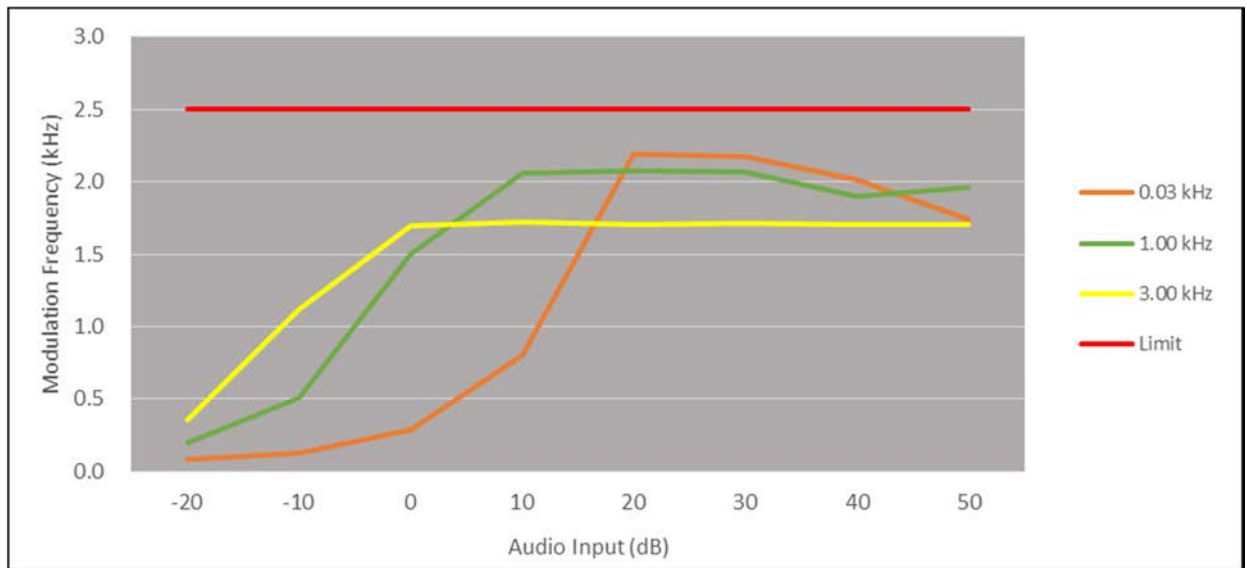
806.05 MHz



815.05 MHz

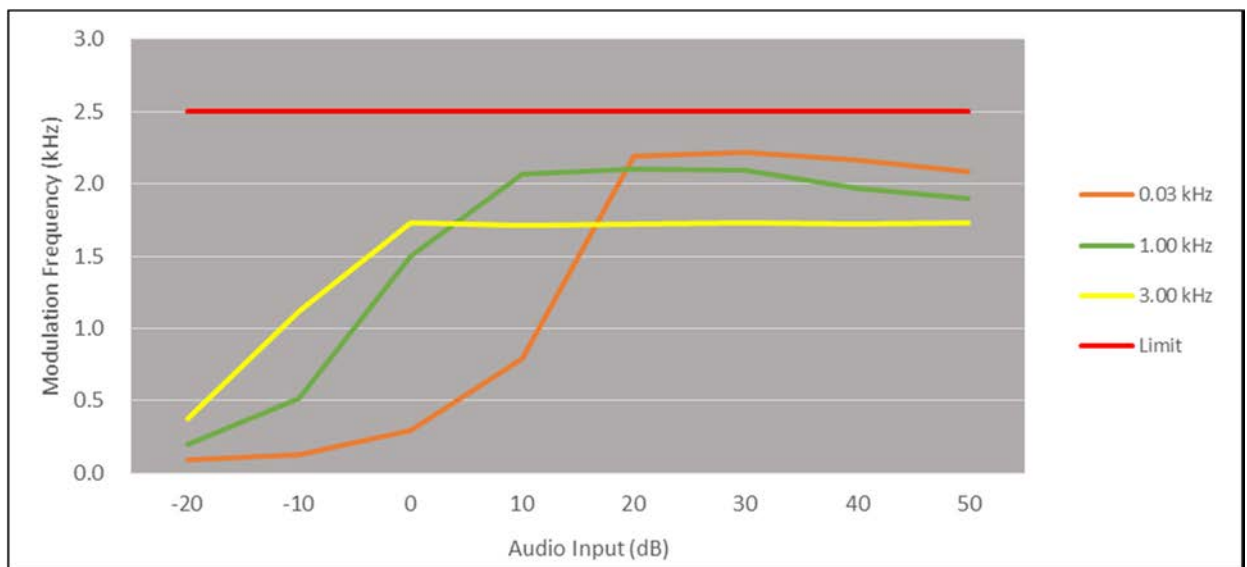


823.95 MHz

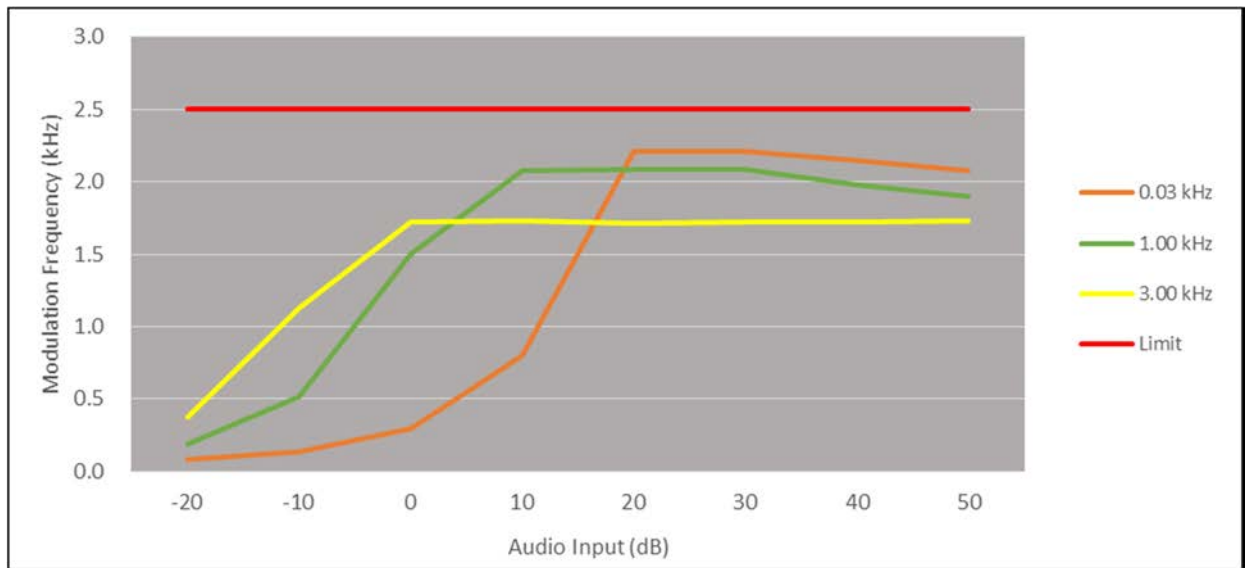


Negative Peaks

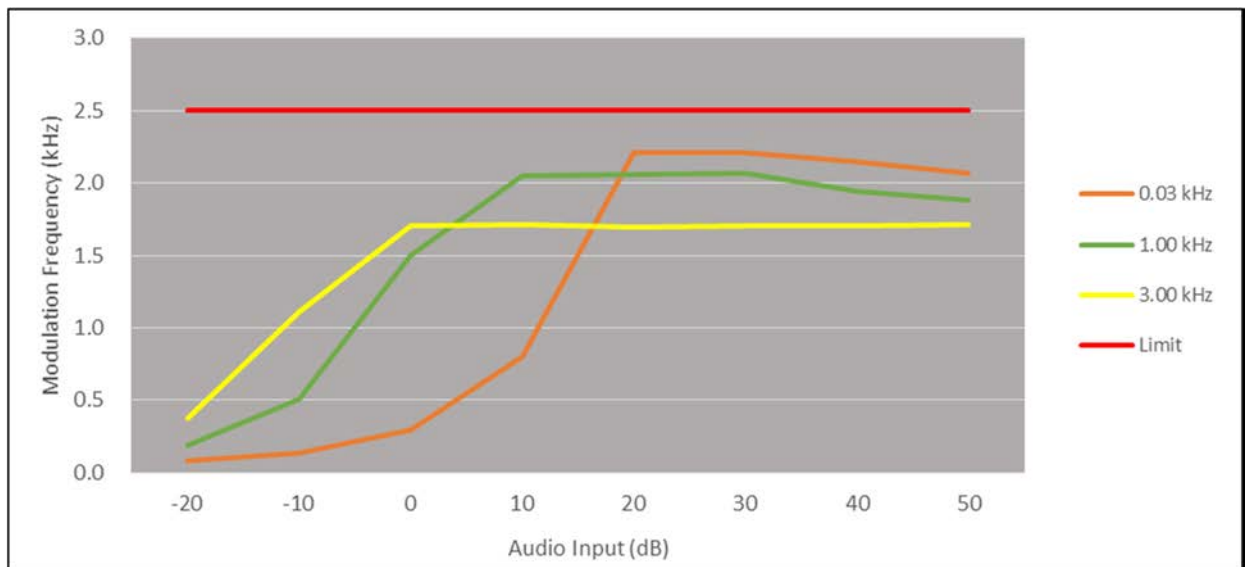
806.05 MHz



815.05 MHz

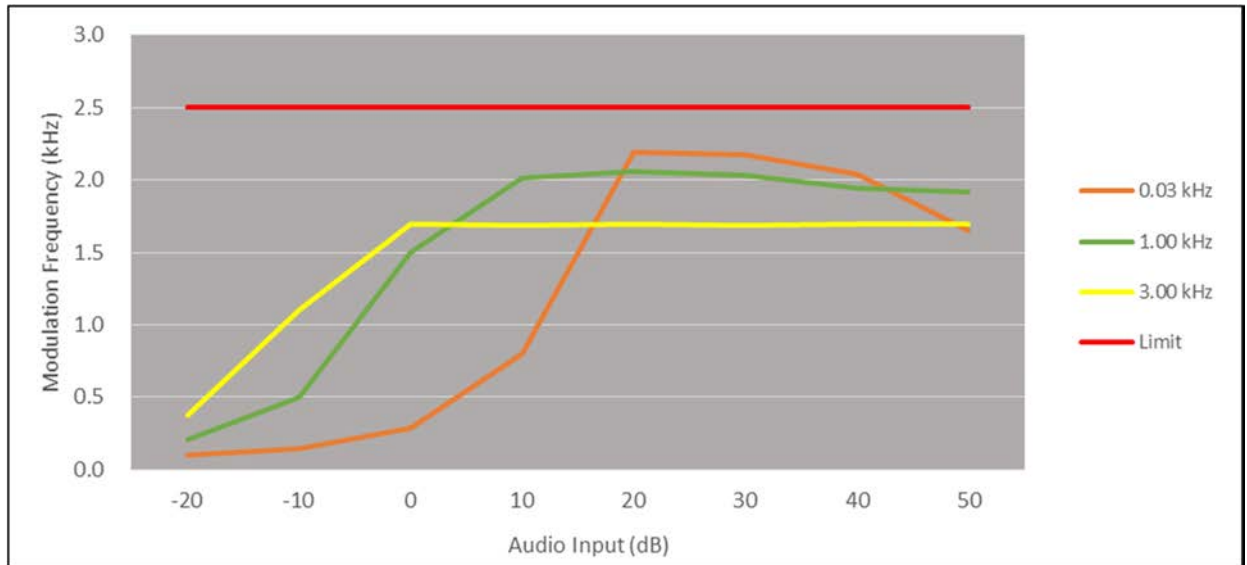


823.95 MHz

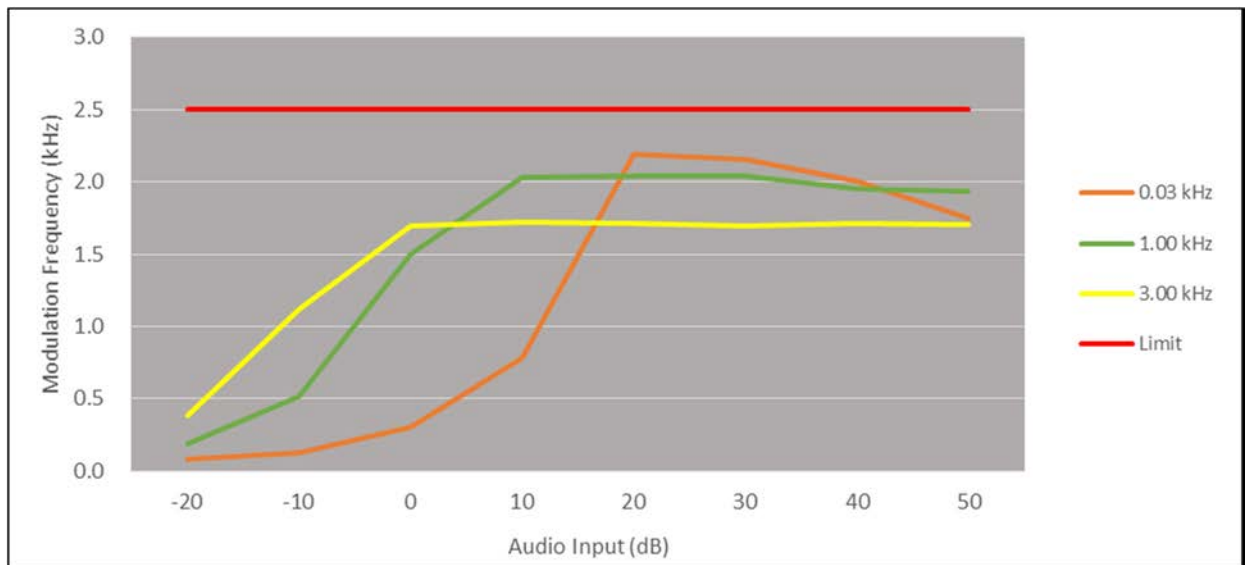


Positive Peaks

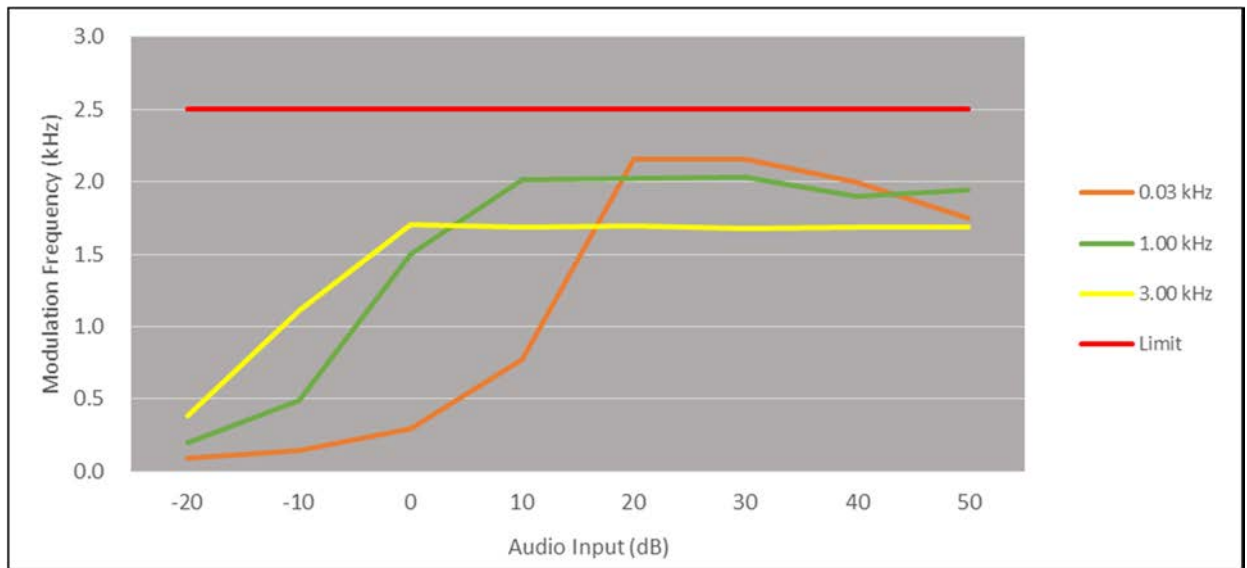
851.05MHz



860.05MHz

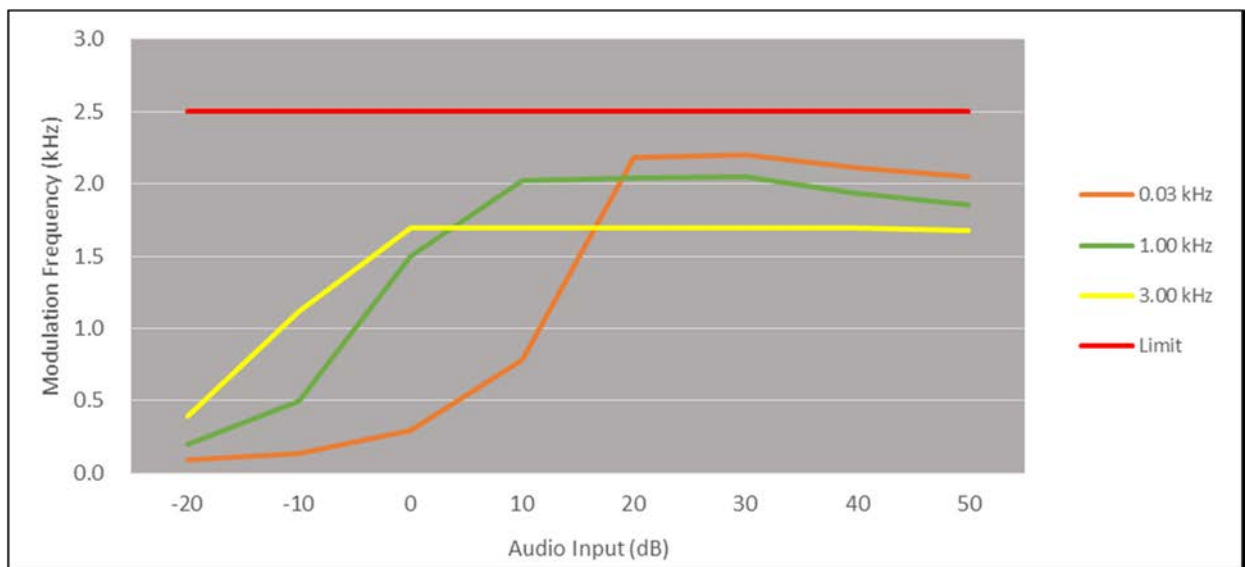


868.95MHz

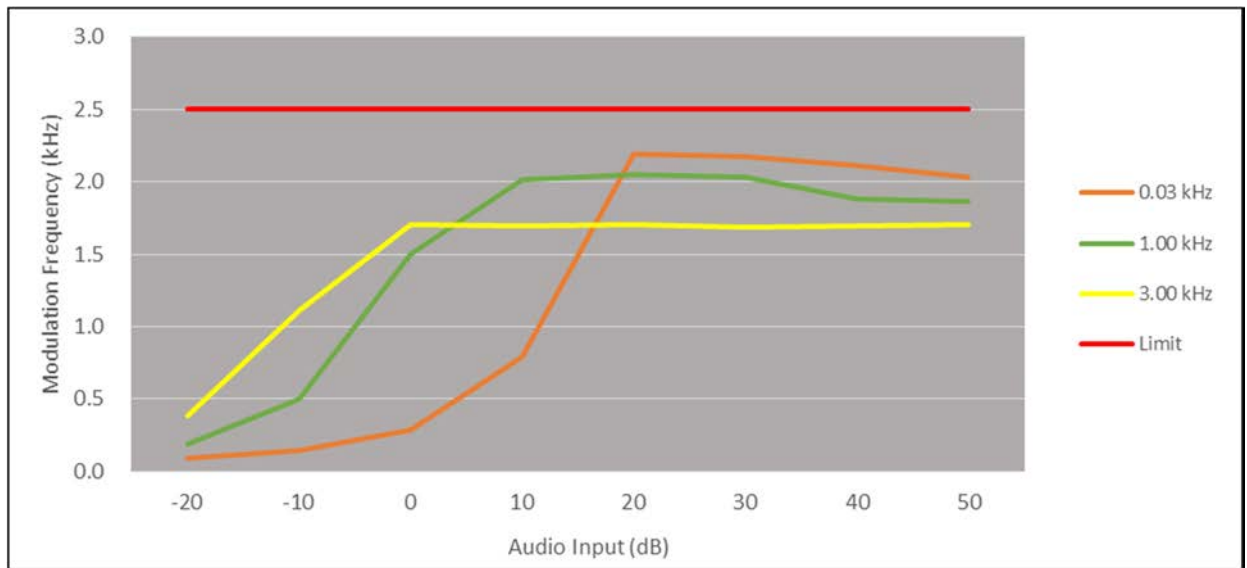


Negative Peaks

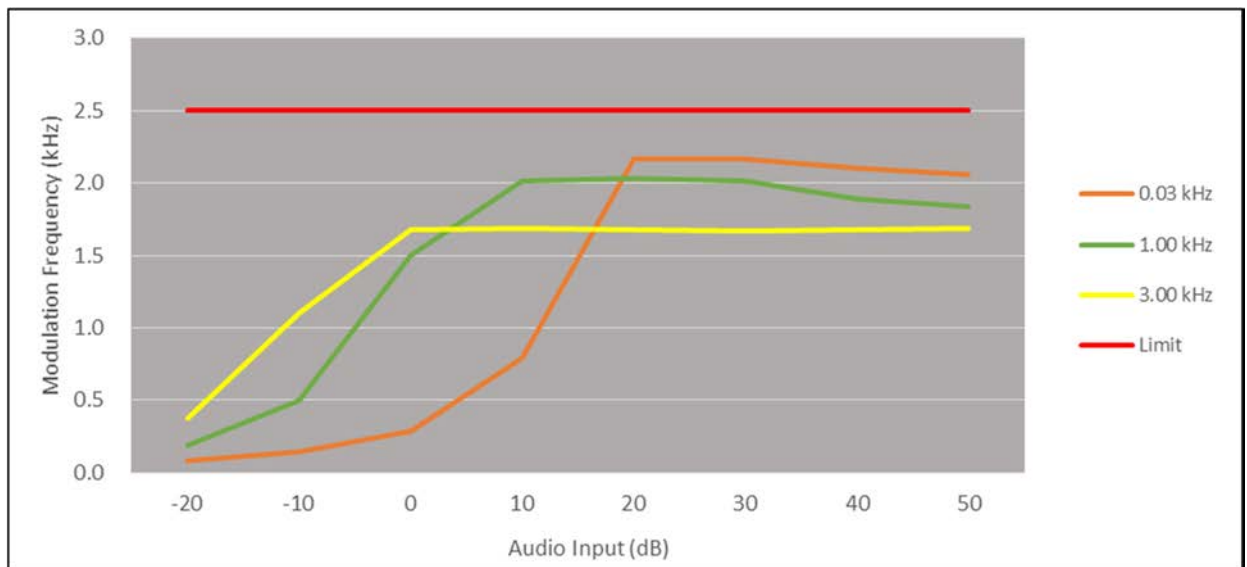
851.05MHz



860.05MHz



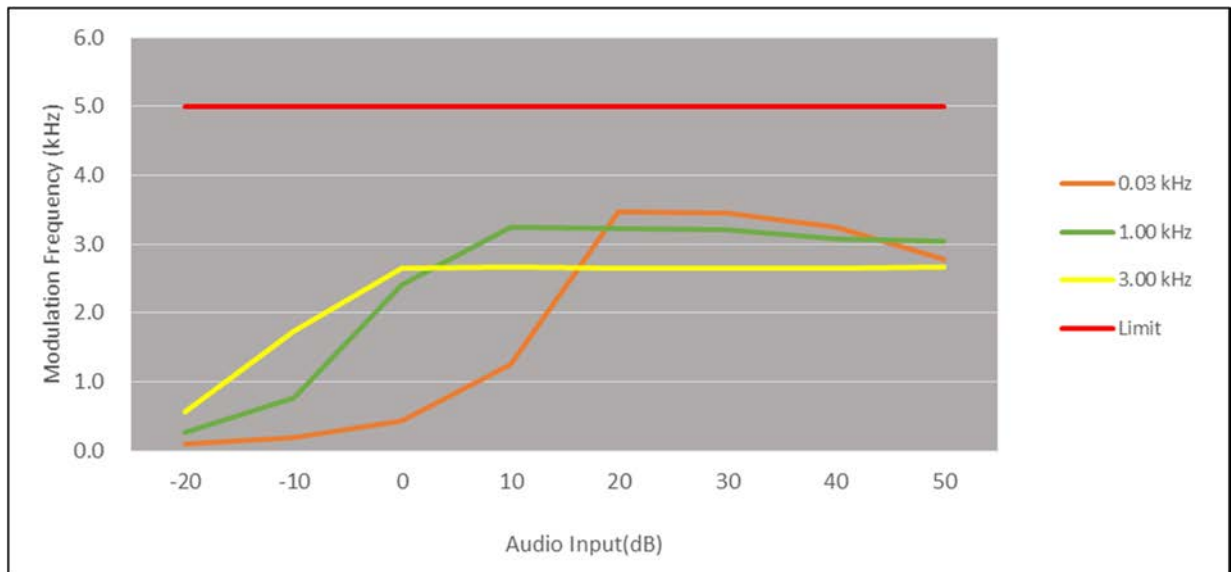
868.95MHz



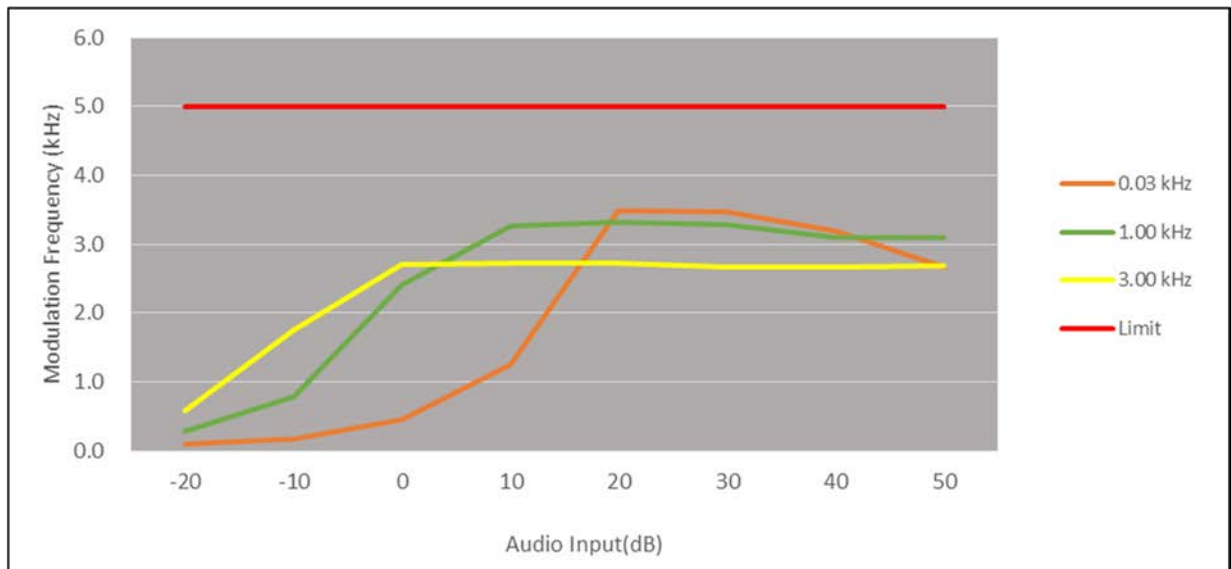
14K0F3E_HIGH POWER

Positive Peaks

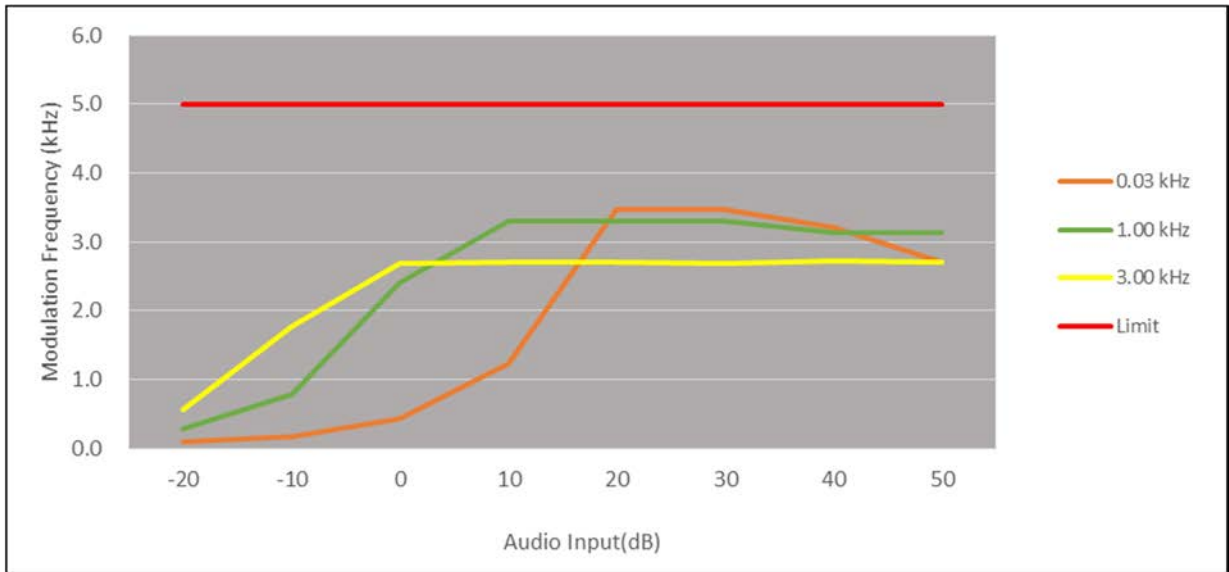
768.05 MHz



769.06 MHz

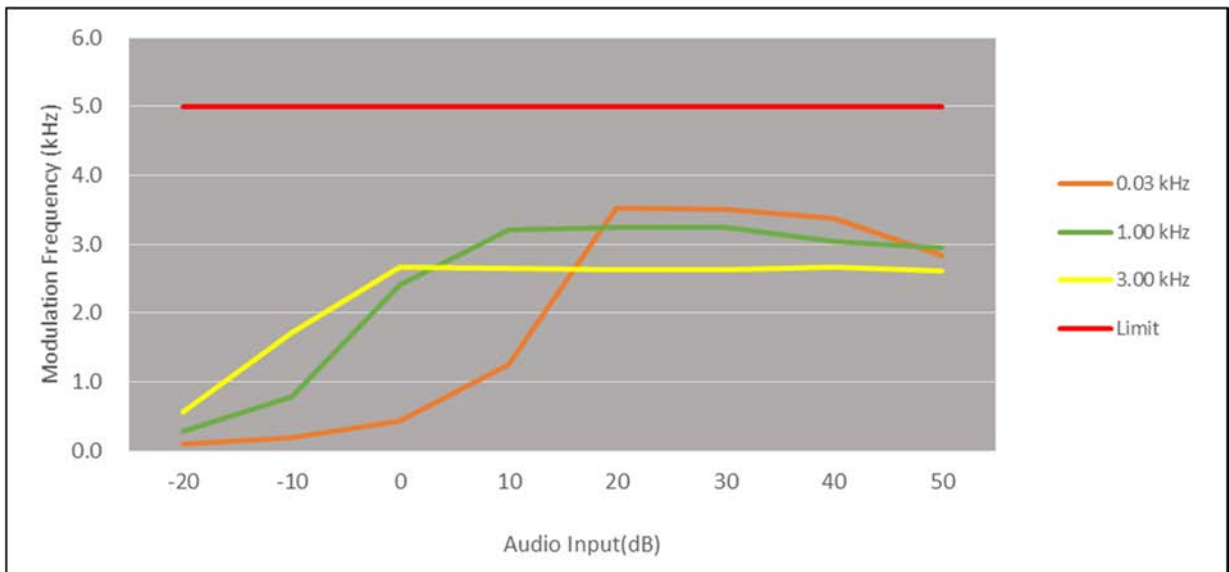


774.95 MHz

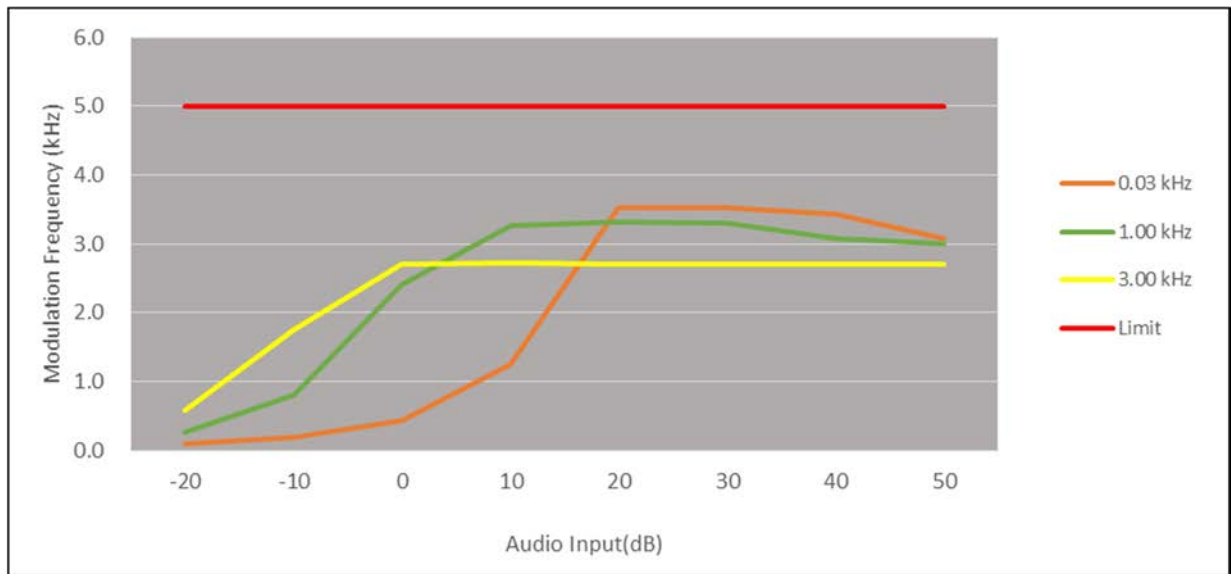


Negative Peaks

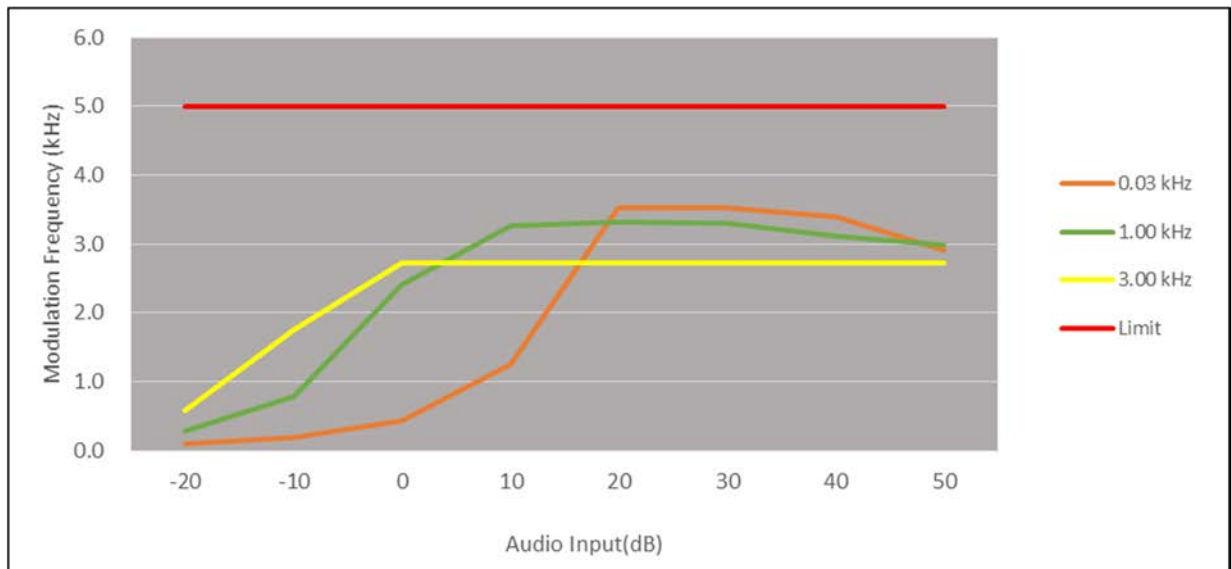
768.05 MHz



769.06 MHz

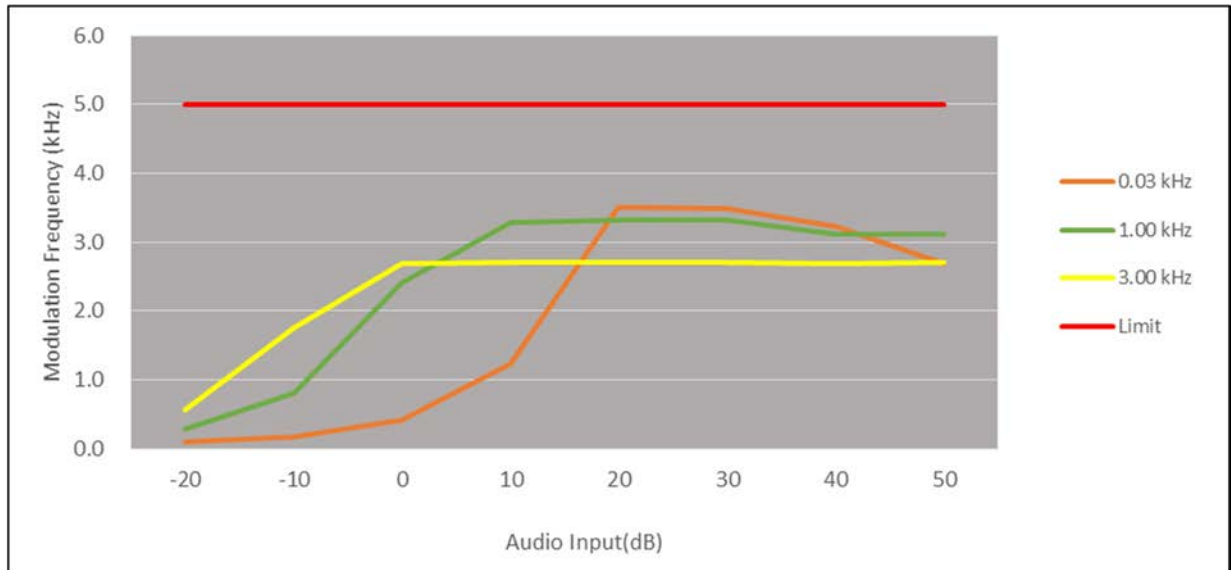


774.95 MHz

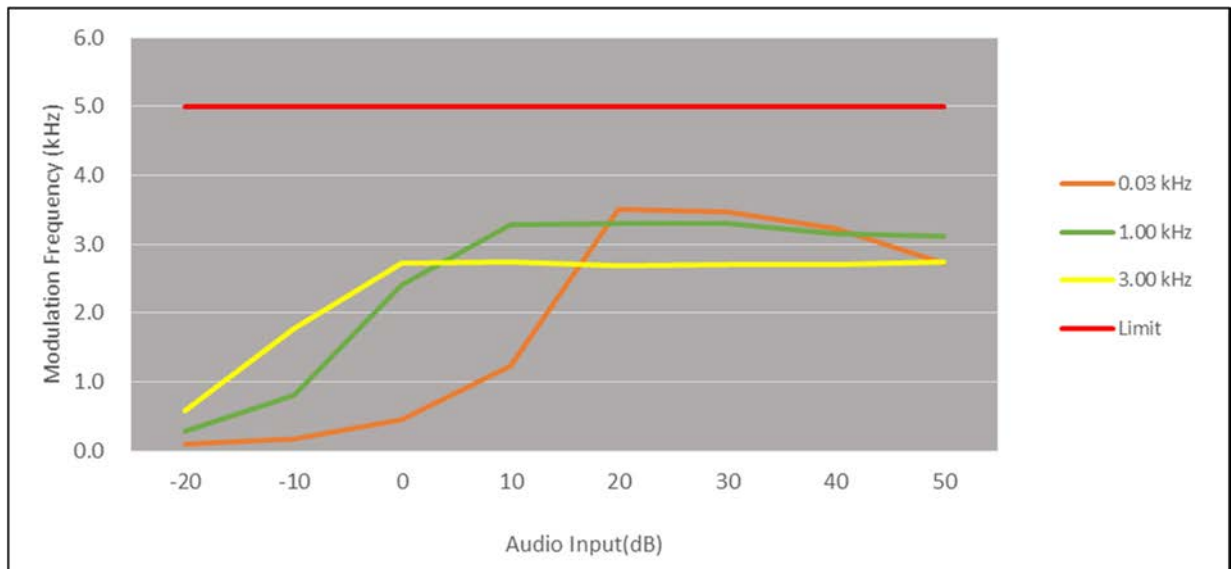


Positive Peaks

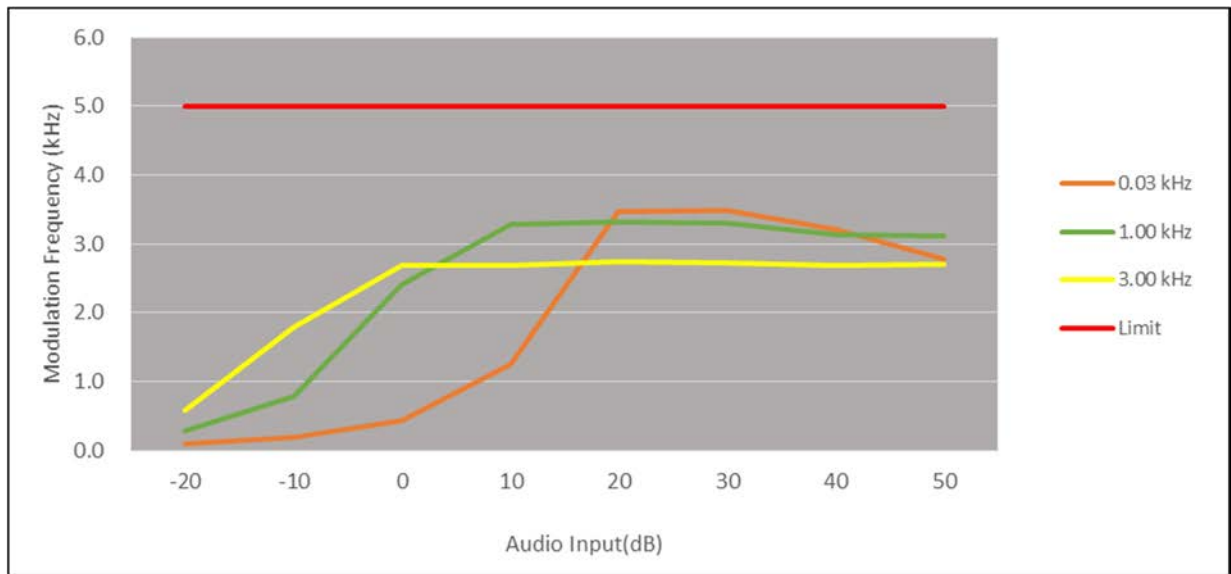
775.95 MHz



798.05 MHz

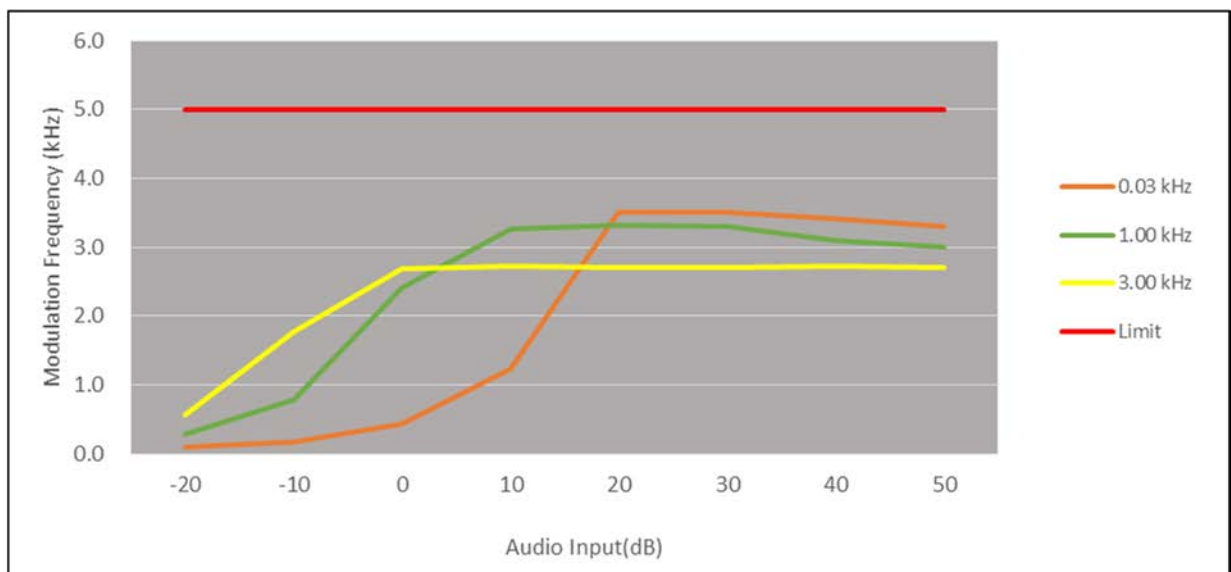


799.05 MHz

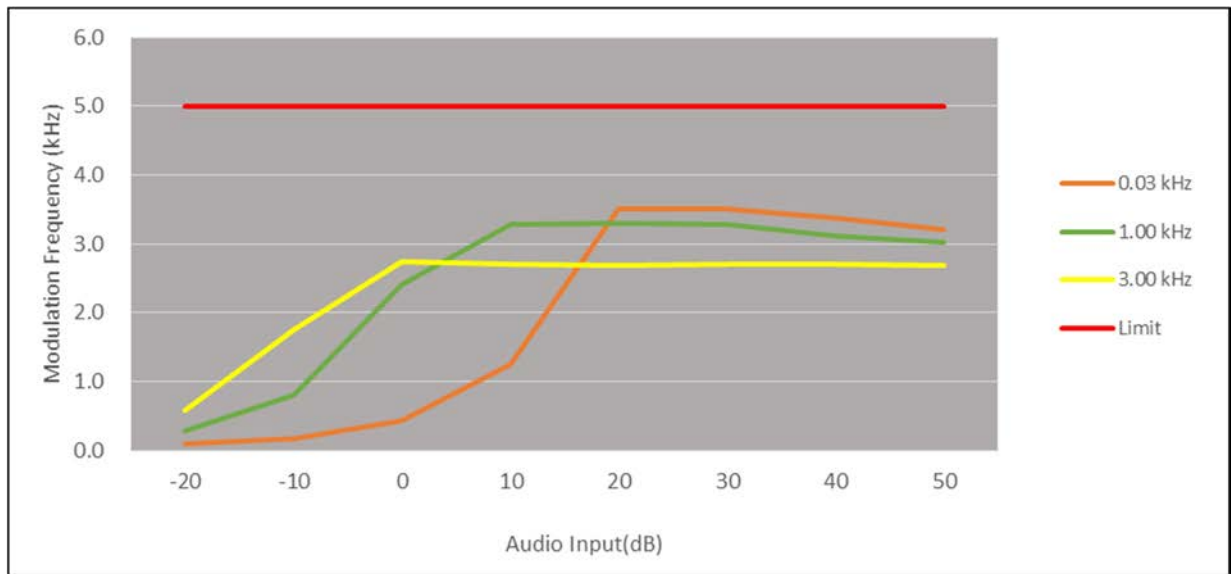


Negative Peaks

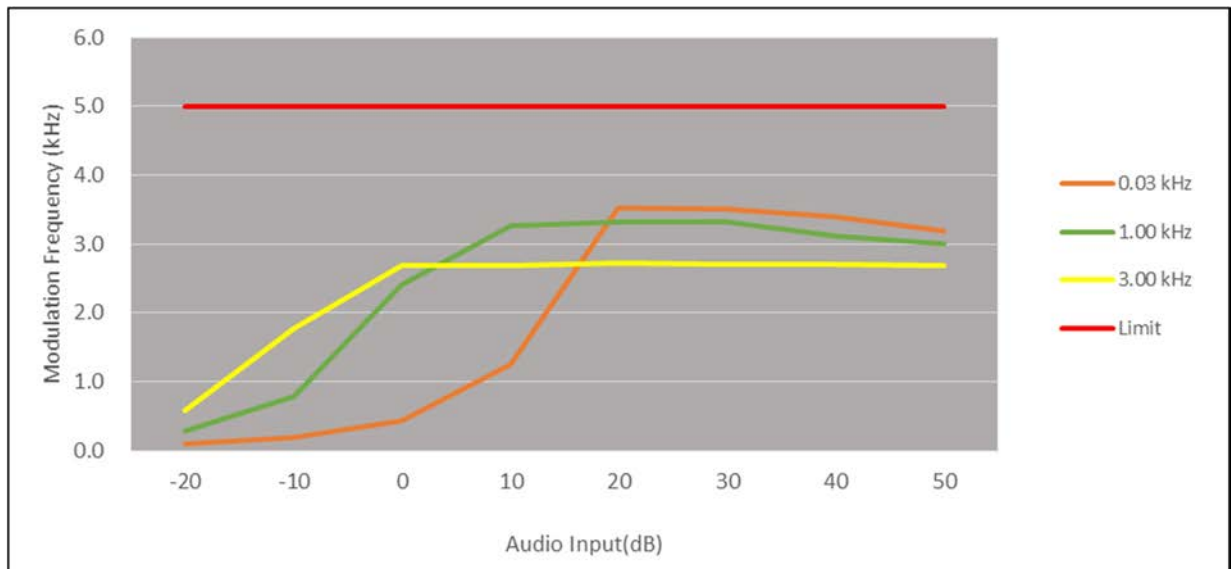
775.95 MHz



798.05 MHz

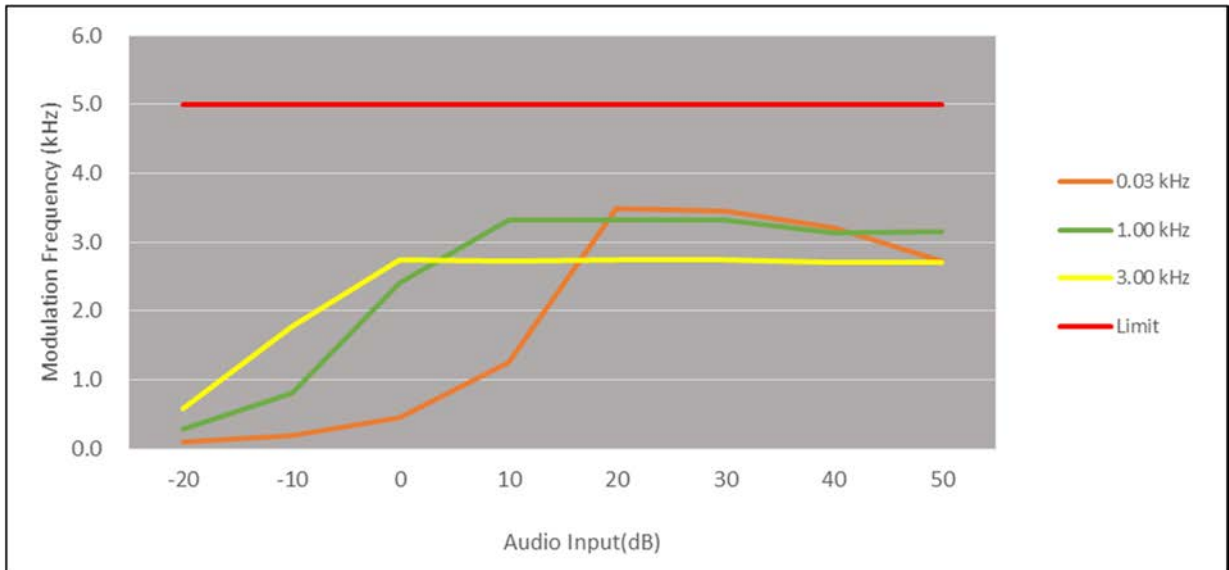


799.05 MHz

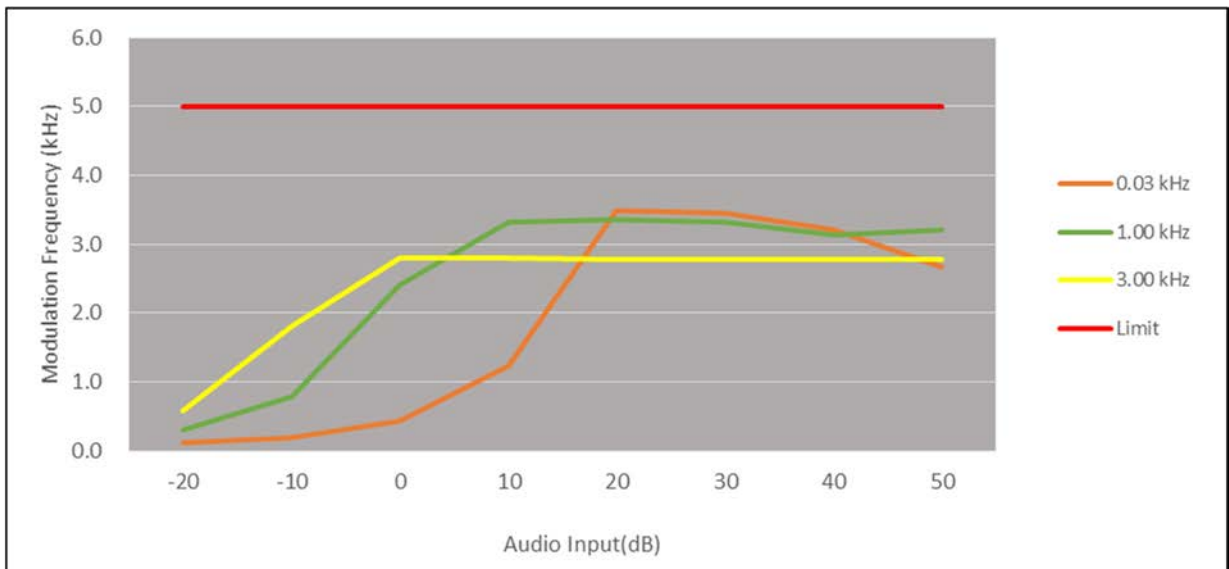


Positive Peaks

804.95 MHz

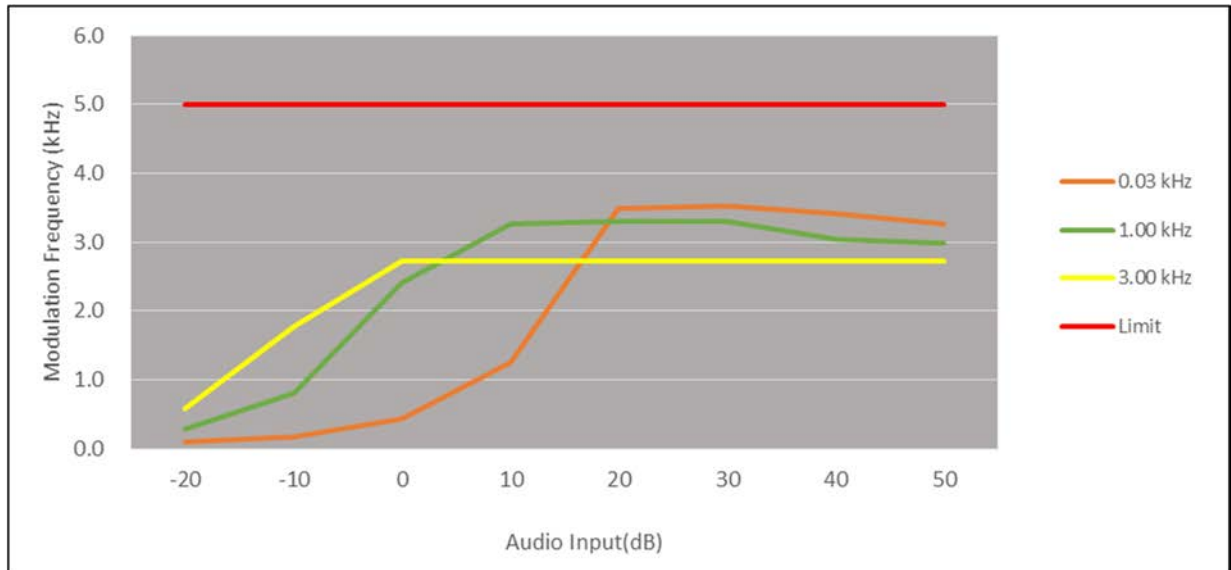


805.95 MHz

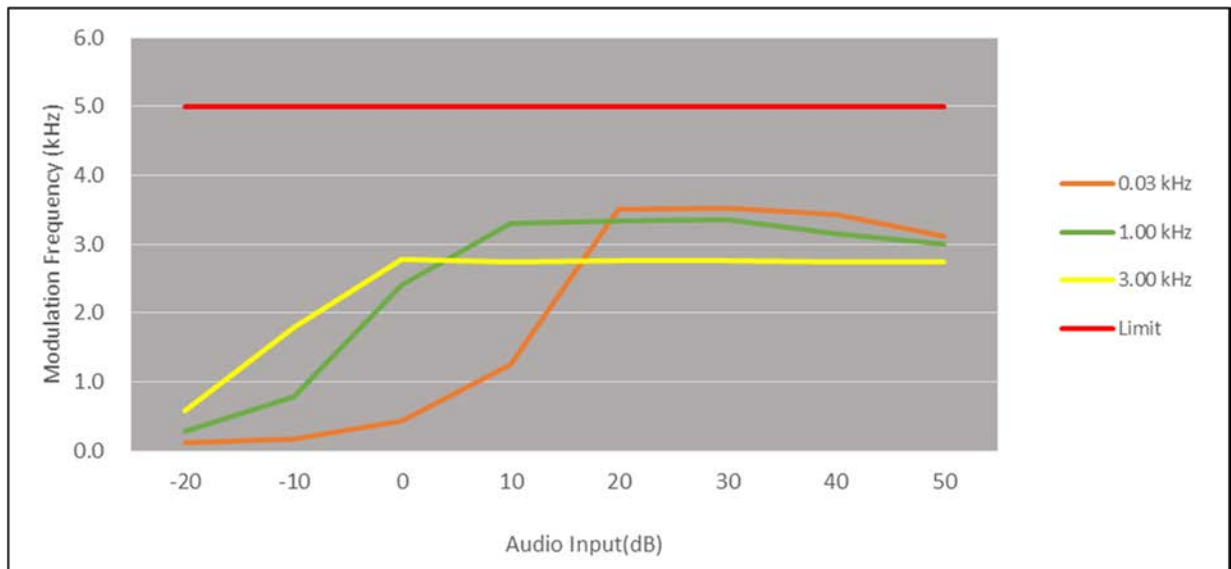


Negative Peaks

804.95 MHz

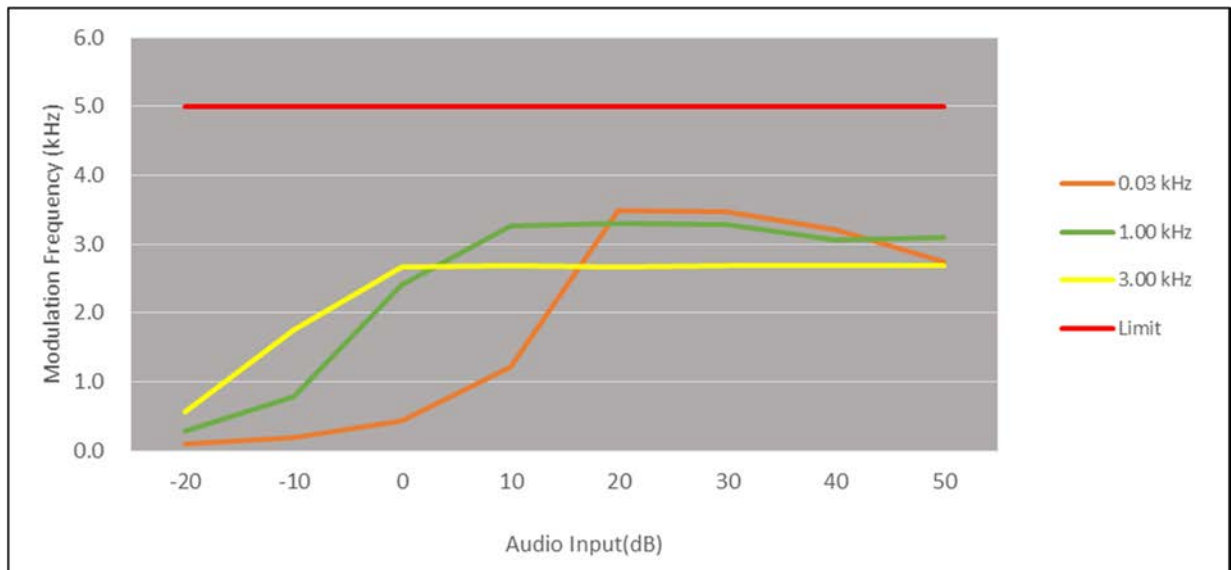


805.95 MHz

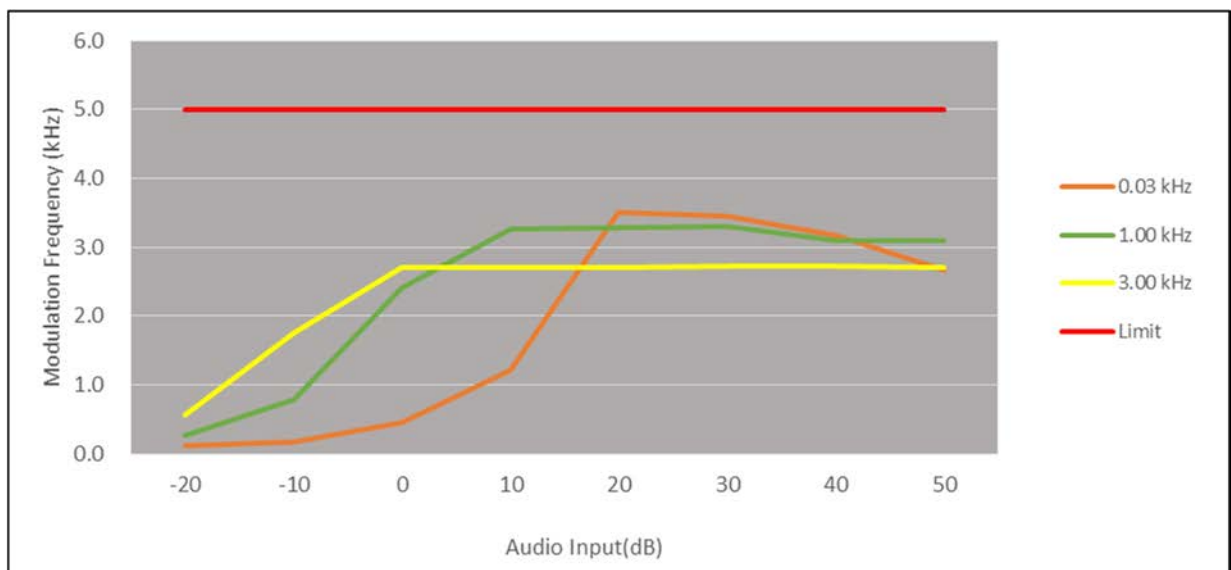


Positive Peaks

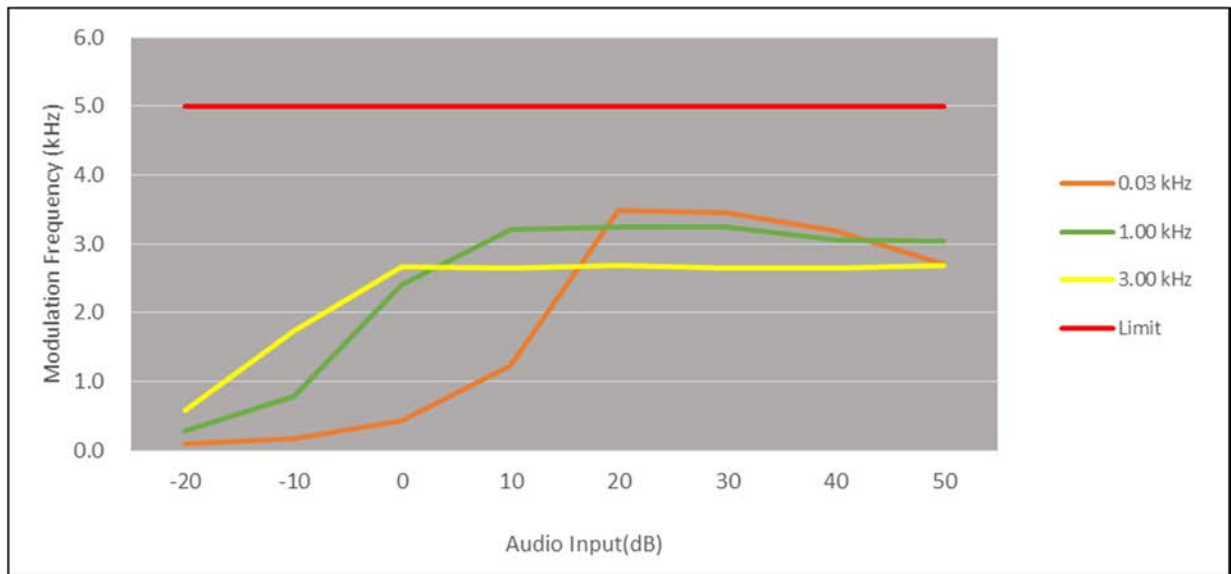
806.05 MHz



815.05 MHz

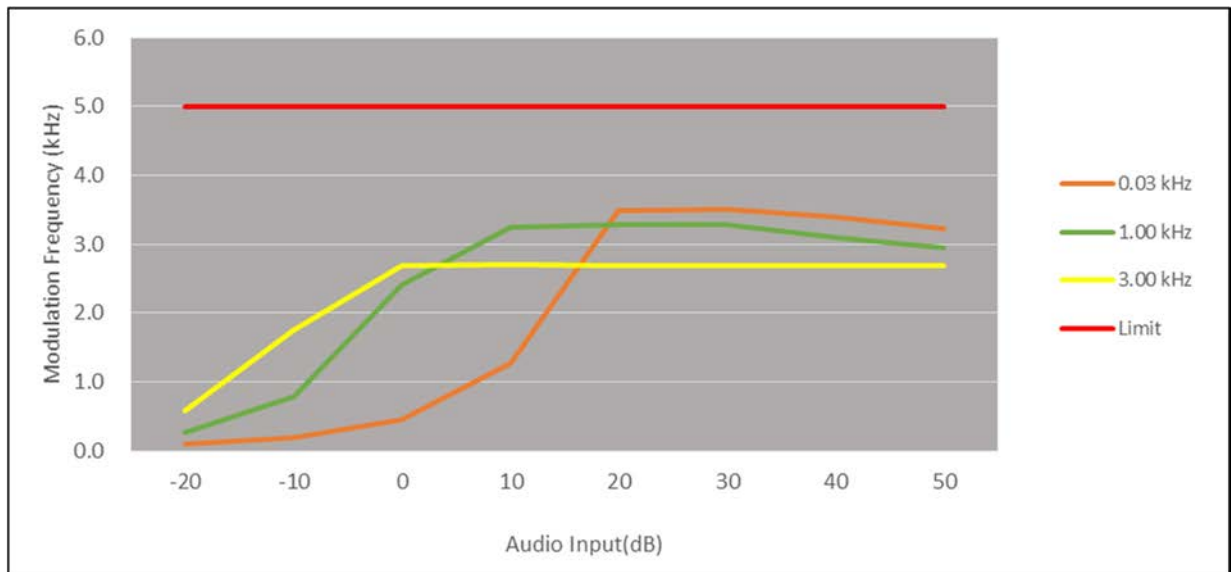


823.95 MHz

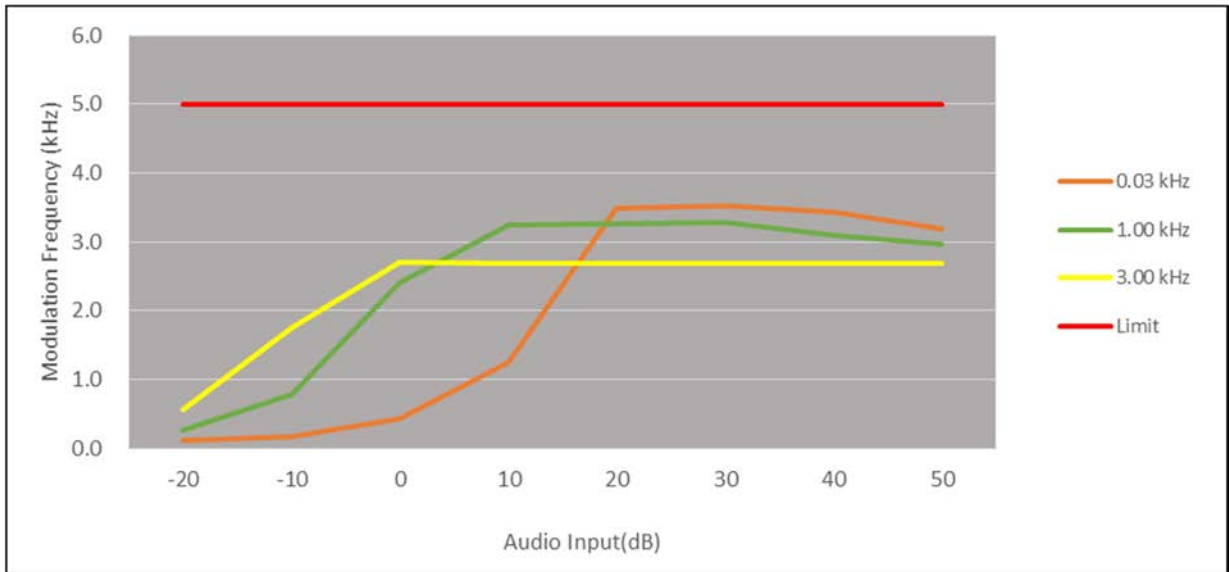


Negative Peaks

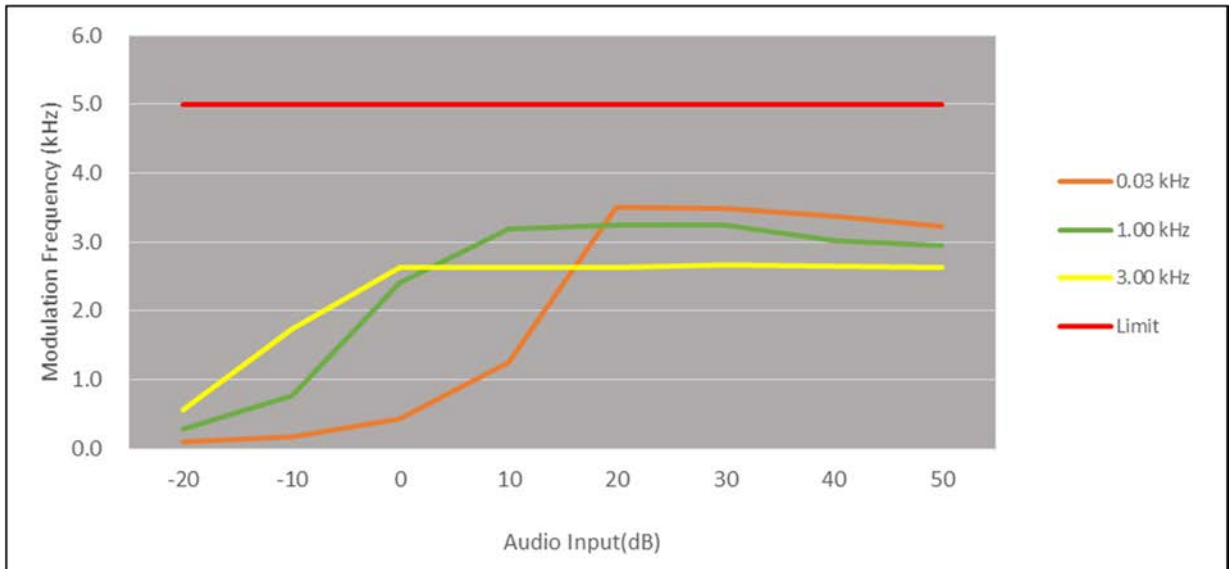
806.05 MHz



815.05 MHz

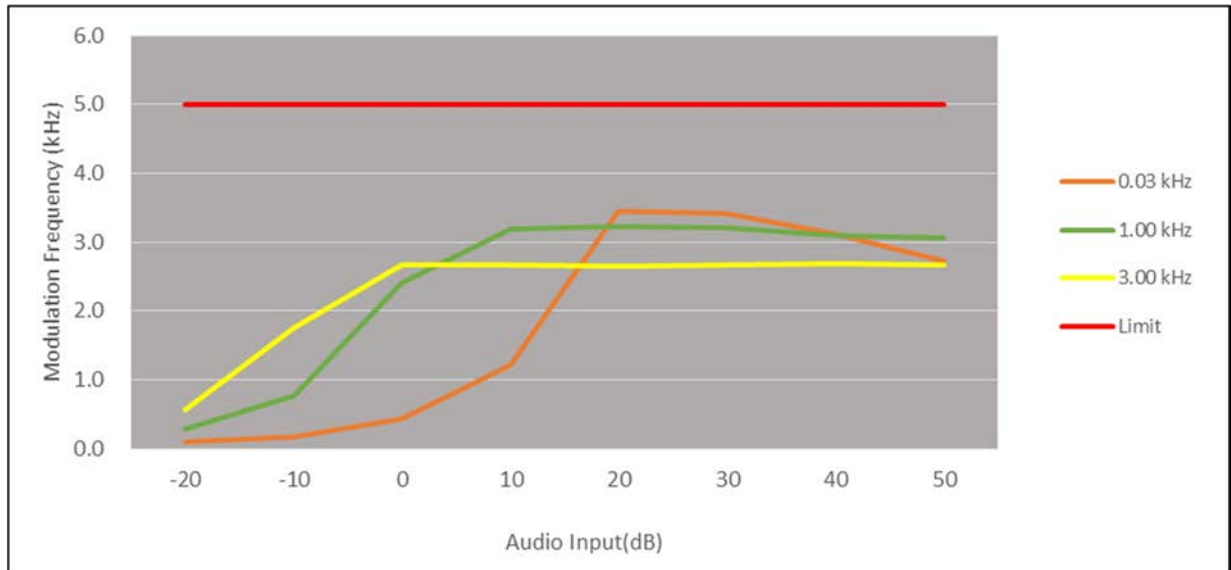


823.95 MHz



Positive Peaks

851.05 MHz



860.05 MHz

