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TEST REPORT

Report No. ..... :	**CHTEW20030032**	Report Verification:
Project No ..... :	**SHT1909084902EW**	
FCC ID ..... :	**K6630673X3D**	
Applicant's name ..... :	**YAESU MUSEN CO., LTD.**	
Address ..... :	Tennozu Parkside Building 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan	
Manufacturer..... :	VTech (Dongguan) Communications Limited	
Address..... :	Xia Ling Bei Management Zone, Liaobu,Dongguan, Guangdong, China	
Test item description ..... :	**25 Watt VHF/FM Marine Transceiver**	
Trade Mark..... :	STANDARD HORIZON	
Model/Type reference ..... :	GX2400GPS	
Listed Model(s)..... :	-	
Standard..... :	**FCC CFR Title 47 Part 80**	
Date of receipt of test sample……..:	Feb.18, 2020	
Date of testing……..……:	Feb.18, 2020- Mar.05, 2020	
Date of issue……..……...:	Mar.06, 2020	
Result ..... ……...:	**PASS**	

Compiled by (position+printed name+signature) .. :	File administrator Echo Wei	Echo Wei
Supervised by (position+printed name+signature) .. :	Project Engineer Xiaodong Zhao	Xiaodong Zhao
Approved by (position+printed name+signature) .. :	RF Manager Hans Hu	Hans HU

Testing Laboratory Name..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**
Address ..... :	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

- FCC Rules Part 80: Stations in The Maritime Services.
- FCC Rules Part 2: Frequency allocations and radio treaty matters; General rules and regulations
- ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
- ANSI/TIA-603-E(2016): Land Mobile FM or PM Communications Equipment and Performance Standards
- ANSI C63.4-2014: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

1.2. Report version information

Revision No.	Date of issue	Description
N/A	2020-03-06	Original

2. TEST DESCRIPTION

Report clause	Test Items	Standard Requirement	Result
5.1	Conducted Carrier Output Power	FCC Part 80.215 FCC Part 2.1046	PASS
5.2	99% Occupied Bandwidth&26dB bandwidth	FCC Part 80.205 FCC Part 2.1049	PASS
5.3	Modulation Limit	FCC Part 80.213 FCC Part 2.1047(b)	PASS
5.4	Audio Frequency Response	FCC Part 2.1047(a)	PASS
5.5	Audio Low Pass Filter Response	FCC Part 80.213 Part 2.1047(a)	PASS
5.6	Emission Mask	FCC Part 80.211(f) FCC Part 2.1049	PASS
5.7	Frequency Stability V.S. Temperature	FCC Part 80.209 Part 2.1055	PASS
5.8	Frequency Stability V.S. Voltage	FCC Part 80.209 Part 2.1055	PASS
5.9	Transmit Conducted Spurious Emission	FCC Part 80. 211(f)(3) FCC Part 2.1051	PASS
5.10	Transmitter Radiated Spurious Emission	FCC Part 80. 211(f)(3) FCC Part 2.1053	PASS

Note:

– The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	YAESU MUSEN CO., LTD.
Address:	Tennozu Parkside Building 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan
Manufacturer:	VTech (Dongguan) Communications Limited
Address:	Xia Ling Bei Management Zone, Liaobu,Dongguan, Guangdong, China

3.2. Product Description

Main unit		
Name of EUT:	25 Watt VHF/FM Marine Transceiver	
Trade mark:	STANDARD HORIZON	
Model/Type reference:	GX2400GPS	
Listed mode(s):	-	
Power supply:	DC 13.8V	
Test sample No.:	Conducted sample No.:	9A000001
	Radiated sample No.:	9A000002
Hardware version:	9A00	
Software version:	9A00	

3.3. Radio Specification Description

Support operation frequency Range:	TX: 156.025MHz to 161.600MHz RX: 156.050MHz to 162.025MHz	
Support type:	Analog	
Modulation type:	FM	
Channel Separation:	25kHz	
Emission Designator*[1]:	16K0G3E	
Rated power class:	☒ High Power: 25W	☒ Low Power: 1W
Antenna Type:	External	
Antenna Gain:	-	

Note:

(1) *[1] According to FCC Part 2.202 requirements, the Necessary Bandwidth is calculated as follows:

- For FM Voice Modulation

  Channel Spacing = 25 KHz, D = 5 KHz max, K = 1, M = 3 KHz

  Bn = 2M + 2DK = 2*3 + 2*5*1 = **16 KHz**

  Emission designation: 16K0G3E

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	
Qualifications	Type	Accreditation Number
	CNAS	L1225
	A2LA	3902.01
	FCC	762235
	Canada	5377A

4. TEST CONFIGURATION

4.1. Test frequency list

According to ANSI C63.26 section 5.1.2.1:

Measurements of transmitters shall be performed and, if required, reported for each frequency band in which the EUT can be operated with the device transmitting at the number of frequencies in each band specified in Table 2.

Frequency range over which EUT operates	Number of frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

Frequency Bands (MHz)	Test Channel	Test Frequency (MHz)	
		TX	RX
156.025~162.025	CH_L (CH60)	156.025	160.625
	CH_M(CH16)	156.800	156.800
	CH_H(CH88)	157.425	157.425

Note: The Product channel frequency table: USA Marine VHF Channels and Frequencies:

Channel	TX Frequency (MHz)	RX Frequency (MHz)	Channel	TX Frequency (MHz)	RX Frequency (MHz)
1	156.05	160.65	60	156.025	160.625
2	156.1	160.7	61	156.075	160.675
3	156.15	160.75	62	156.125	160.725
4	156.2	160.8	63	156.175	160.775
5	156.25	160.85	64	156.225	160.825
6	156.3	156.3	65	156.275	160.875
7	156.35	160.95	66	156.325	160.925
8	156.4	156.4	67	156.375	156.375
9	156.45	156.45	68	156.425	156.425
10	156.5	156.5	69	156.475	156.475
11	156.55	156.55	71	156.575	156.575
12	156.6	156.6	72	156.625	156.625
13	156.65	156.65	73	156.675	156.675
14	156.7	156.7	74	156.725	156.725
15	156.75	156.75	75	156.775	156.775
16	156.8	156.8	76	156.825	156.825
17	156.85	156.85	77	156.875	156.875
18	156.9	161.5	78	156.925	161.525
19	156.95	161.55	79	156.975	161.575
20	157	161.6	80	157.025	161.625
21	157.05	161.65	81	157.075	161.675
22	157.1	161.7	82	157.125	161.725
23	157.15	161.75	83	157.175	161.775
24	157.2	161.8	84	157.225	161.825
25	157.25	161.85	85	157.275	161.875
26	157.3	161.9	86	157.325	161.925
27	157.35	161.95	87	157.375	157.375
28	157.4	162	88	157.425	157.425

4.2. EUT operation mode

Test mode	Transmitting	Receiving	Power level		Analog Voice/FM
			High	Low	25kHz
TX-AWH	√		√		√
TX-AWL	√			√	√

√: is operation mode.

Modulation Type	Description
UM	Un-modulation
AM2	Apply a 1000 Hz tone and adjust the audio frequency generator to produce 20% of the rated system deviation.
AM6	Apply a 1000 Hz modulating signal to the transmitter from the audio frequency generator, and adjust the level to obtain 60% of full rated system deviation, then increase the level from the audio generator by 20 dB
AM5	Modulate the transmitter with a 2500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of rated system deviation.

Pre-scan above all test mode, found below test mode which it was worse case mode, so only show the test data for worse case mode on the test report.

Test item	Modulation Type	Test mode
Conducted Output Power	UM	TX-AWH, TX-AWL
99% Occupied Bandwidth & 26dB bandwidth	AM6	TX-AWH, TX-AWL
Emission Mask	AM5	TX-AWH, TX-AWL
Modulation Limit	AM6	TX-AWH
Audio Frequency Response	AM2	TX-AWH
Audio Low Pass Filter Response	AM2	TX-AWH
Frequency Stability VS Temperature	UM	TX-AWH, TX-AWL
Frequency Stability VS Voltage	UM	TX-AWH, TX-AWL
Transmit Conducted Spurious Emission	AM5	TX-AWH
Transmit Radiated Spurious Emission	AM5	TX-AWH

4.3. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
✓ No				
Item	Equipment	Trade Name	Model No.	Other specification
1				
2				

4.4. Testing environmental condition

Type	Requirement	Actual
Temperature:	15~35°C	25°C
Relative Humidity:	25~75%	50%
Air Pressure:	860~1060mbar	1000mbar
Test voltage:	Normal voltage:	DC 13.80V
	Extreme lower voltage:	DC 11.73V
	Extreme upper voltage:	DC 15.87V

4.5. Measurement uncertainty

Test Item	Measurement Uncertainty
Frequency stability	25 Hz
Carrier output power (ERP)	2.20 dB
Occupied Bandwidth	35 Hz
Modulation Limiting	0.42 %
FM deviation	25 Hz
Audio level	0.62 dB
Radiated Spurious Emission 30~1000MHz	4.65 dB
Radiated Spurious Emission 1~18GHz	5.16 dB
AC power line Conducted Emission 9KHz-30MHz	3.39 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.6. Equipment Used during the Test

● TS8613 Test system							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Spectrum Analyzer	Agilent	HTWE0286	N9020A	MY50510187	2019/10/26	2020/10/25
●	Signal & Spectrum Analyzer	R&S	HTWE0262	FSW26	103440	2019/10/26	2020/10/25
●	RF Communication Test Set	HP	HTWE0038	8920A	3813A10206	2019/10/26	2020/10/25
●	Digital intercom communication tester	Aeroflex	HTWE0255	3920B	1001682041	2019/10/26	2020/10/25
●	Signal Generator	R&S	HTWE0191	SML02	100507	2019/10/26	2020/10/25
●	RF Control Unit	Tonscend	HTWE0294	JS0806-2	N/A	N/A	N/A
●	Filter-VHF	Microwave	HTWE0309	N26460M1	498702	N/A	N/A
○	Filter-UHF	Microwave	HTWE0311	N25155M2	498704	N/A	N/A
○	Power Divider	Microwave	HTWE0043	OPD1040-N-4	N/A	2019/05/24	2020/05/23
●	Attenuator	JFW	HTWE0292	50FH-030-100	N/A	2019/05/18	2020/05/17
○	Attenuator	JFW	HTWE0293	50-A-MFN-20	0322	2019/05/18	2020/05/17
●	Test software	HTW	N/A	Radio ATE	N/A	N/A	N/A

● Auxiliary Equipment							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Climate chamber	ESPEC	HTWE0254	GPL-2	N/A	2019/10/23	2020/10/22
●	DC Power Supply	Gwinstek	HTWE0274	SPS-2415	GER835793	N/A	N/A

●	Radiated Spurious Emission						
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	N/A	2018/09/27	2021/09/26
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2019/10/26	2020/10/25
●	Loop Antenna	R&S	HTWE0170	HFH2-Z2	100020	2018/04/02	2021/04/01
●	Broadband Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2018/10/11	2021/10/11
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0123	VULB9163	538	2018/04/04	2021/04/03
●	Horn Antenna	SCHWARZBECK	HTWE0126	9120D	1011	2017/04/01	2020/03/31
●	Pre-amplifier	CD	HTWE0071	PAP-0102	12004	2019/11/14	2020/11/13
●	Broadband Preamplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2019/05/23	2020/05/22
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-01	6m 18GHz S Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-02	6m 3GHz RG Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-03	6m 3GHz RG Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-04	6m 3GHz RG Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0121-01	6m 18GHz S Serisa	N/A	2019/05/10	2020/05/09
●	EMI Test Software	Audix	N/A	E3	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Conducted Carrier Output Power

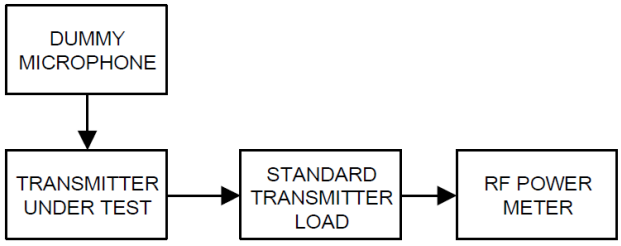
LIMIT

FCC Part 80.215(e)

(e) Ship stations frequencies above 27500 kHz. The maximum power must not exceed the values listed below.
(1) Ship stations 156-162 MHz—25W

(g) The carrier power of ship station radiotelephone transmitters, except portable transmitters, operating in the 156-162MHz band must be at least 8 but not more than 25 watts.
(1) All transmitters and remote control units must be capable of reducing the carrier power to one watt or less

TEST CONFIGURATION



TEST PROCEDURE

(1) Connect the equipment as illustrated
(2) Correct for all losses in the RF path
(3) Measure the transmitter output power
(4) If the power output is adjustable, measurements shall be made for the highest and lowest power levels.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix A on the appendix report

5.2. 99% Occupied Bandwidth & 26dB Bandwidth

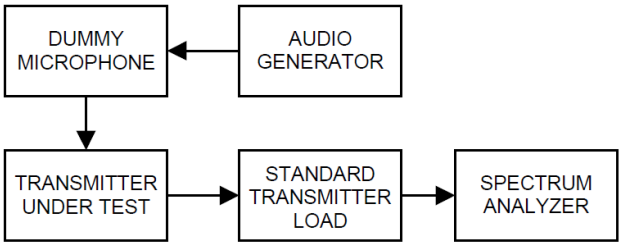
LIMIT

FCC Part 80.205

(a) An emission designator shows the necessary bandwidth for each class of emission of a station except that in ship earth stations it shows the occupied or necessary bandwidth, whichever is greater. The following table gives the class of emission and corresponding emission designator and authorized bandwidth:

Class of emission	Emission designator	Authorized bandwidth (kHz)
A1A	160HA1A	0.4
A1B[1]	160HA1B	0.4
A1D[12]	16K0A1D	20.0
A2A	2K66A2A	2.8
A2B[1]	2K66A2B	2.8
A2D[12]	16K0A2D	20.0
A3E	6K00A3E	8.0
A3N[2]	2K66A3N	2.8
A3X[3]	3K20A3X	25.0
F1B[4]	280HF1B	0.3
F1B[5]	300HF1B	0.5
F1B[6]	16KOF1B	20.0
F1C	2K80F1C	3.0
F1D[12]	16K0F1D	20.0
F2B[6]	16KOF2B	20.0
F2C[7]	16KOF2C	20.0
F2D[12]	16K0F2D	20.0
F3C	2K80F3C	3.0
F3C[7]	16KOF3C	20.0
F3E[8]	16KOF3E	20.0
F3N[9]	20MOF3N	20,000.0
G1D[12]	16K0G1D	20.0
G2D[12]	16K0G2D	20.0
G3D[10]	16KOG3D	20.0
G3E[8]	16KOG3E	20.0
G3N[3 13]	16KOG3N	20.0
H2A	1K40H2A	2.8
H2B[1]	1K40H2B	2.8
H3E[11]	2K80H3E	3.0
H3N	2K66H3N	2.8
J2A	160HJ2A	0.4
J2B[4]	280HJ2B	0.3
J2B[5]	300HJ2B	0.5
J2B	2K80J2B	3.0
J2C	2K80J2C	3.0
J2D[14]	2K80J2D	3.0
J3C	2K80J3C	3.0
J3E[11]	2K80J3E	3.0
J3N	160HJ3N	0.4
NON	NON	0.4
PON	([12])	([12])
R3E[11]	2K80R3E	3.0

TEST CONFIGURATION



TEST PROCEDURE

(1) Connect the equipment as illustrated

(2) Spectrum set as follow:

Centre frequency = the nominal EUT channel center frequency,

The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of 1.5 × OBW is sufficient)

RBW = 1% to 5% of the anticipated OBW, VBW ≥ 3 × RBW, Sweep = auto,

Detector function = peak, Trace = max hold

(3) Set 99% Occupied Bandwidth and 26dB Bandwidth

(4) Measure and record the results in the test report.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix B on the appendix report

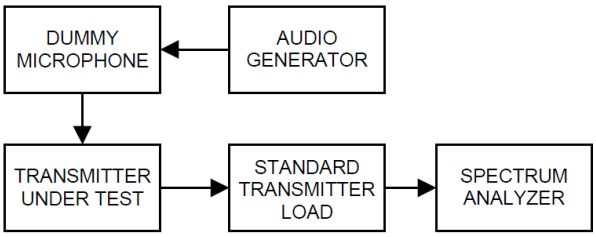
5.3. Emission Mask

LIMIT

FCC Part 80.211

(f) The mean power when using emissions other than those in paragraphs (a), (b), (c) and (d) of this section:
(1) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 dB;
(2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 dB; and
(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10 (mean power in watts) dB.

TEST CONFIGURATION



TEST PROCEDURE

1) Connect the equipment as illustrated.
2) Spectrum set as follow:
   Centre frequency= fundamental frequency, span=120kHz, RBW=300Hz, VBW=1000Hz, Sweep= auto, Detector function=peak, Trace=max hold.
3) Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line. This is the 0dB reference for the measurement.
4) Apply Input Modulation Signal to EUT according to Section 4.2
5) Measure and record the results in the test report.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix C on the appendix report

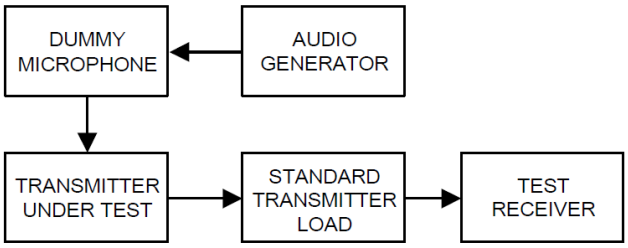
5.4. Modulation Limit

LIMIT

FCC Part 2.1047(b), FCC Part 80.213(d)

Ship and coast station transmitters operating in the 156-162 MHz and 216-220 bands must be capable of proper operation with a frequency deviation that does not exceed ±5 kHz when using any emission authorized by §80.207.

TEST CONFIGURATION



TEST PROCEDURE

1) Connect the equipment as illustrated.
2) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
3) Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤0.25 Hz to ≥15,000 Hz. Turn the de-emphasis function off.
4) Apply Input Modulation Signal to EUT according to Section 4.2 and vary the input level from –20 to +20dB.
5) Measure both the instantaneous and steady-state deviation at and after the time of increasing the audio input level
6) Repeat step 4-5 with input frequency changing to 300Hz,1004Hz,1500Hz and 2500Hz in sequence.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

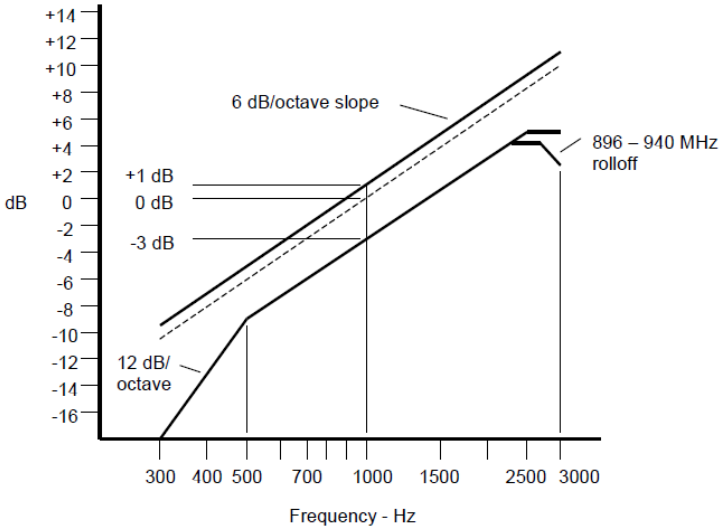
Please refer to appendix D on the appendix report

5.5. Audio Frequency Response

LIMIT

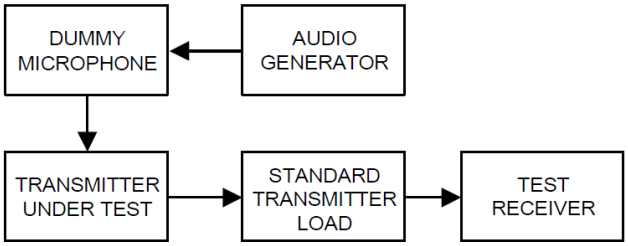
FCC Part 2.1047(a):

Voice modulated communication equipment. A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.



An additional 6 dB per octave attenuation is allowed from 2500 Hz to 3000 Hz in equipment operating in the 25 MHz to 869 MHz range.

TEST CONFIGURATION



TEST PROCEDURE

1) Connect the equipment as illustrated.
2) Set the test receiver to measure peak positive deviation. Set the audio bandwidth for 50 Hz to 15,000 Hz. Turn the de-emphasis function off.
3) Set the DMM to measure rms voltage.
4) Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
5) Apply Input Modulation Signal to EUT according to Section 4.2
6) Set the test receiver to measure rms deviation and record the deviation reading.
7) Record the DMM reading as V_{REF} .
8) Set the audio frequency generator to the desired test frequency between 300 Hz and 3000 Hz.
9) Vary the audio frequency generator output level until the deviation reading that was recorded in step 6) is obtained.
10) Record the DMM reading as V_{FREQ}
11) Calculate the audio frequency response at the present frequency as: audio frequency response=$20\log_{10}$ (V_{FREQ}/V_{REF}).
12) Repeat steps 8) through 11) for all the desired test frequencies

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

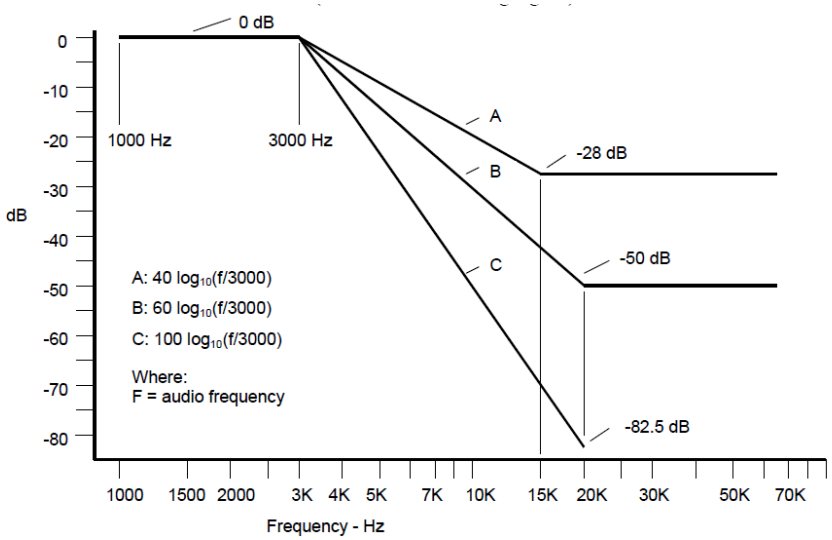
Please refer to appendix E on the appendix report

5.6. Audio Low Pass Filter Response

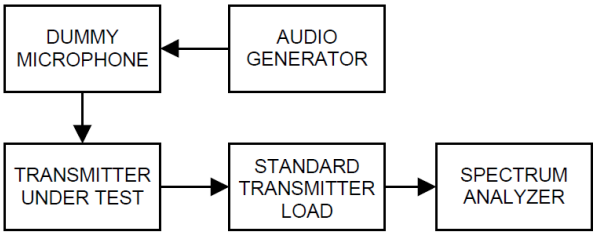
LIMIT

FCC Part 2.1047(b), FCC Part 80.213(e)

Coast station transmitters operated in the 156-162 MHz band must be equipped with an audio low-pass filter. The filter must be installed between the modulation limiter and the modulated radio frequency stage. At frequencies between 3 kHz and 20 kHz it must have an attenuation greater than at 1 kHz by at least 60log10(f/3) dB where "f" is the audio frequency in kilohertz. At frequencies above 20 kHz the attenuation must be at least 50 dB greater than at 1 kHz.



TEST CONFIGURATION



TEST PROCEDURE

1) Configure the EUT as shown in figure .
2) Apply a 1000 Hz tone from the audio signal generator and adjust the level per manufacturer's specifications. Record the dB level of the 1000 Hz tone as LEV_{REF}.
3) Set the audio signal generator to the desired test frequency between 3000 Hz and the upper low pass filter limit. Record the dB level at the test frequency as $LEV_{FREQ.}$
4) Calculate the audio frequency response at the test frequency as:
low pass filter response = LEV_{FREQ} - LEV_{REF}

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix F on the appendix report

5.7. Frequency stability VS Temperature

LIMIT

FCC Part 80.209(a):

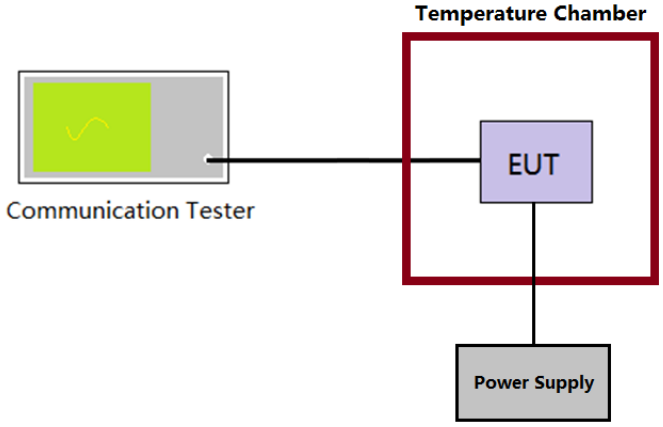
The frequency tolerance requirements applicable to transmitters in the maritime services are shown in the following table. Tolerances are given as parts in 10^6 unless shown in Hz.

Frequency bands and categories of stations	Tolerances[1]
(5) Band 156-162 MHz:	
(i) Coast stations:	
For carriers licensed to operate with a carrier power:	
Below 3 watts	10.
3 to 100 watts	5.[7]
(ii) Ship stations	10.[4]
(iii) Survival craft stations operating on 121.500 MHz	50.
(iv) EPIRBs:	
Operating on 121.500 and 243.000 MHz	50.
Operating on 156.750 and 156.800 MHz.[6]	10.
(6) Band 216-220 MHz:	
(i) Coast stations:	
For all emissions	5.
(ii) Ship stations:	
For all emissions	5.
(7) Band 400-466 MHz:	
(i) EPIRBs operating on 406-406.1 MHz	5.
(ii) On-board stations	5.
(iii) Radiolocation and telecommand stations.	5.
(8) Band 1626.5-1646.5 MHz:	
(i) Ship earth stations	5.

[4]For transmitters in the radiolocation and associated telecommand service operating on 154.584 MHz, 159.480 MHz, 160.725 MHz and 160.785 MHz the frequency tolerance is 15 parts in 10^6.

[7]For transmitters operated at private coast stations with antenna heights less than 6 meters (20 feet) above ground and output power of 25 watts or less the frequency tolerance is 10 parts in 10^6.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT output port was connected to communication tester.
2. The EUT was placed inside the temperature chamber.
3. Turn EUT off and set the chamber temperature to –30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency as MCF_{MHz}.
4. Calculate the ppm frequency error by the following:
   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
5. Repeat step 3 measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix G on the appendix report

5.8. Frequency stability VS Voltage

LIMIT

FCC Part 80.209(a):

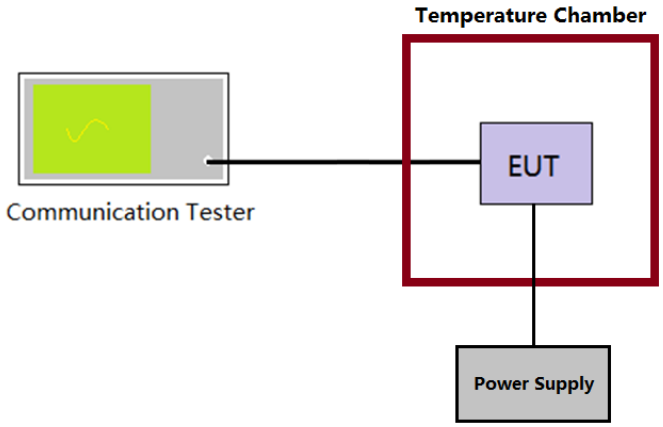
The frequency tolerance requirements applicable to transmitters in the maritime services are shown in the following table. Tolerances are given as parts in 10^6 unless shown in Hz.

Frequency bands and categories of stations	Tolerances[1]
(5) Band 156-162 MHz:	
(i) Coast stations:	
For carriers licensed to operate with a carrier power:	
Below 3 watts	10.
3 to 100 watts	5.[7]
(ii) Ship stations	10.[4]
(iii) Survival craft stations operating on 121.500 MHz	50.
(iv) EPIRBs:	
Operating on 121.500 and 243.000 MHz	50.
Operating on 156.750 and 156.800 MHz.[6]	10.
(6) Band 216-220 MHz:	
(i) Coast stations:	
For all emissions	5.
(ii) Ship stations:	
For all emissions	5.
(7) Band 400-466 MHz:	
(i) EPIRBs operating on 406-406.1 MHz	5.
(ii) On-board stations	5.
(iii) Radiolocation and telecommand stations.	5.
(8) Band 1626.5-1646.5 MHz:	
(i) Ship earth stations	5.

[4]For transmitters in the radiolocation and associated telecommand service operating on 154.584 MHz, 159.480 MHz, 160.725 MHz and 160.785 MHz the frequency tolerance is 15 parts in 10^6.

[7]For transmitters operated at private coast stations with antenna heights less than 6 meters (20 feet) above ground and output power of 25 watts or less the frequency tolerance is 10 parts in 10^6.

TEST CONFIGURATION



TEST PROCEDURE

1) The EUT output port was connected to communication tester.
2) The EUT was placed inside the temperature chamber at 25°C
3) Record the carrier frequency of the transmitter as MCF_{MHZ}
4) Calculate the ppm frequency error by the following:
   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
5) Repeat step 3 measure with varied ±15% of the nominal value measured at the input to the EUT

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix H on the appendix report

5.9. Transmit Conducted Spurious Emission

LIMIT

FCC Part 80.211(f)(3)

On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10 (mean power in watts) dB.

Note: In general, the worse case attenuation requirement shown above was applied.

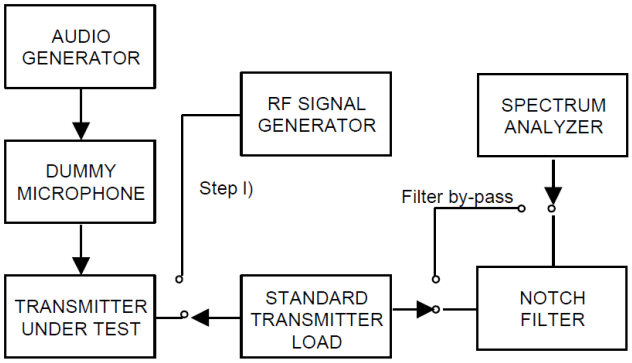
Calculation: Limit (dBm) =EL-43-10log10 (TP)

EL is the emission level of the Output Power expressed in dBm,

In this application, the EL is P(dBm)

Limit (dBm) = P(dBm)-43-10 log (Pwatts) = -13dBm

TEST CONFIGURATION



TEST PROCEDURE

1) Connect the equipment as illustrated, with the notch filter by-passed.
2) Apply Input Modulation Signal to EUT according to Section 4.2
3) Adjust the spectrum analyzer for the following settings:
   Below 1GHz: RBW=100kHz, VBW=300kHz, Above 1GHz: RBW=1MHz, VBW=3MHz
   Detector=Peak, Sweep time=Auto, Trace=Max hold
4) Scan frequency range up to 10th harmonic.
5) Record the frequencies and levels of spurious emissions.

TEST MODE

Please reference to the section 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix I on the appendix report

5.10. Transmitter Radiated Spurious Emission

LIMIT

FCC Part 80.211(f)(3)

On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10 (mean power in watts) dB.

Note: In general, the worse case attenuation requirement shown above was applied.

Calculation: Limit (dBm) =EL-43-10log10 (TP)

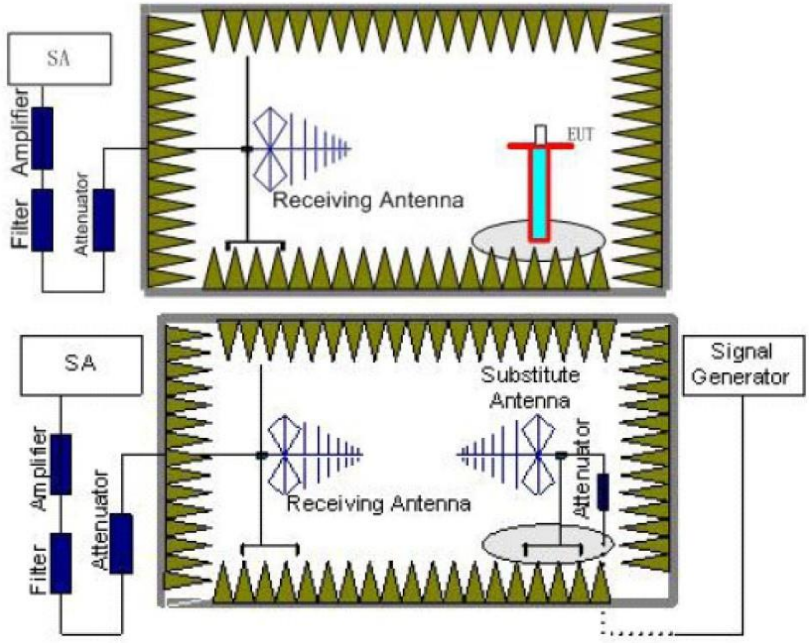
EL is the emission level of the Output Power expressed in dBm,

In this application, the EL is P(dBm)

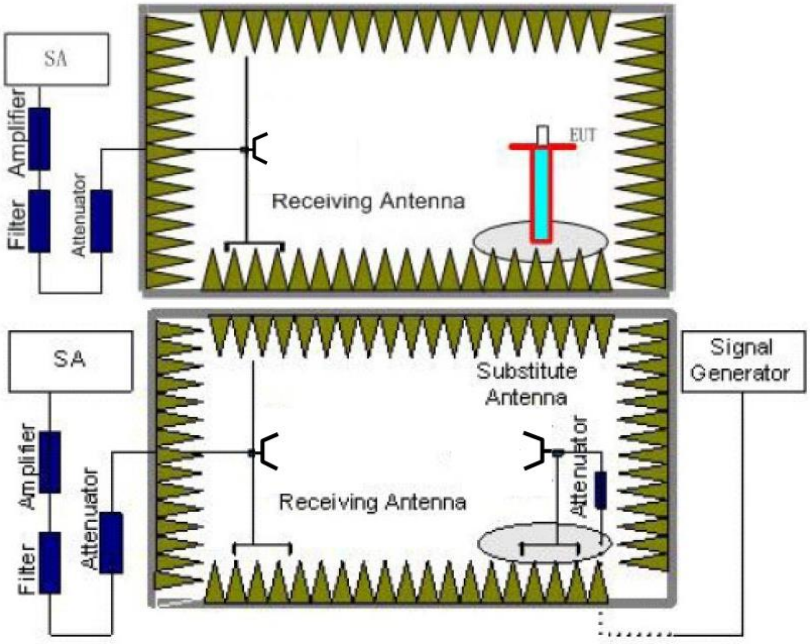
Limit (dBm) = P(dBm)-43-10 log (Pwatts) = -13dBm

TEST CONFIGURATION

Below 1GHz:



Above 1GHz:



TEST PROCEDURE

1. Standard Transmitter Load with a 50Ω input impedance and an output impedance matched to the test equipment.
2. EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1. 0 m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in six channels were measured with peak detector.
3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
   The measurement results are obtained as described below:
   Power(EIRP)=PMea- PAg - Pcl - Ga
   We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below:
   Power(EIRP)=PMea- Pcl - Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
8. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

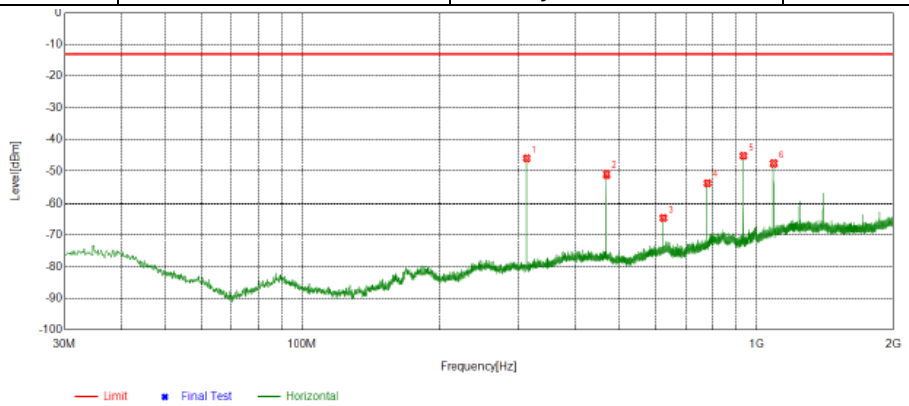
TEST MODE

Please reference to the section 4.2

TEST RESULTS

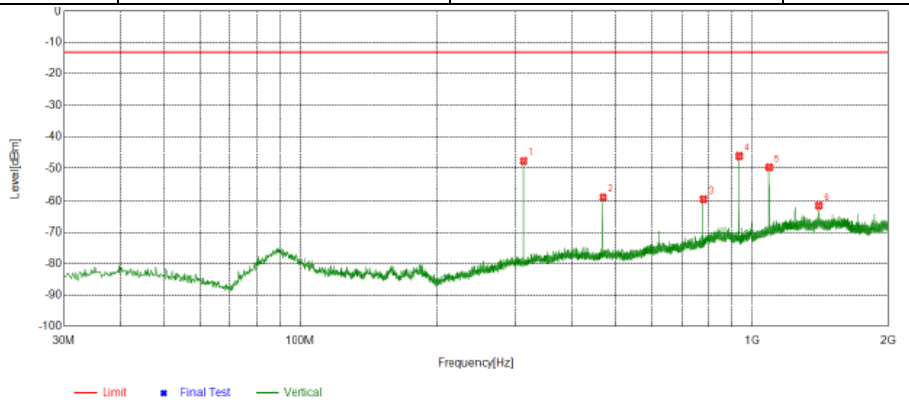
☒ **Passed** ☐ **Not Applicable**

TX-AWH			
Test Frequency:	CH_L	Polarity:	Horizontal



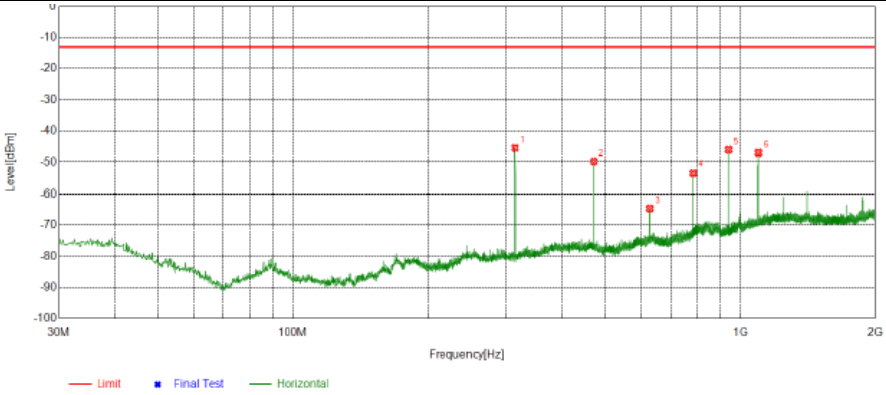
NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	312.0628	-47.14	1.03	-46.11	-13.00	33.11	Horizontal	PK
2	468.1310	-54.87	3.98	-50.89	-13.00	37.89	Horizontal	PK
3	624.0780	-70.90	6.45	-64.45	-13.00	51.45	Horizontal	PK
4	780.1463	-62.50	9.03	-53.47	-13.00	40.47	Horizontal	PK
5	936.2145	-54.86	9.57	-45.29	-13.00	32.29	Horizontal	PK
6	1092.125	-50.15	2.50	-47.65	-13.00	34.65	Horizontal	PK

Test Frequency:	CH_L	Polarity:	Vertical



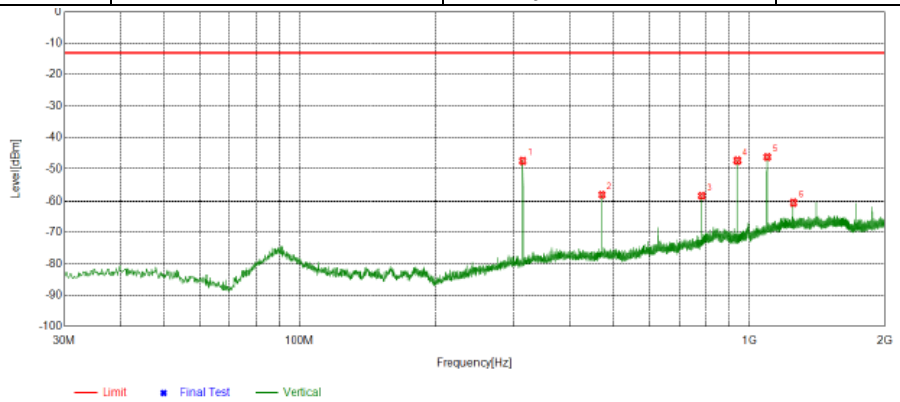
NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	312.0628	-49.24	1.61	-47.63	-13.00	34.63	Vertical	PK
2	468.1310	-62.38	3.69	-58.69	-13.00	45.69	Vertical	PK
3	780.1463	-67.86	8.53	-59.33	-13.00	46.33	Vertical	PK
4	936.2145	-55.51	9.41	-46.10	-13.00	33.10	Vertical	PK
5	1092.125	-52.01	2.36	-49.65	-13.00	36.65	Vertical	PK
6	1404.375	-67.69	6.28	-61.41	-13.00	48.41	Vertical	PK

TX-AWH			
Test Frequency:	CH_M	Polarity:	Horizontal



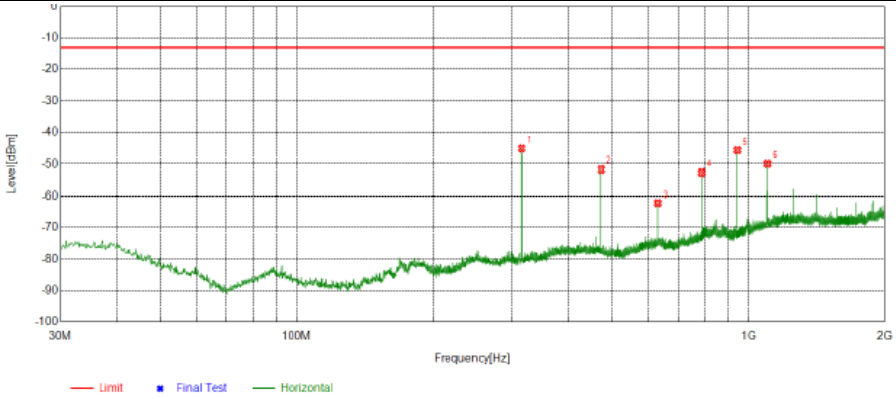
NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	313.6392	-46.62	1.08	-45.54	-13.00	32.54	Horizontal	PK
2	470.4351	-53.76	3.95	-49.81	-13.00	36.81	Horizontal	PK
3	627.2309	-71.08	6.54	-64.54	-13.00	51.54	Horizontal	PK
4	784.0268	-62.32	9.16	-53.16	-13.00	40.16	Horizontal	PK
5	940.8226	-55.77	9.67	-46.10	-13.00	33.10	Horizontal	PK
6	1097.500	-49.68	2.62	-47.06	-13.00	34.06	Horizontal	PK

Test Frequency:	CH_M	Polarity:	Vertical



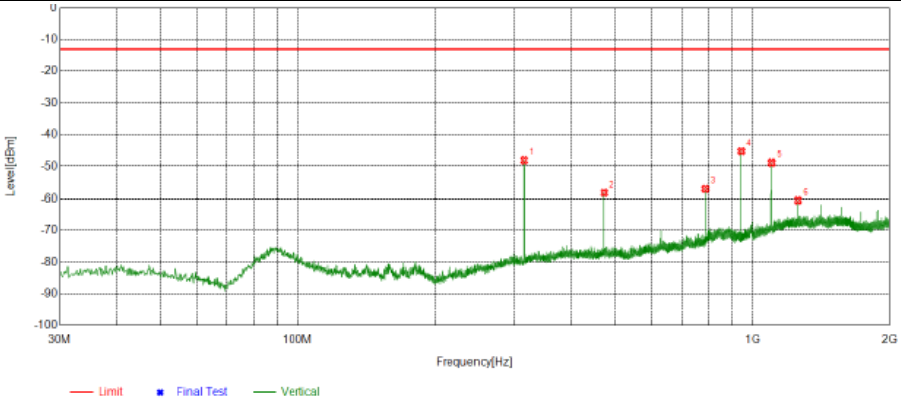
NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	313.6392	-49.21	1.67	-47.54	-13.00	34.54	Vertical	PK
2	470.4351	-61.80	3.83	-57.97	-13.00	44.97	Vertical	PK
3	784.0268	-66.97	8.67	-58.30	-13.00	45.30	Vertical	PK
4	940.8226	-56.81	9.38	-47.43	-13.00	34.43	Vertical	PK
5	1097.500	-48.88	2.50	-46.38	-13.00	33.38	Vertical	PK
6	1254.375	-65.60	5.17	-60.43	-13.00	47.43	Vertical	PK

TX-AWH			
Test Frequency:	CH_H	Polarity:	Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	314.8519	-46.31	1.11	-45.20	-13.00	32.20	Horizontal	PK
2	472.2540	-55.52	3.93	-51.59	-13.00	38.59	Horizontal	PK
3	629.7775	-68.69	6.60	-62.09	-13.00	49.09	Horizontal	PK
4	787.1796	-61.84	9.28	-52.56	-13.00	39.56	Horizontal	PK
5	944.5818	-55.62	9.87	-45.75	-13.00	32.75	Horizontal	PK
6	1102.000	-52.65	2.72	-49.93	-13.00	36.93	Horizontal	PK

Test Frequency:	CH_H	Polarity:	Vertical



NO.	Freq. [MHz]	Reading [dBm]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity	Detector
1	314.8519	-49.89	1.71	-48.18	-13.00	35.18	Vertical	PK
2	472.2540	-61.97	3.94	-58.03	-13.00	45.03	Vertical	PK
3	787.1796	-65.58	8.79	-56.79	-13.00	43.79	Vertical	PK
4	944.5818	-54.94	9.59	-45.35	-13.00	32.35	Vertical	PK
5	1102.000	-51.54	2.60	-48.94	-13.00	35.94	Vertical	PK
6	1259.375	-65.63	5.21	-60.42	-13.00	47.42	Vertical	PK

6. APPENDIX REPORT

Project No.	SHT1909084902EW		
Test sample No.	YPHT19090849002	Model No.	GX2400GPS
Start test date	2020/3/2	Finish date	2020/3/3
Temperature	22.8℃	Humidity	50%
Test Engineer	Gaosheng. Pan	Auditor	William. wang

Appendix clause	Test Item	Test date (M/D)	Test Result (PASS/FAIL)
A	Maximum Transmitter Power	2020/3/3	PASS
B	Occupied Bandwidth	2020/3/3	PASS
C	Emission Mask	2020/3/3	PASS
D	Modulation Limit	2020/3/3	PASS
E	Aduio Frequency Response	2020/3/3	PASS
F	Audio Low Pass Filter Response	2020/3/3	PASS
G	Frequency Stability Test & Temperature	2020/3/3	PASS
H	Frequency Stability Test & Voltage	2020/3/3	PASS
I	Spurious Emission On Antenna Port	2020/3/3	PASS

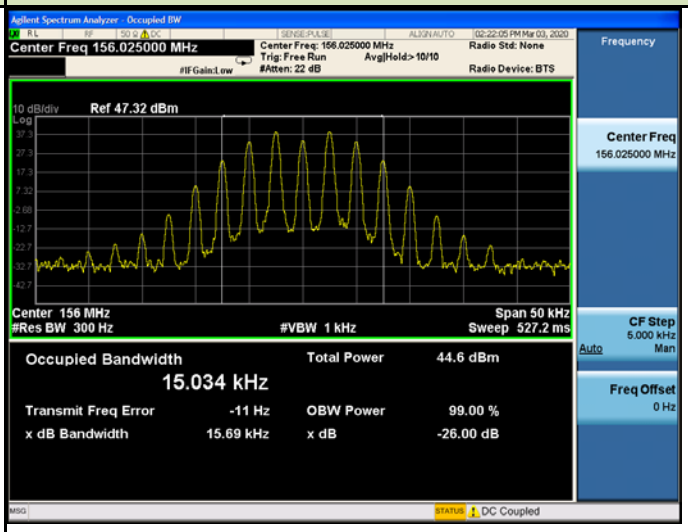
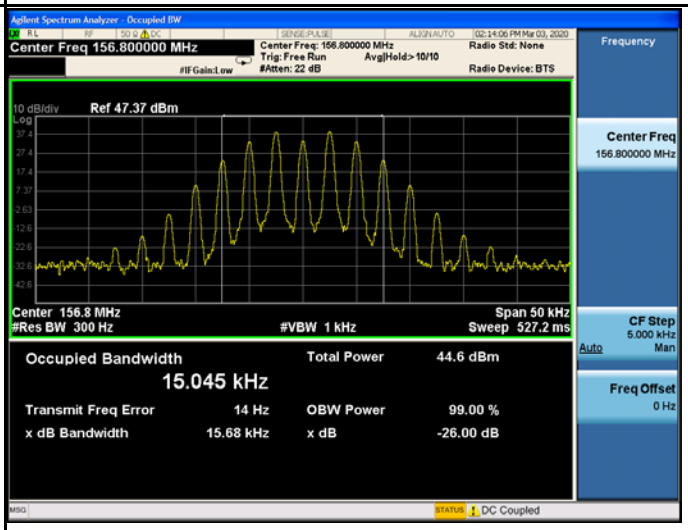
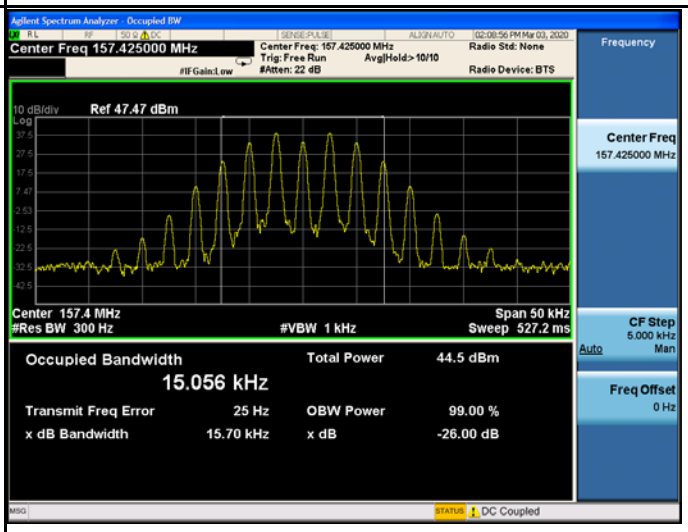
Appendix A:Maximum Transmitter Power

Operation Mode	Modulation Type	Test Channel	Measured Power(dBm)	Measured Power(W)	Limit(W)	Result
TX-AWH	FM	CH_L	43.79	23.90	25	PASS
TX-AWH	FM	CH_M	43.78	23.90	25	PASS
TX-AWH	FM	CH_H	43.77	23.80	25	PASS
TX-AWL	FM	CH_L	29.08	0.81	1	PASS
TX-AWL	FM	CH_M	29.10	0.81	1	PASS
TX-AWL	FM	CH_H	29.05	0.80	1	PASS

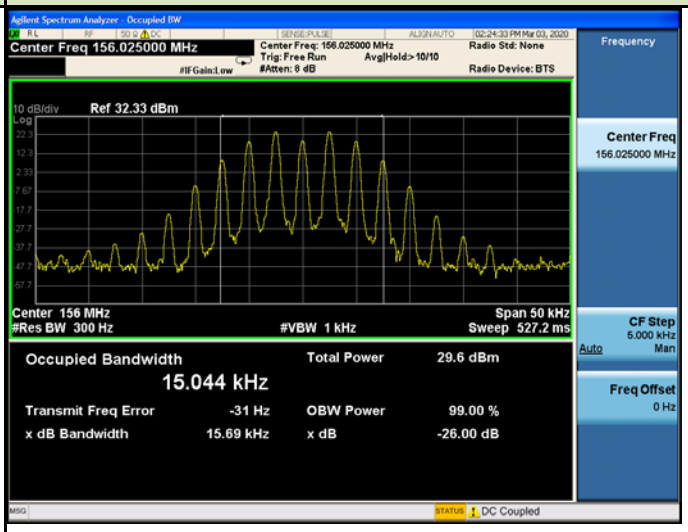
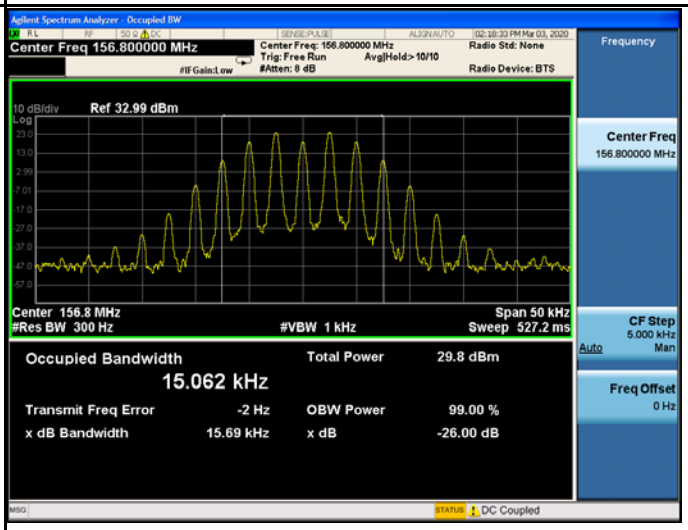
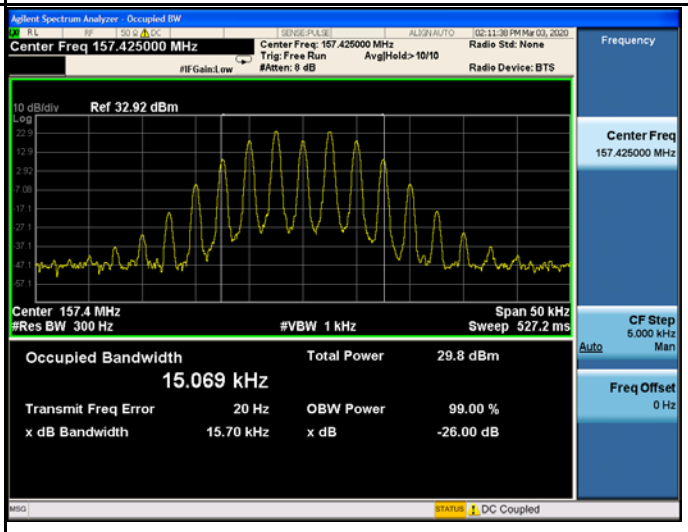
Appendix B:Occupied Bandwidth

Operation Mode	Modulation Type	Test Channel	Occupied Bandwidth		99% Limit(kHz)	Result
			99%(kHz)	26dB(kHz)		
TX-AWH	FM	CH_L	15.034	15.69	⩽20	PASS
TX-AWH	FM	CH_M	15.045	15.68	⩽20	PASS
TX-AWH	FM	CH_H	15.056	15.70	⩽20	PASS
TX-AWL	FM	CH_L	15.044	15.69	⩽20	PASS
TX-AWL	FM	CH_M	15.062	15.69	⩽20	PASS
TX-AWL	FM	CH_H	15.069	15.70	⩽20	PASS

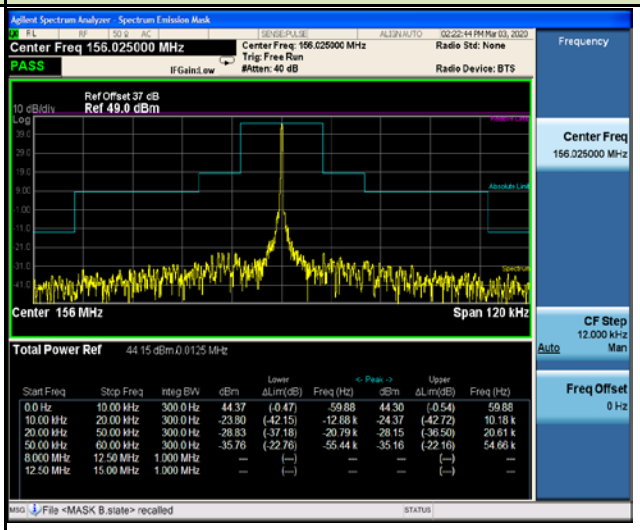
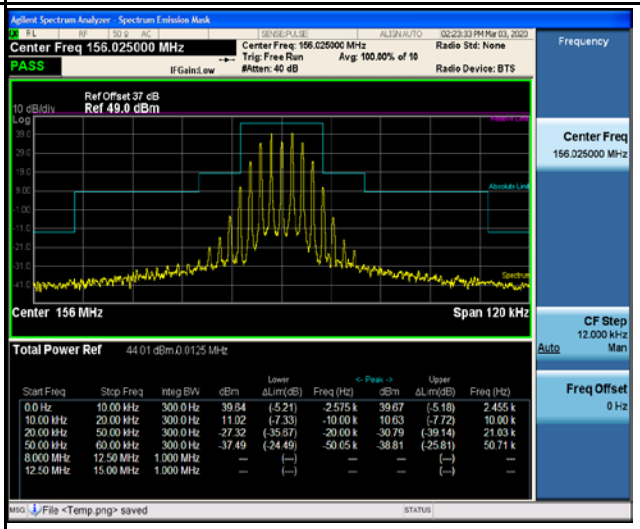
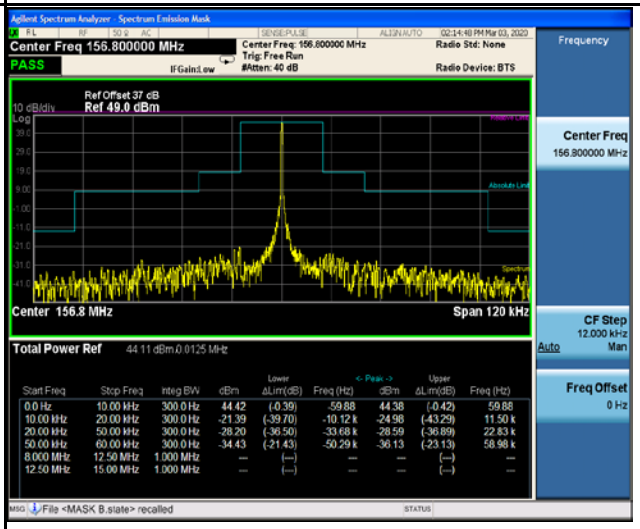
Appendix B:Occupied Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_L	
TX-AWH	FM	CH_M	
TX-AWH	FM	CH_H	

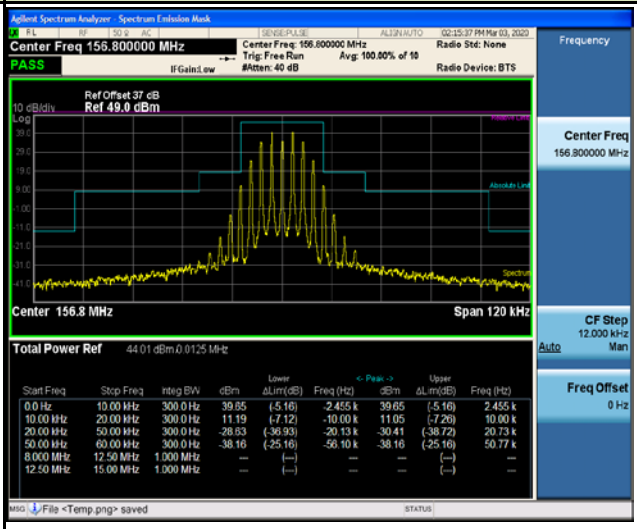
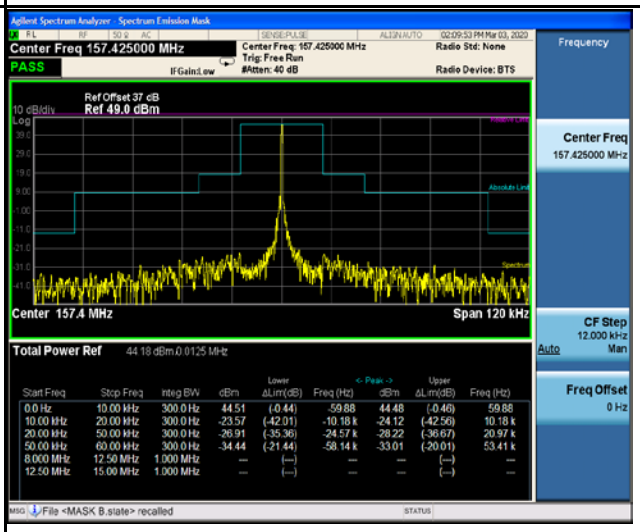
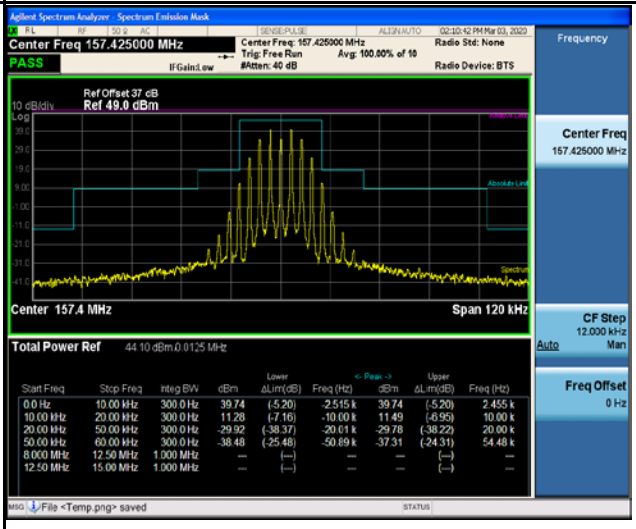
Appendix B:Occupied Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWL	FM	CH_L	
TX-AWL	FM	CH_M	
TX-AWL	FM	CH_H	

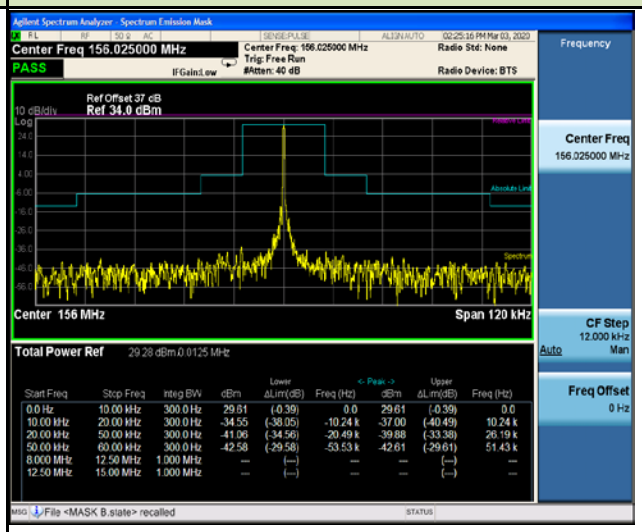
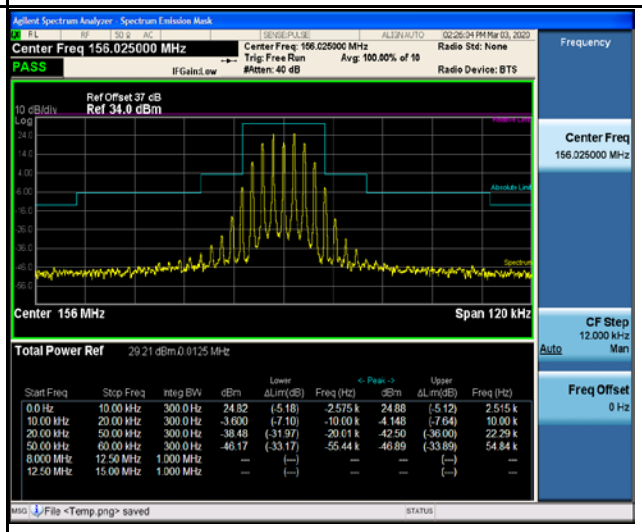
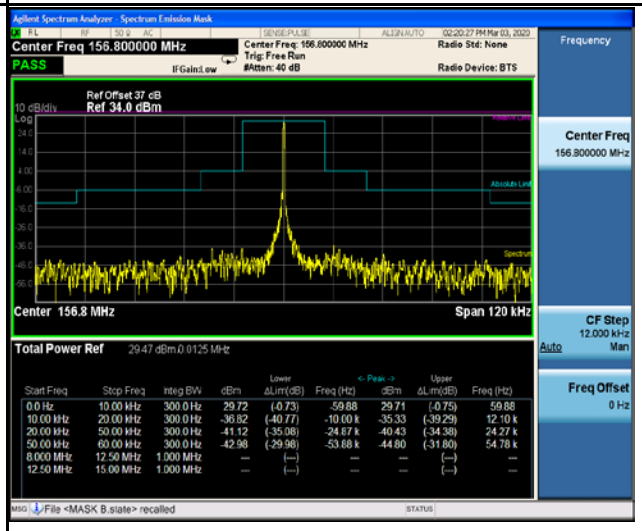
Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_L	
TX-AWH	FM	CH_L	
TX-AWH	FM	CH_M	

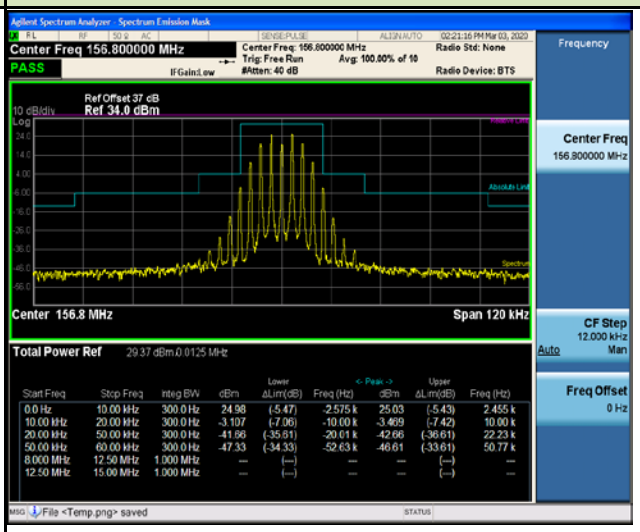
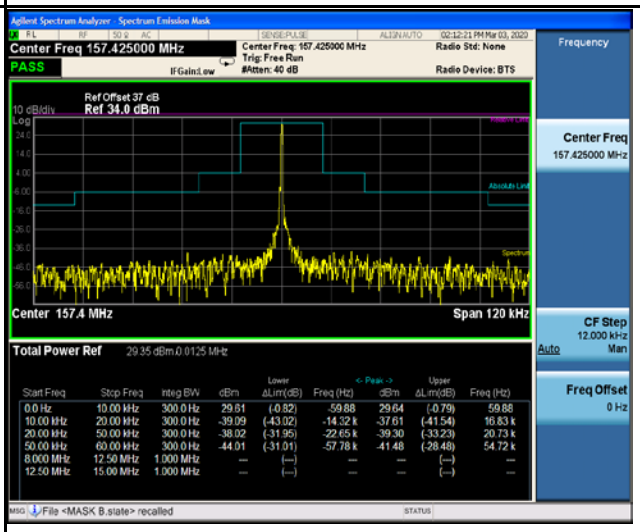
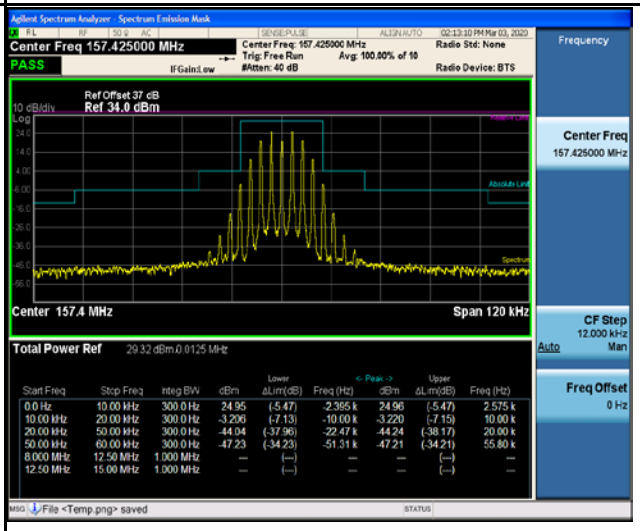
Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_M	
TX-AWH	FM	CH_H	
TX-AWH	FM	CH_H	

Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWL	FM	CH_L	
TX-AWL	FM	CH_L	
TX-AWL	FM	CH_M	

Appendix C:Emission Mask

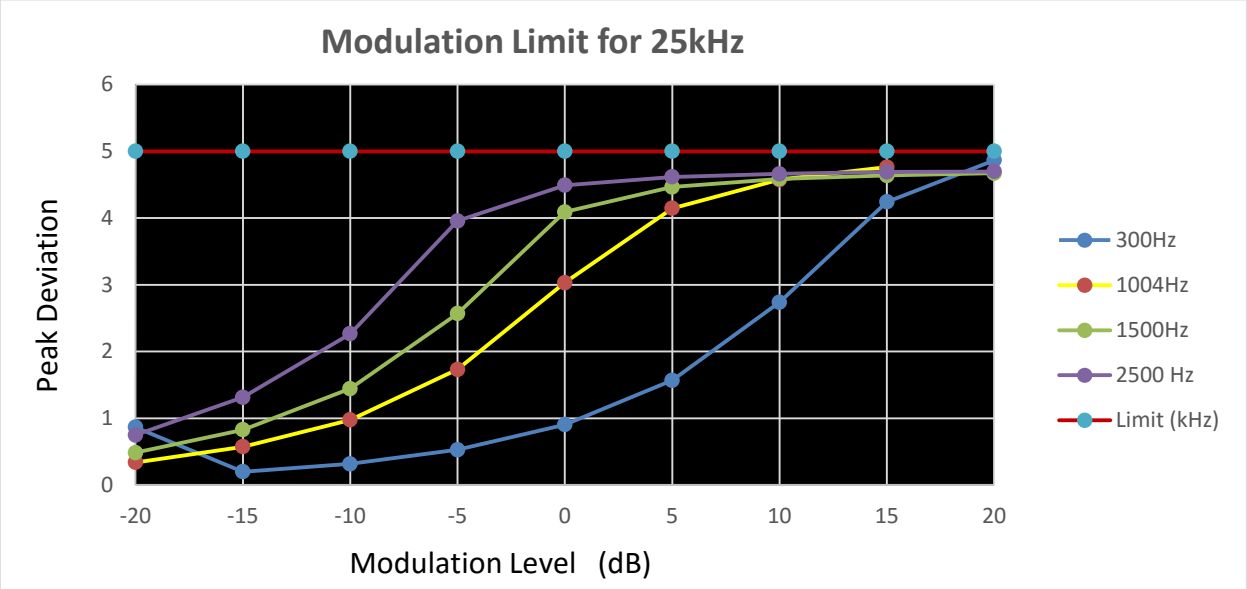
Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWL	FM	CH_M	
TX-AWL	FM	CH_H	
TX-AWL	FM	CH_H	

Appendix D:Modulation Limit

Operation Mode	Modulation Type	Test Channel	Modulation Level (dB)	Peak frequency deviation (kHz)				Limit (kHz)	Result
				300Hz	1004Hz	1500Hz	2500 Hz		
TX-AWH	FM	CH_M	-20	0.866	0.339	0.485	0.748	5	PASS
TX-AWH	FM	CH_M	-15	0.198	0.574	0.827	1.313	5	PASS
TX-AWH	FM	CH_M	-10	0.316	0.975	1.443	2.266	5	PASS
TX-AWH	FM	CH_M	-5	0.528	1.732	2.568	3.957	5	PASS
TX-AWH	FM	CH_M	0	0.903	3.031	4.09	4.491	5	PASS
TX-AWH	FM	CH_M	5	1.569	4.145	4.464	4.615	5	PASS
TX-AWH	FM	CH_M	10	2.739	4.576	4.587	4.661	5	PASS
TX-AWH	FM	CH_M	15	4.242	4.761	4.637	4.69	5	PASS
TX-AWH	FM	CH_M	20	4.866	4.928	4.671	4.698	5	PASS

Appendix D:Modulation Limit

TEST PLOT RESULT

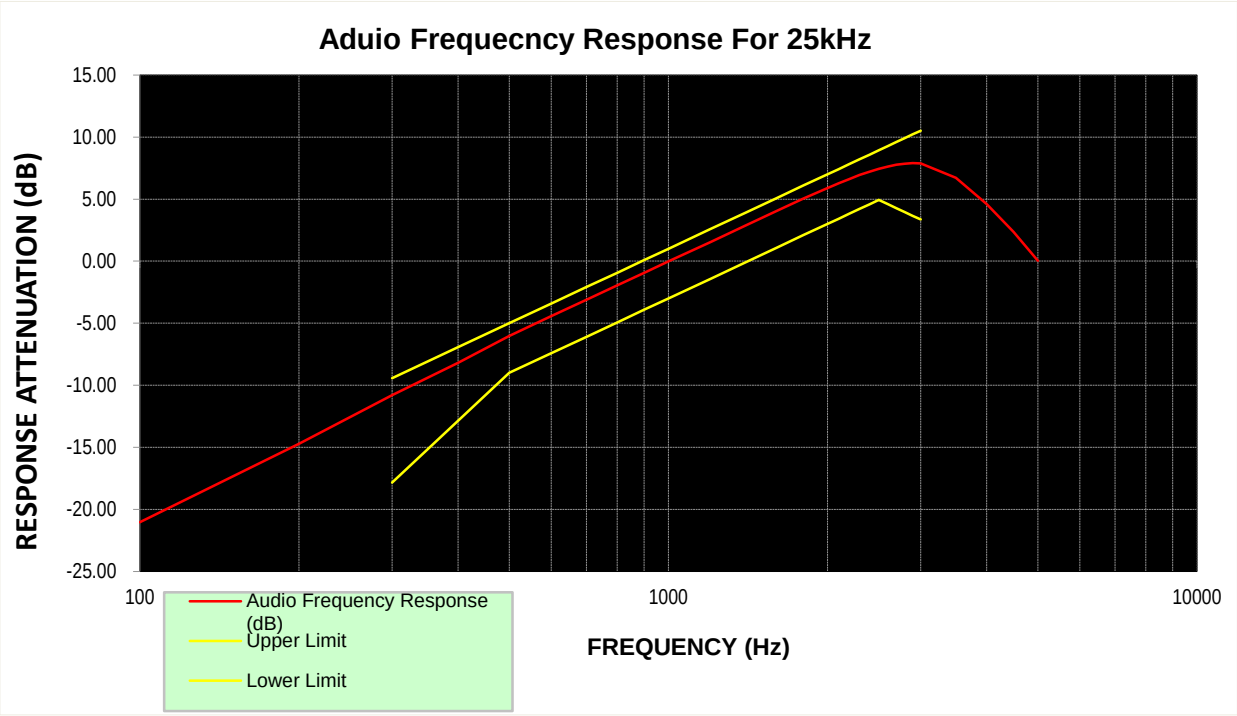


Appendix E:Aduio Frequency Response

Operation Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-AWH	FM	CH_M	100	-21.02			PASS
TX-AWH	FM	CH_M	200	-14.71			PASS
TX-AWH	FM	CH_M	300	-10.80	-17.84	-9.42	PASS
TX-AWH	FM	CH_M	400	-8.18	-12.86	-6.93	PASS
TX-AWH	FM	CH_M	500	-6.02	-9.00	-5.00	PASS
TX-AWH	FM	CH_M	600	-4.43	-7.42	-3.42	PASS
TX-AWH	FM	CH_M	700	-3.12	-6.09	-2.09	PASS
TX-AWH	FM	CH_M	800	-1.94	-4.93	-0.93	PASS
TX-AWH	FM	CH_M	900	-0.95	-3.91	0.09	PASS
TX-AWH	FM	CH_M	1000	-0.03	-3.00	1.00	PASS
TX-AWH	FM	CH_M	1200	1.53	-1.42	2.58	PASS
TX-AWH	FM	CH_M	1400	2.87	-0.09	3.91	PASS
TX-AWH	FM	CH_M	1600	4.04	1.07	5.07	PASS
TX-AWH	FM	CH_M	1800	5.03	2.09	6.09	PASS
TX-AWH	FM	CH_M	2000	5.90	3.00	7.00	PASS
TX-AWH	FM	CH_M	2100	6.28	3.42	7.42	PASS
TX-AWH	FM	CH_M	2200	6.63	3.83	7.83	PASS
TX-AWH	FM	CH_M	2300	6.94	4.21	8.21	PASS
TX-AWH	FM	CH_M	2400	7.20	4.58	8.58	PASS
TX-AWH	FM	CH_M	2500	7.43	4.93	8.93	PASS
TX-AWH	FM	CH_M	2600	7.62	4.59	9.27	PASS
TX-AWH	FM	CH_M	2700	7.77	4.27	9.60	PASS
TX-AWH	FM	CH_M	2800	7.86	3.95	9.91	PASS
TX-AWH	FM	CH_M	2900	7.91	3.65	10.22	PASS
TX-AWH	FM	CH_M	3000	7.87	3.35	10.51	PASS
TX-AWH	FM	CH_M	3500	6.71			PASS
TX-AWH	FM	CH_M	4000	4.61			PASS
TX-AWH	FM	CH_M	4500	2.35			PASS
TX-AWH	FM	CH_M	5000	0.03			PASS

Appendix E:Aduio Frequency Response

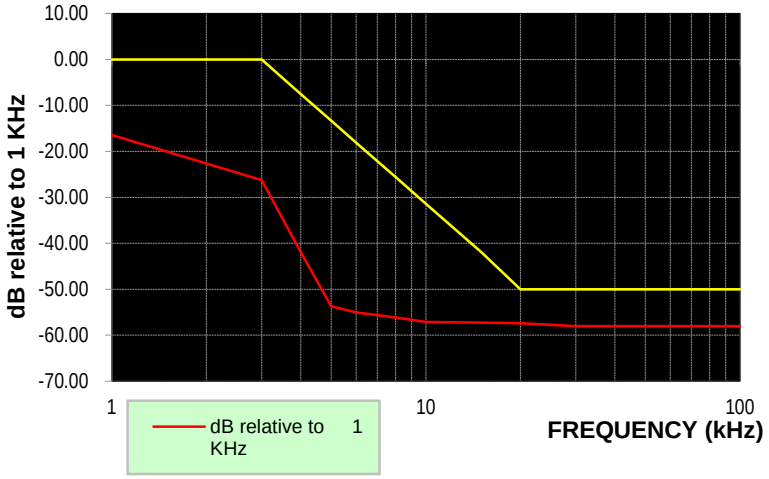
TEST PLOT RESULT



Appendix F:Audio Low Pass Filter Response

Operation Mode	Modulation Type	Test Channel	Frequency (KHz)	dB relative to 1 KHz	Limit	Result
TX-AWH	FM	CH_M	1	-16.43	0.00	PASS
TX-AWH	FM	CH_M	3	-26.25	0.00	PASS
TX-AWH	FM	CH_M	4	-41.93	-7.50	PASS
TX-AWH	FM	CH_M	5	-53.69	-13.30	PASS
TX-AWH	FM	CH_M	6	-55.03	-18.10	PASS
TX-AWH	FM	CH_M	8	-56.16	-25.60	PASS
TX-AWH	FM	CH_M	10	-57.14	-31.40	PASS
TX-AWH	FM	CH_M	15	-57.26	-41.90	PASS
TX-AWH	FM	CH_M	20	-57.42	-50.00	PASS
TX-AWH	FM	CH_M	30	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	40	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	50	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	60	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	70	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	80	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	90	-58.03	-50.00	PASS
TX-AWH	FM	CH_M	100	-58.03	-50.00	PASS

Appendix F:Audio Low Pass Filter Response

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_M	

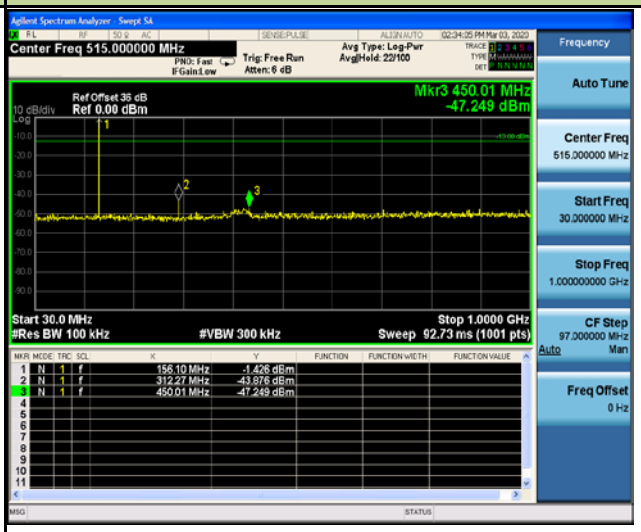
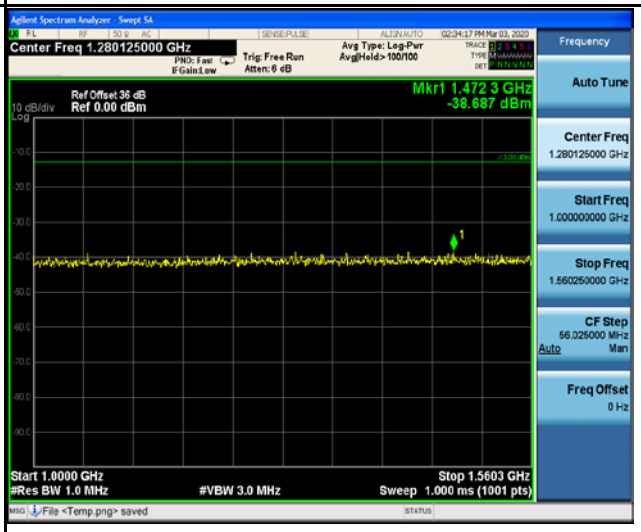
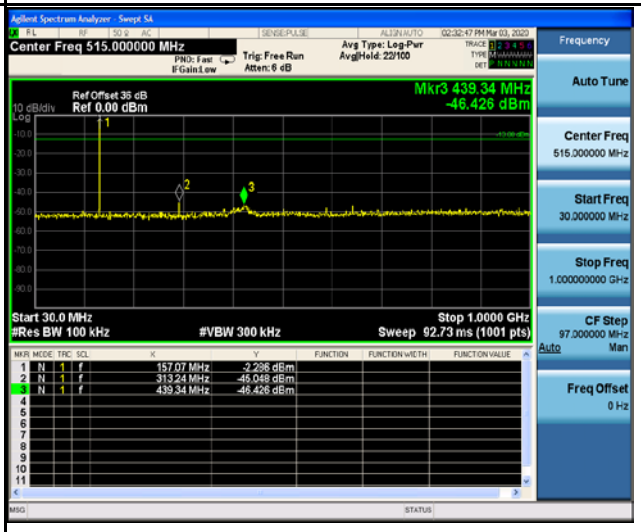
Appendix G:Frequency Stability Test & Temperature

Operation Mode	Modulation Type	Test Conditions		Frequency error (ppm)			Limit (ppm)	Result
		Voltage	Temperature	CH_L	CH_{M1}	CH_H		
TX-AWH	FM	V_N	-20	0.058	0.072	0.067	±10	PASS
TX-AWH	FM	V_N	-10	0.049	0.058	0.056	±10	PASS
TX-AWH	FM	V_N	0	0.041	0.046	0.042	±10	PASS
TX-AWH	FM	V_N	10	0.033	0.038	0.031	±10	PASS
TX-AWH	FM	V_N	20	0.029	0.028	0.026	±10	PASS
TX-AWH	FM	V_N	30	0.042	0.035	0.037	±10	PASS
TX-AWH	FM	V_N	40	0.054	0.044	0.059	±10	PASS
TX-AWH	FM	V_N	50	0.062	0.059	0.067	±10	PASS
TX-AWL	FM	V_N	-20	0.067	0.063	0.071	±10	PASS
TX-AWL	FM	V_N	-10	0.055	0.051	0.059	±10	PASS
TX-AWL	FM	V_N	0	0.048	0.039	0.046	±10	PASS
TX-AWL	FM	V_N	10	0.041	0.032	0.035	±10	PASS
TX-AWL	FM	V_N	20	0.030	0.027	0.024	±10	PASS
TX-AWL	FM	V_N	30	0.045	0.036	0.038	±10	PASS
TX-AWL	FM	V_N	40	0.054	0.043	0.049	±10	PASS
TX-AWL	FM	V_N	50	0.068	0.055	0.059	±10	PASS

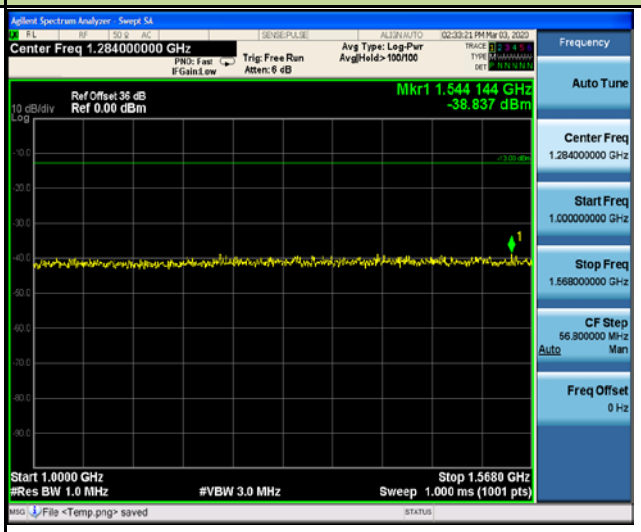
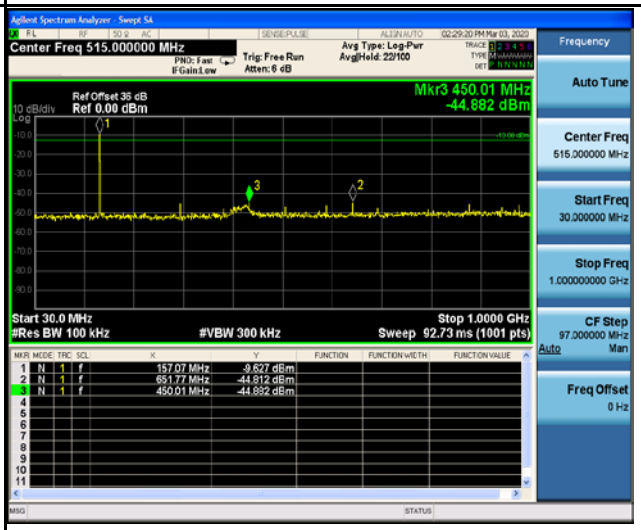
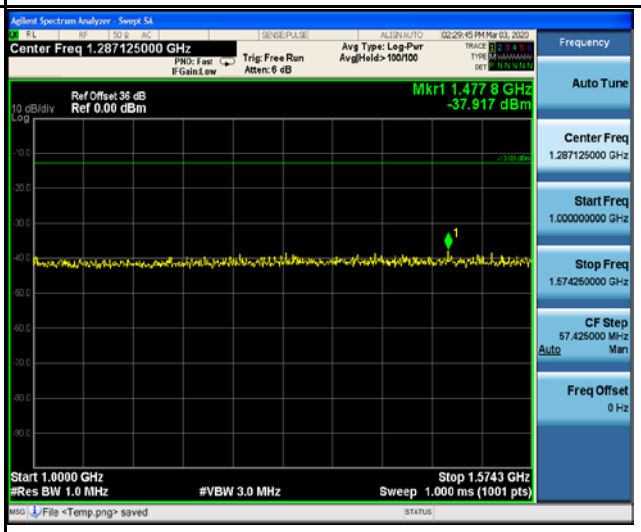
Appendix H:Frequency Stability Test & Voltage

Operation Mode	Modulation Type	Test Conditions		Frequency error (ppm)			Limit (ppm)	Result
		Voltage	Temperature	CH_L	CH_M	CH_H		
TX-AWH	FM	V_N	T_N	0.029	0.028	0.026	±10	PASS
TX-AWH	FM	V_L	T_N	0.057	0.048	0.051	±10	PASS
TX-AWH	FM	V_H	T_N	0.042	0.035	0.038	±10	PASS
TX-AWL	FM	V_N	T_N	0.030	0.027	0.024	±10	PASS
TX-AWL	FM	V_L	T_N	0.052	0.054	0.049	±10	PASS
TX-AWL	FM	V_H	T_N	0.044	0.041	0.037	±10	PASS

Appendix I:Spurious Emission On Antenna Port

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_L	 30MHz~1GHz
TX-AWH	FM	CH_L	 1GHz~10th Harmonic
TX-AWH	FM	CH_M	 30MHz~1GHz

Appendix I:Spurious Emission On Antenna Port

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-AWH	FM	CH_M	 1GHz~10th Harmonic
TX-AWH	FM	CH_H	 30MHz~1GHz
TX-AWH	FM	CH_H	 1GHz~10th Harmonic

----End of Report----