




# TEST REPORT

Report No. .... : CHTEW20030075 Report Verification: 

Project No..... : SHT2002023901EW

FCC ID..... : AMWUT427Z

Applicant's name ..... : Uniden America Corporation

Address..... : 6225 N. State Highway 161 Suite 300, Irving,  
Texas, United States 75038

Manufacturer..... : Uniden Vietnam Ltd.

Address..... : Lot 5. 1, Tan Troung Industrial Zone, Cam Giang District, Hai  
Duong Province, Vietnam

Test item description ..... : UT427ZV

Trade Mark ..... : Road King

Model/Type reference..... : RKCBBT

Listed Model(s) ..... : -

Standard ..... : FCC CFR Title 47 Part 95 Subpart D

Date of receipt of test sample..... : Mar.03, 2020

Date of testing..... : Mar.03, 2020- May.12, 2020

Date of issue..... : May.12, 2020

Result..... : PASS

Compiled by  
( Position+Printed name+Signature): File administrator Echo Wei

Supervised by  
(Position+Printed name+Signature): Project Engineer Gaosheng Pan

Approved by  
(Position+Printed name+Signature): RF Manager Hans Hu

Echo Wei

Gaosheng. Pan

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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The test report merely correspond to the test sample.

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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 95](#): PERSONAL RADIO SERVICES
- [FCC Rules Part 2](#): Frequency allocations and radio treaty matters; General rules and regulations
- [ANSI/EIA/TIA-382-A: 1989](#): Minimum standards – Citizens band radio service amplitude modulated (AM) transceivers operating in the 27MHz band.
- [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

Revision No.	Date of issue	Description
N/A	2020-05-12	Original

## 2. TEST DESCRIPTION

Report clause	Test Items	Standard Requirement	Result
5.1	Carrier Output Power	Part 95.967 Part 2.1046(a)	PASS
5.2	99% Occupied Bandwidth & 26dB bandwidth	Part 95.973 Part 2.1049	PASS
5.3	Emission Mask	Part 95.979(a)(1)(2)(3) Part 2.1049	PASS
5.4	Modulation response	Part 95.975 Part 2.1047	PASS
5.5	Frequency Stability V.S. Temperature	Part 95.965 Part 2.1055	PASS
5.6	Frequency Stability V.S. Voltage	Part 95.965 Part 2.1055	PASS
5.7	Transmit Conducted Spurious Emission	Part 95.979(a)(3) Part 2.1051	PASS
5.8	Transmit Radiated Spurious Emission	Part 95.979(a)(3) Part 2.1053	PASS

Note:

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

### 3. SUMMARY

#### 3.1. Client Information

Applicant:	Uniden America Corporation
Address:	6225 N. State Highway 161 Suite 300, Irving, Texas, United States 75038
Manufacturer:	Uniden Vietnam Ltd.
Address:	Lot 5. 1, Tan Troung Industrial Zone, Cam Giang District, Hai Duong Province, Vietnam

#### 3.2. Product Description

Main unit	
Name of EUT:	UT427ZV
Trade mark:	Road King
Model/Type reference:	RKCBBT
Listed mode(s):	-
Power supply:	DC 12V
Hardware version:	NA
Software version:	NA

#### 3.3. Radio Specification Description

Support Frequency Range:	26.965MHz ~ 27.405MHz
Channel spacing:	10kHz
Channel quantity:	40
Modulation Type:	AM
Emission type:	A3E
Antenna Type:	External

### 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

Test Channel	Frequency band (MHz)	Channel No.	Frequency (MHz)
CH <sub>L</sub>	26.965 ~27.405	1	26.965
CH <sub>M</sub>	26.965 ~27.405	19	27.185
CH <sub>H</sub>	26.965 ~27.405	40	27.405

The Product channel frequency table:

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

## 4.2. Test mode

Test mode	Transmitting	CB
TX-CB	√	√

Note:

√: is operation mode.

Modulation Type	Description
UM	Un-modulation
AM2	Apply a 1000 Hz tone and adjust the audio frequency generator to produce 50% modulation level.
AM6	Apply a 2400 Hz modulating signal to the transmitter from the audio frequency generator, and adjust the level to obtain 50% modulation level, then increase the level from the audio generator by 16 dB

Test item	Modulation Type	Test mode
Carrier Output Power (ERP)	UM	TX-CB
99% Occupied Bandwidth & 26dB bandwidth	AM6	TX-CB
Emission Mask	AM6	TX-CB
Modulation response	AM2	TX-CB
Frequency Stability V.S. Temperature	UM	TX-CB
Frequency Stability V.S. Voltage	UM	TX-CB
Transmit Conducted Spurious Emission	AM6	TX-CB
Transmit Radiated Spurious Emission	AM6	TX-CB

## 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 12.0V
	Extreme lower voltage:	DC 10.8V
	Extreme upper voltage:	DC 13.2V

#### 4.5. Measurement uncertainty

Test Item	Measurement Uncertainty
Frequency stability	25 Hz
Conducted Output Power	0.51dB
Occupied Bandwidth	35 Hz
Modulation Limiting	0.42 %
FM deviation	25 Hz
Audio level	0.62 dB
Conducted Spurious Emission	0.51dB
Radiated Spurious Emission 30~1000MHz	4.65 dB
Radiated Spurious Emission 1~18GHz	5.16 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
●	Horn Antenna	SCHWARZBECK	HTWE0126	9120D	1011	2020/04/01	2023/03/31
●	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	HTWE0120-01	6m 18GHz S Serisa	N/A	2020/05/09	2021/05/08
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-02	6m 3GHz RG Serisa	N/A	2019/05/10	2020/05/09

●	RF Connection Cable	HUBER+SUHNER	HTWE0120-02	6m 3GHz RG Serisa	N/A	2020/05/09	2021/05/08
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-03	6m 3GHz RG Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-03	6m 3GHz RG Serisa	N/A	2020/05/09	2021/05/08
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-04	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	2020/05/09	2021/05/08
●	RF Connection Cable	HUBER+SUHNER	HTWE0121-01	6m 18GHz S Serisa	N/A	2019/05/10	2020/05/09
●	RF Connection Cable	HUBER+SUHNER	HTWE0121-01	6m 18GHz S Serisa	N/A	2020/05/09	2021/05/08
●	EMI Test Software	Audix	N/A	E3	N/A	N/A	N/A

## **5. TEST CONDITIONS AND RESULTS**

### **5.1. Carrier Output Power**

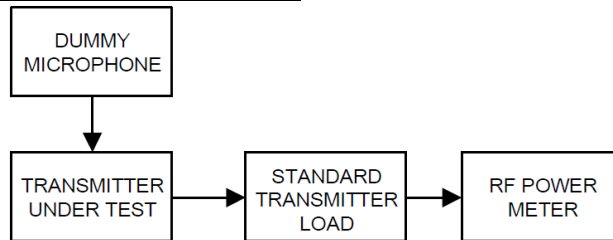
#### **LIMIT**

FCC Part 95.967, FCC Part 2.1046(a)

Each CBRS transmitter type must be designed such that the transmitter power can not exceed the following limits:

- (a) When transmitting amplitude modulated (AM) voice signals, the mean carrier power must not exceed 4 Watts.
- (b) When transmitting single sideband (SSB) voice signals, the peak envelope power must not exceed 12 Watts.

#### **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 95.973, FCC Part 2.1049

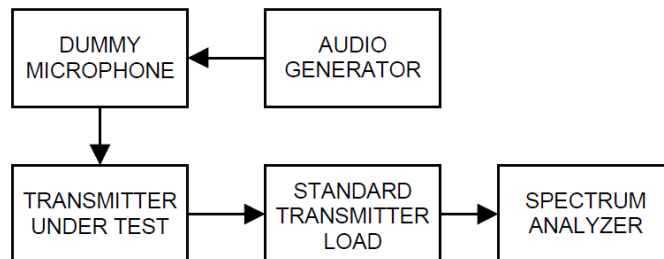
Each CBRS transmitter type must be designed such that the occupied bandwidth does not exceed the authorized

bandwidth for the emission type under test.

(a) AM. The authorized bandwidth for emission type A3E is 8 kHz.

(b) SSB. The authorized bandwidth for emission types J3E, R3E, and H3E is 4 kHz.

### 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  $1.5 \times \text{OBW}$  is sufficient)  
RBW = 1% to 5% of the anticipated OBW, VBW  $\geq 3 \times \text{RBW}$ , 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 95.979(a), FCC Part 2.1049

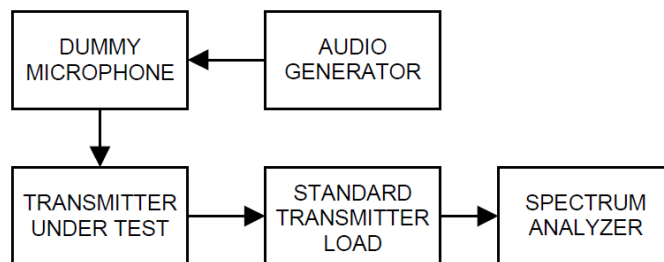
- a) Each CBRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section

The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) as specified in the applicable paragraphs listed in the following table:

Emission type	Paragraph
A3E	(1), (3), (5), (6)
H3E, J3E, R3E	(2), (4), (5), (6)

- (1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;
- (2) 25 dB in the frequency band 2 kHz to 6 kHz removed from the channel center frequency;
- (3) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;
- (4) 35 dB in the frequency band 6 kHz to 10 kHz removed from the channel center frequency;
- (5)  $53 + 10 \log (P)$  dB in any frequency band removed from the channel center frequency by more than 250% of the authorized bandwidth.
- (6) 60 dB in any frequency band centered on a harmonic (i.e., an integer multiple of two or more times) of the carrier frequency.

#### TEST CONFIGURATION



#### TEST PROCEDURE

- 1) Connect the equipment as illustrated.
- 2) Spectrum set as follow:  
The power of unwanted emissions in the frequency bands specified in paragraphs (a)(1) through (4) of this section is measured with a reference bandwidth of 300 Hz.  
The power of unwanted emissions in the frequency ranges specified in paragraphs (a)(5) and (6) of this section is measured with a reference bandwidth of at least 30kHz.  
Centre frequency = fundamental frequency, 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 response

### LIMIT

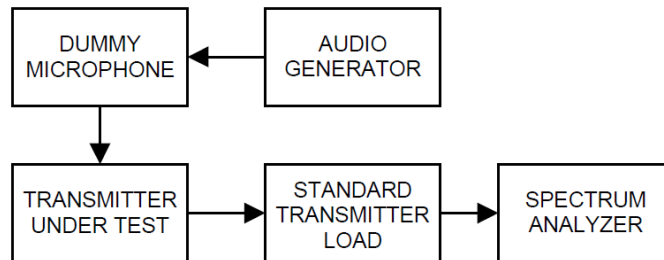
FCC Part 95.975, FCC Part 2.1047(b)

Each CBRS transmitter type must be designed such that the modulation characteristics are in compliance with the rules in this section.

(a) When emission type A3E is transmitted with voice modulation, the modulation percentage must be at least 85%, but not more than 100%.

(b) When emission type A3E is transmitted by a CBRS transmitter having a transmitter output power of more than 2.5 W, the transmitter must contain a circuit that automatically prevents the modulation percentage from exceeding 100%.

### TEST CONFIGURATION



### TEST PROCEDURE

#### Audio frequency response

- 1) Connect the equipment as illustrated.
- 2) Adjust to deliver 50% modulation at the audio frequency that produces the maximum modulation level
- 3) Record the modulation input level (mV) and use this level as 0dB for plotting modulation limiting.
- 4) Vary the modulating frequency from 100Hz to 10000Hz and record the input levels necessary to maintain a constant 50% modulation.
- 5) Graph the audio level in dB relative to the 0dB reference level as a function of the modulating frequency. Record audio frequency where it is impossible to perform the measurement.

#### Modulation limiting

- 1) Connect the equipment as illustrated.
- 2) Adjust to deliver 50% modulation at the audio frequency that produces the maximum modulation level
- 3) Record the modulation input level (mV) and use this level as 0dB for plotting modulation limiting.
- 4) Increment the audio signal level to 40dB above the reference level. Record the modulation level (%).
- 5) Repeat the measurements using a 400Hz and a 2500Hz sinusoidal audio signal, record the modulation level (%), perform for both positive and negative modulation.

### TEST MODE

Please reference to the section 4.2

### TEST RESULTS

☒ Passed ☐ Not Applicable

### TEST Data

Please refer to appendix D, E on the appendix report

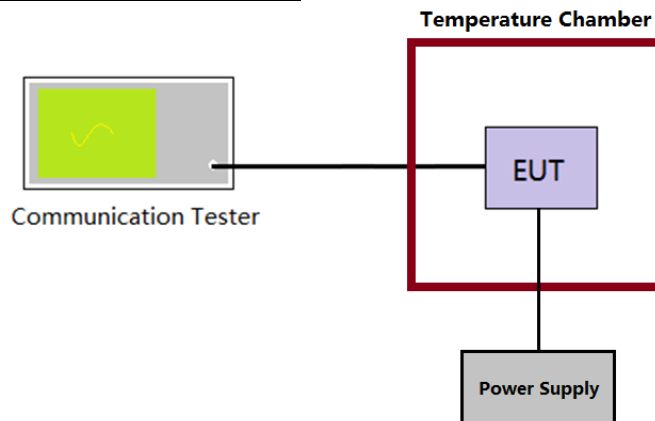
## 5.5. Frequency stability VS Temperature

### LIMIT

FCC Part 95.965:

Each CBRS transmitter type must be designed such that the transmit carrier frequency (or in the case of SSB transmissions, the reference frequency) remains within **50 parts-per-million** of the channel center frequencies

### 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  $-30^{\circ}\text{C}$ . After the temperature stabilized for approximately 30 minutes recorded the frequency as  $MCF_{\text{MHz}}$ .
- 4) Calculate the ppm frequency error by the following:  
$$\text{ppm error} = (MCF_{\text{MHz}} / ACF_{\text{MHz}} - 1) * 10^6$$

where  
 $MCF_{\text{MHz}}$  is the Measured Carrier Frequency in MHz  
 $ACF_{\text{MHz}}$  is the Assigned Carrier Frequency in MHz
- 5) Repeat step 3 measure with  $10^{\circ}\text{C}$  increased per stage until the highest temperature of  $+50^{\circ}\text{C}$  reached.

### 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



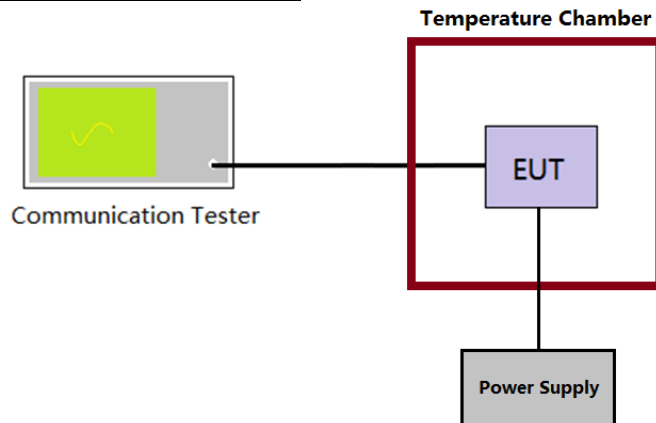
## 5.6. Frequency stability VS Voltage

### LIMIT

FCC Part 95.965:

Each CBRS transmitter type must be designed such that the transmit carrier frequency (or in the case of SSB transmissions, the reference frequency) remains within **50 parts-per-million** of the channel center frequencies

### 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  $\pm 15\%$  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 G on the appendix report

## 5.7. Transmit Conducted Spurious Emission

### LIMIT

FCC Part 95.979(a), FCC Part 2.1049

- a) Each CBRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section

The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) as specified in the applicable paragraphs listed in the following table:

Emission type	Paragraph
A3E	(1), (3), (5), (6)
H3E, J3E, R3E	(2), (4), (5), (6)

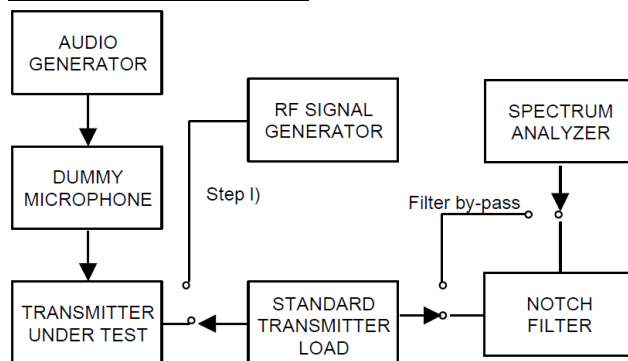
- (1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;
- (2) 25 dB in the frequency band 2 kHz to 6 kHz removed from the channel center frequency;
- (3) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;
- (4) 35 dB in the frequency band 6 kHz to 10 kHz removed from the channel center frequency;
- (5)  $53 + 10 \log(P)$  dB in any frequency band removed from the channel center frequency by more than 250% of the authorized bandwidth.
- (6) 60 dB in any frequency band centered on a harmonic (i.e., an integer multiple of two or more times) of the carrier frequency.

Note:

**Limit (dBm)** =  $EL - [53 + 10 \log(P)] = 10 \log(P * 1000) - [53 + 10 \log(P)] = 10 \log(P) + 30 - 53 - 10 \log(P) = -23 \text{ dBm}$

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

### 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 3.4
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 10<sup>th</sup> harmonic.
5. Record the frequencies and levels of spurious emissions

### TEST MODE

Please reference to the section 3.4

### TEST RESULTS

☒ Passed ☐ Not Applicable

### TEST Data

Please refer to appendix H on the appendix report

## 5.8. Transmit Radiated Spurious Emission

### LIMIT

FCC Part 95.979(a), FCC Part 2.1049

- b) Each CBRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section

The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) as specified in the applicable paragraphs listed in the following table:

Emission type	Paragraph
A3E	(1), (3), (5), (6)
H3E, J3E, R3E	(2), (4), (5), (6)

- (1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;
- (2) 25 dB in the frequency band 2 kHz to 6 kHz removed from the channel center frequency;
- (3) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;
- (4) 35 dB in the frequency band 6 kHz to 10 kHz removed from the channel center frequency;
- (5)  $53 + 10 \log(P)$  dB in any frequency band removed from the channel center frequency by more than 250% of the authorized bandwidth.
- (6) 60 dB in any frequency band centered on a harmonic (i.e., an integer multiple of two or more times) of the carrier frequency.

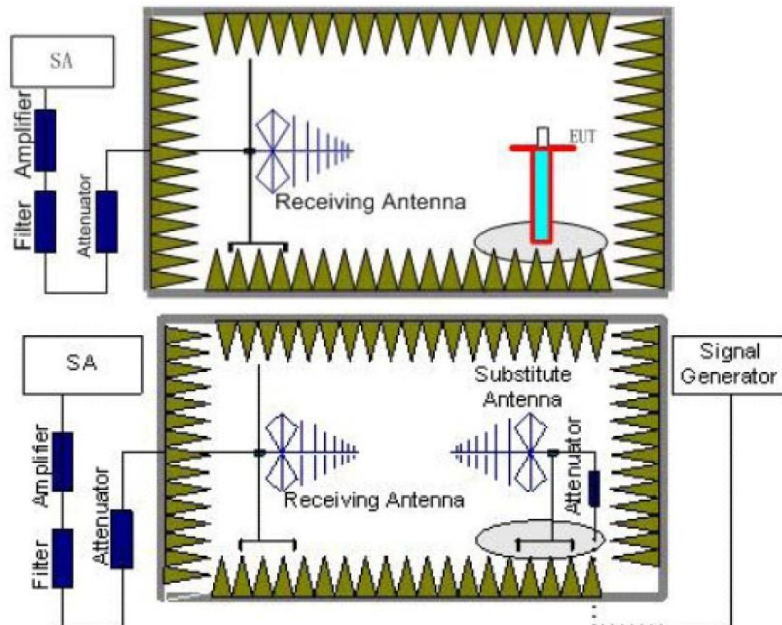
Note:

**Limit (dBm)** =  $EL - [53 + 10 \log(P)] = 10 \log(P \cdot 1000) - [53 + 10 \log(P)] = 10 \log(P) + 30 - 53 - 10 \log(P) = -23 \text{ dBm}$

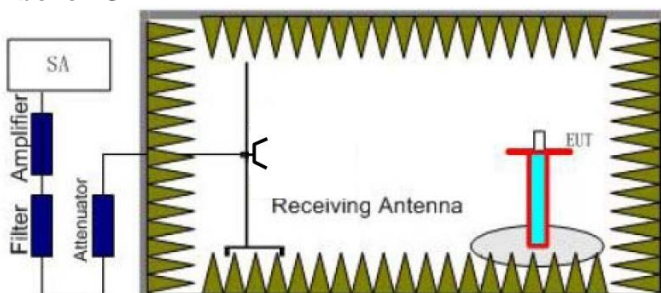
EL is the emission level of the Output Power expressed in dBm,

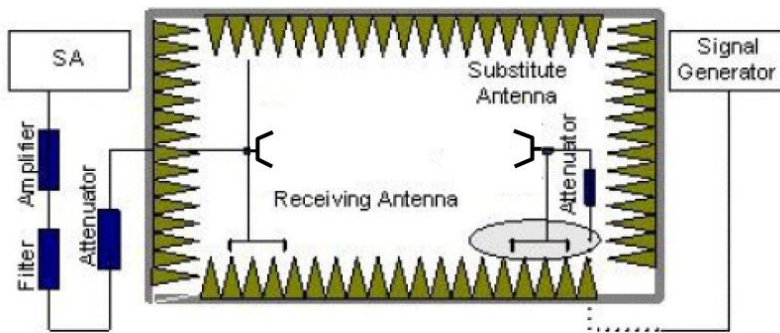
### TEST CONFIGURATION

Below 1GHz:



Above 1GHz:





## TEST PROCEDURE

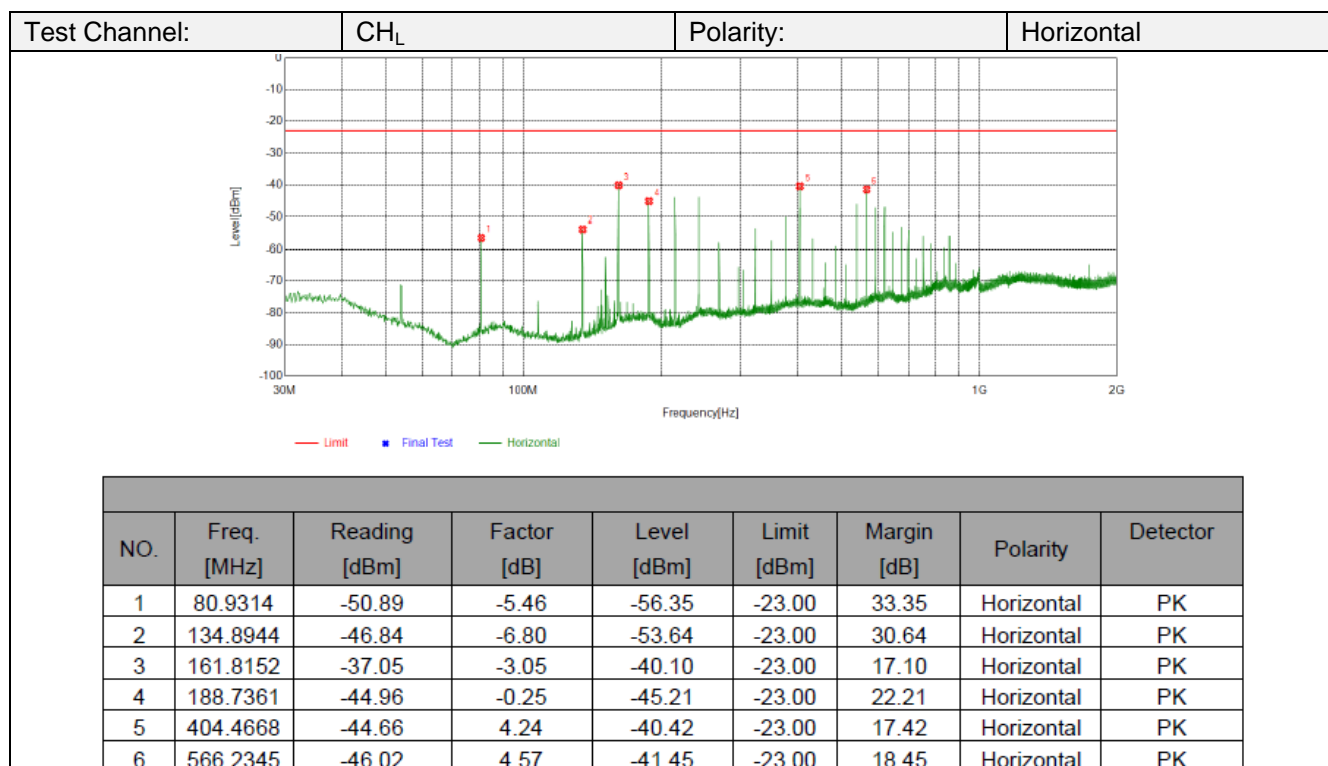
- 1) The measuring distance of at 3m shall be used for measurements
- 2) The transmitter shall be terminated in a nonradiating dummy load, the EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The table was rotated 360 degrees to determine the position of the highest radiation
- 3) The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4) The spectrum setting as follow
  - Below 1 GHz: RBW=120kHz, VBW=300kHz, Sweep time=auto, Detector =peak, Trace=max hold;
  - Above 1GHz: RBW=1MHz, VBW=3MHz Sweep time=auto, Detector=peak, Trace=max hold
- 5) Record the field strength level of the EUT from the spectrum
- 6) The substitution antenna is substituted for EUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be moved height from 1m to 4m to find the highest radiation. Adjust the S.G. output level and repeat this step to get the same field strength level as the EUT
- 7) The EIRP level = S.G. output level(dBm)- TX cable(dB) + Substituted Antenna Gain(dBi)
- 8) Record the ERP value for below 1GHz, ERP value = EIRP-2.15; Record the EIRP for above 1GHz.

## TEST MODE

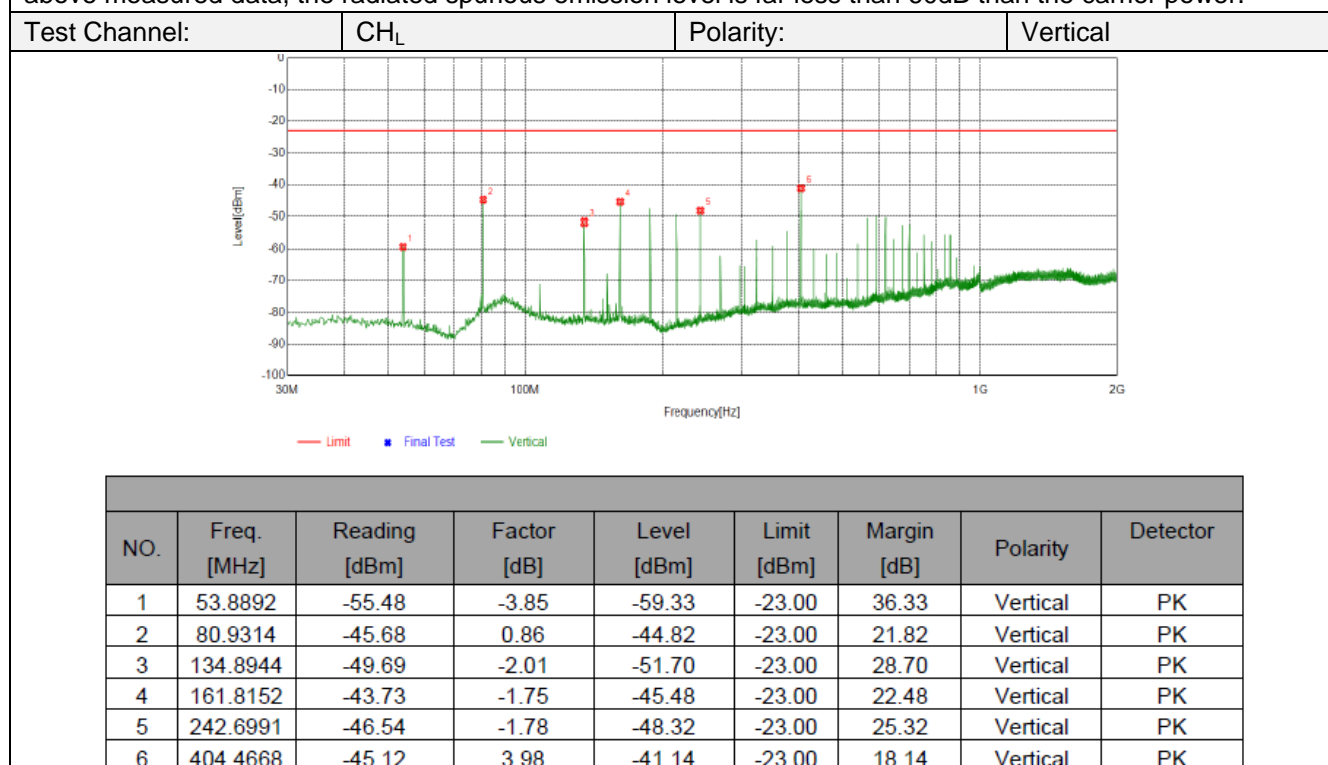
Please reference to the section 4.2

## TEST RESULTS

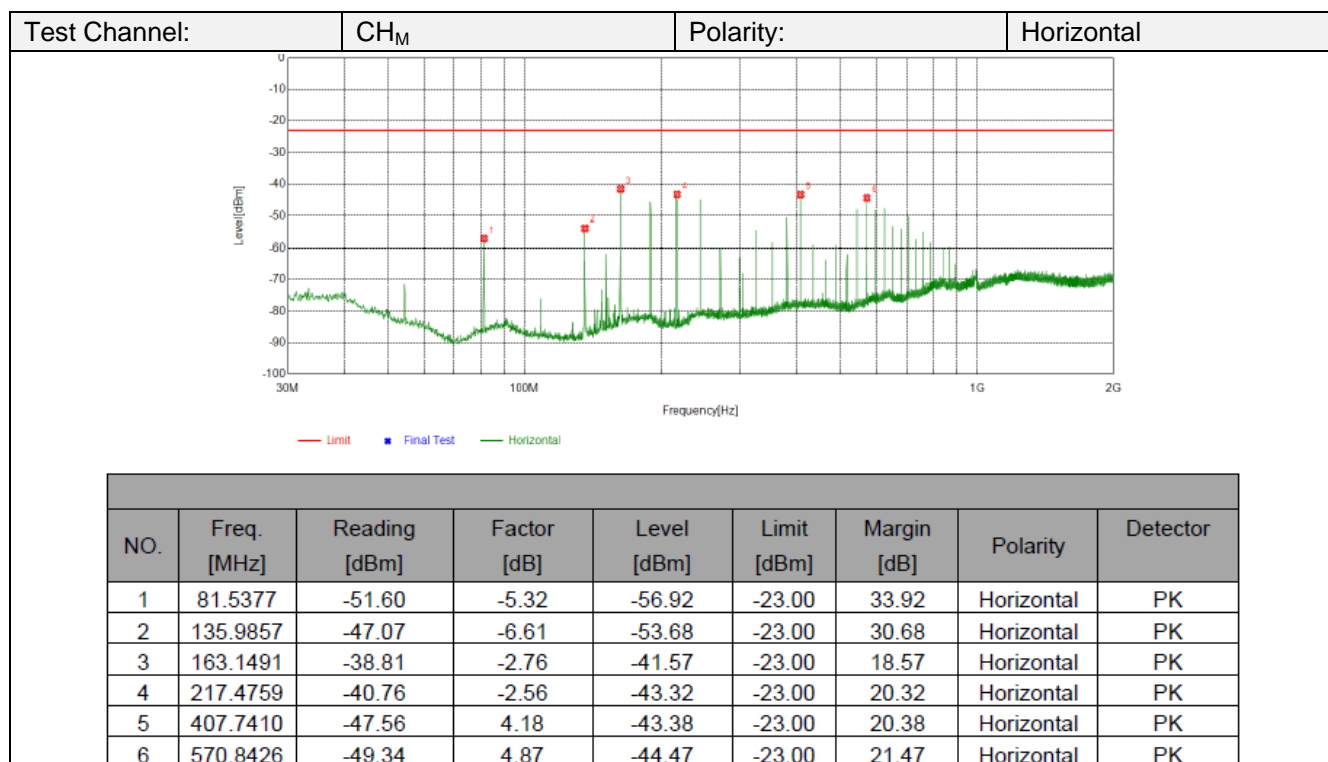
☒ Passed ☐ Not Applicable



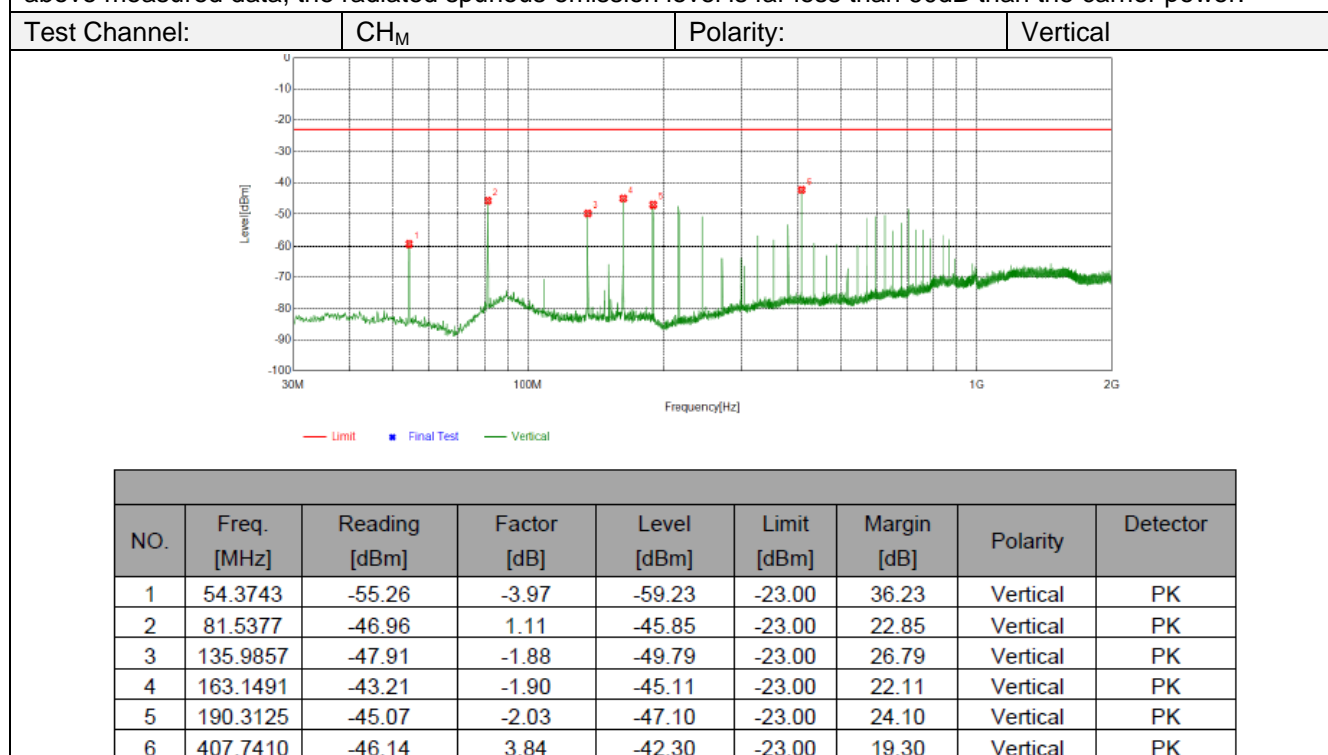
According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.



According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.

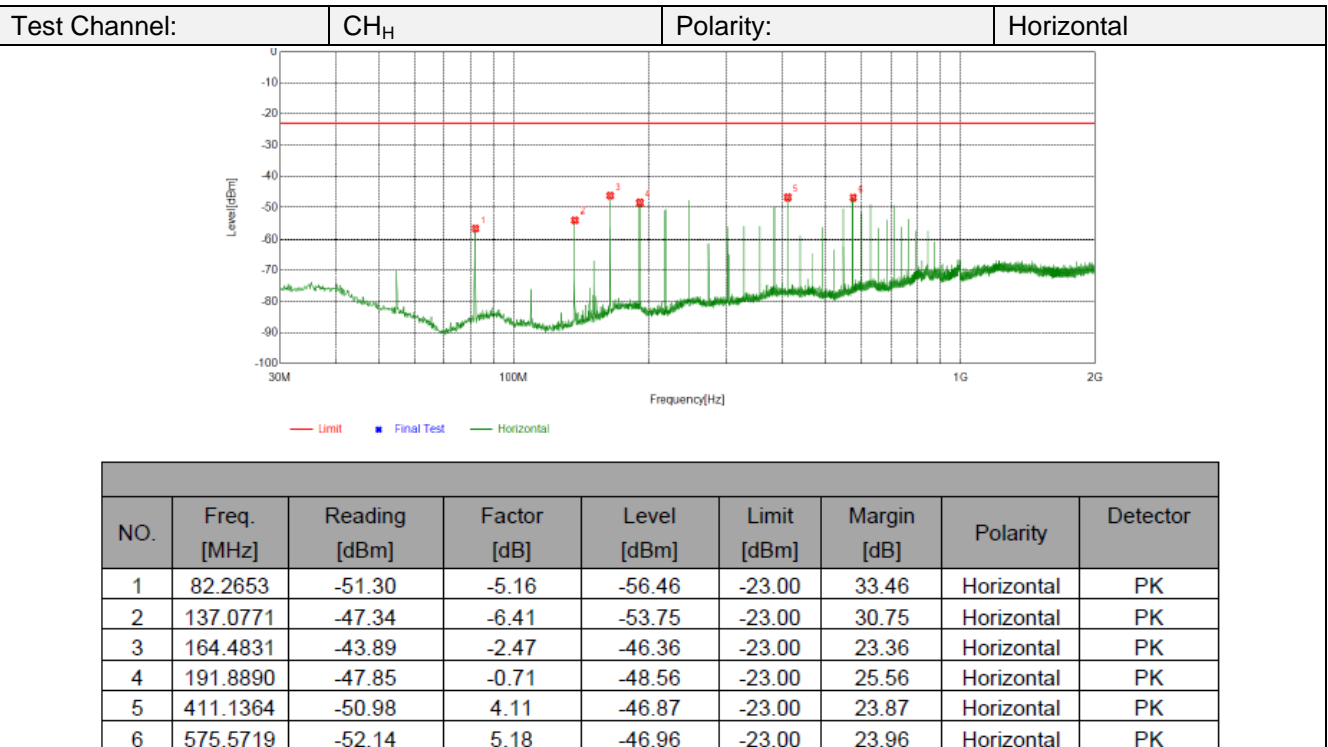


According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.

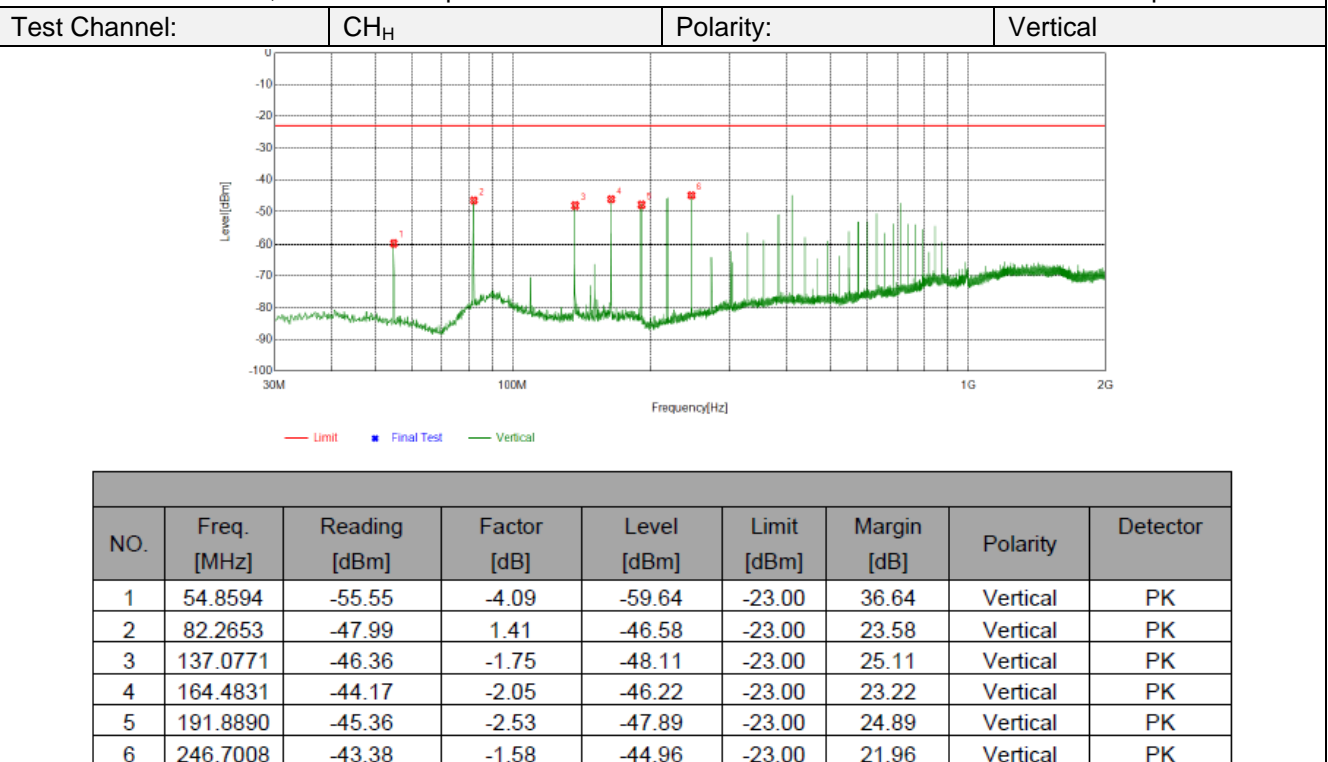


According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.





According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.



According to section 5.1, the maximum output power is 35.10dBm, above measured data, the radiated spurious emission level is far less than 60dB than the carrier power.

## 6. APPENDIX REPORT

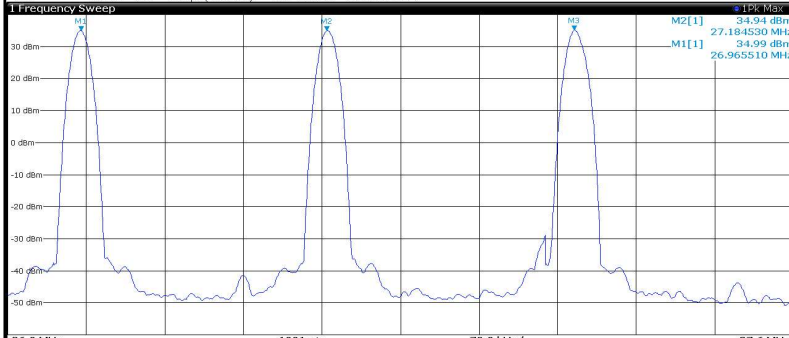
**Appendix A: Carrier Output Power**

Test Mode	Modulation Type	Test Channel	Measured power (dBm)	Measured power (W)	Limit(W)	Result
TX-CB	AM	CH <sub>L</sub>	34.99	3.16	<4	PASS
TX-CB	AM	CH <sub>M</sub>	34.94	3.12	<4	PASS
TX-CB	AM	CH <sub>H</sub>	35.10	3.24	<4	PASS





## Appendix A: Carrier Output Power

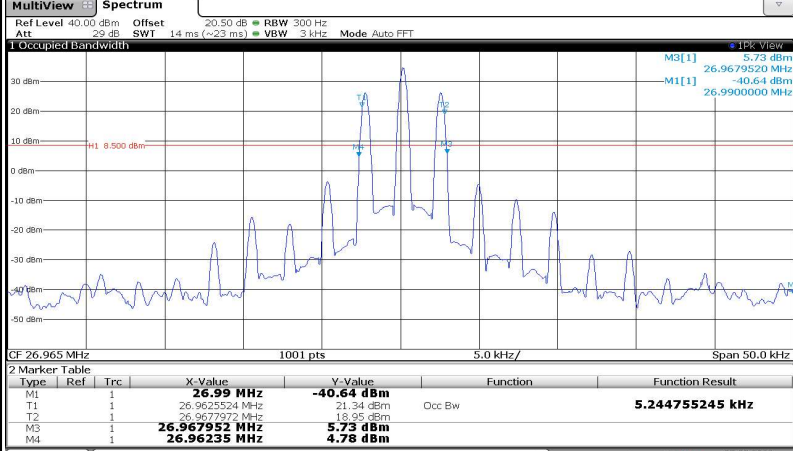
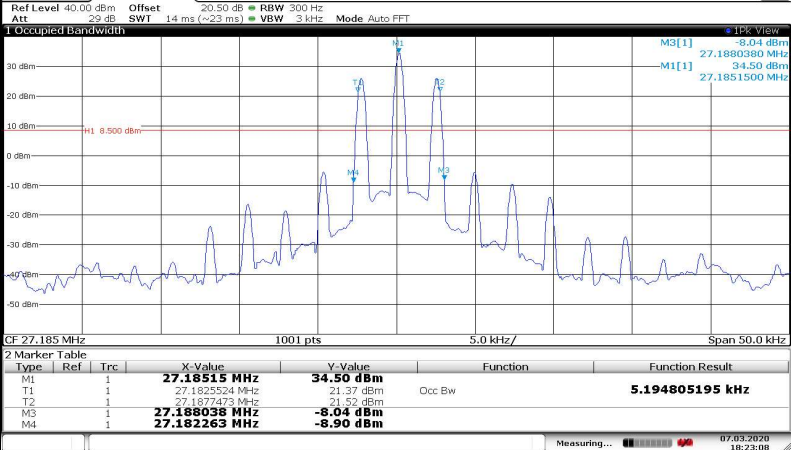
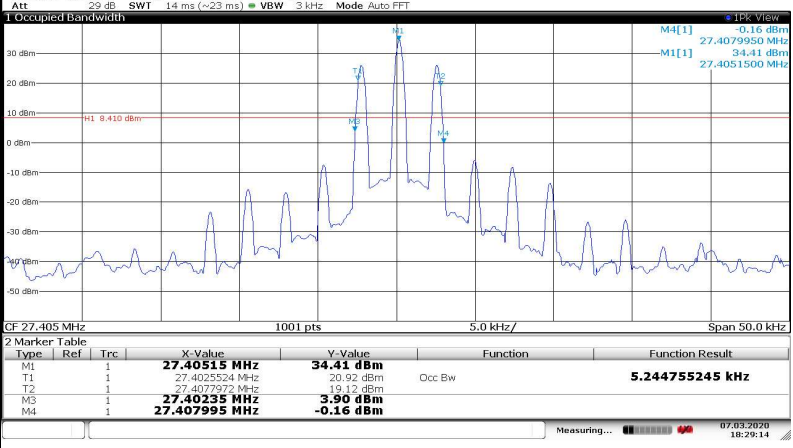
Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																												
TX-CB	AM	CH <sub>L</sub> CH <sub>M</sub> CH <sub>H</sub>	<div><div>MultiView Spectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 10 kHz Att 29 dB SWT 503 μs (~7.9 ms) VBW 10 kHz Mode Auto FFT</div><div>1 Frequency Sweep</div><div></div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>26.96551 MHz</td><td>34.99 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>27.18453 MHz</td><td>34.94 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>27.40455 MHz</td><td>35.10 dBm</td><td></td><td></td></tr></table><div>Instrument warming up...</div><div>Measuring...</div><div>07.03.2020 17:36:49</div><div>Date: 7.MAR.2020 17:36:49</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		26.96551 MHz	34.99 dBm			M2	1		27.18453 MHz	34.94 dBm			M3	1		27.40455 MHz	35.10 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																									
M1	1		26.96551 MHz	34.99 dBm																											
M2	1		27.18453 MHz	34.94 dBm																											
M3	1		27.40455 MHz	35.10 dBm																											

**Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth**

Test Mode	Modulation Type	Test Channel	Occupied Bandwidth		99% Limit(kHz)	Result
			99%(kHz)	26dB(kHz)		
TX-CB	AM	CH <sub>L</sub>	5.245	5.602	≤8	PASS
TX-CB	AM	CH <sub>M</sub>	5.195	5.775	≤8	PASS
TX-CB	AM	CH <sub>H</sub>	5.245	5.645	≤8	PASS

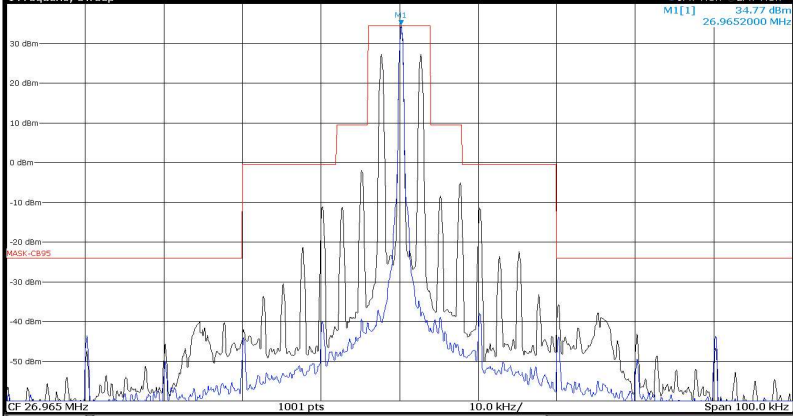
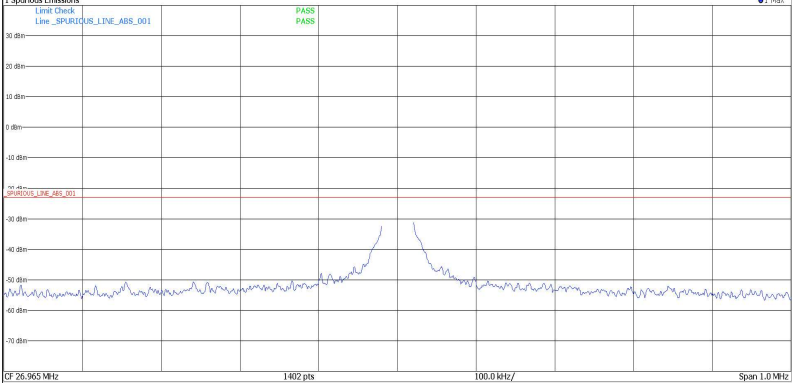
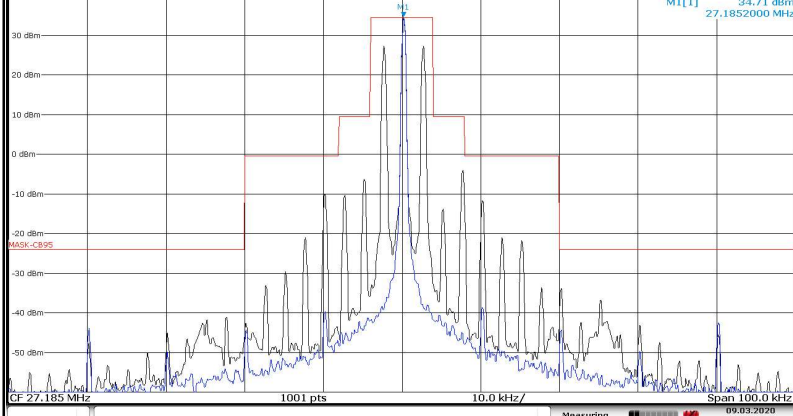
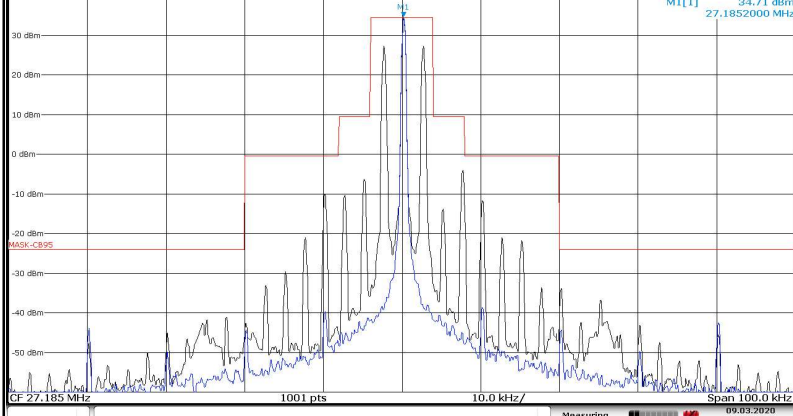


## Appendix B:99% Occupied Bandwidth &amp; 26dB Bandwidth

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																										
TX-CB	AM	CH <sub>L</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Occupied Bandwidth</div><div></div><div>CF 26.965 MHz 1001 pts 5.0 kHz/ Span 50.0 kHz</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>26.99 MHz</td><td>-40.64 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>26.9625524 MHz</td><td>21.34 dBm</td><td>Occ Bw</td><td>5.244755245 kHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>26.9677972 MHz</td><td>18.95 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>26.967952 MHz</td><td>5.73 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>26.96235 MHz</td><td>4.78 dBm</td><td></td><td></td></tr></table><div>Measuring... 07.03.2020 18:27:22</div><div>Date: 7.MAR.2020 18:27:22</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		26.99 MHz	-40.64 dBm			T1	1		26.9625524 MHz	21.34 dBm	Occ Bw	5.244755245 kHz	T2	1		26.9677972 MHz	18.95 dBm			M3	1		26.967952 MHz	5.73 dBm			M4	1		26.96235 MHz	4.78 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		26.99 MHz	-40.64 dBm																																									
T1	1		26.9625524 MHz	21.34 dBm	Occ Bw	5.244755245 kHz																																							
T2	1		26.9677972 MHz	18.95 dBm																																									
M3	1		26.967952 MHz	5.73 dBm																																									
M4	1		26.96235 MHz	4.78 dBm																																									
TX-CB	AM	CH <sub>M</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Occupied Bandwidth</div><div></div><div>CF 27.185 MHz 1001 pts 5.0 kHz/ Span 50.0 kHz</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>27.18515 MHz</td><td>34.50 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>27.1825524 MHz</td><td>21.37 dBm</td><td>Occ Bw</td><td>5.194805195 kHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>27.1877473 MHz</td><td>21.52 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>27.188038 MHz</td><td>-8.04 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>27.182263 MHz</td><td>-8.90 dBm</td><td></td><td></td></tr></table><div>Measuring... 07.03.2020 18:23:08</div><div>Date: 7.MAR.2020 18:23:08</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		27.18515 MHz	34.50 dBm			T1	1		27.1825524 MHz	21.37 dBm	Occ Bw	5.194805195 kHz	T2	1		27.1877473 MHz	21.52 dBm			M3	1		27.188038 MHz	-8.04 dBm			M4	1		27.182263 MHz	-8.90 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		27.18515 MHz	34.50 dBm																																									
T1	1		27.1825524 MHz	21.37 dBm	Occ Bw	5.194805195 kHz																																							
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M4	1		27.182263 MHz	-8.90 dBm																																									
TX-CB	AM	CH <sub>H</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Occupied Bandwidth</div><div></div><div>CF 27.405 MHz 1001 pts 5.0 kHz/ Span 50.0 kHz</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>27.40515 MHz</td><td>34.41 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>27.4025524 MHz</td><td>20.92 dBm</td><td>Occ Bw</td><td>5.244755245 kHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>27.4077972 MHz</td><td>19.12 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>27.40235 MHz</td><td>3.90 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>27.407995 MHz</td><td>-0.16 dBm</td><td></td><td></td></tr></table><div>Measuring... 07.03.2020 18:29:14</div><div>Date: 7.MAR.2020 18:29:14</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		27.40515 MHz	34.41 dBm			T1	1		27.4025524 MHz	20.92 dBm	Occ Bw	5.244755245 kHz	T2	1		27.4077972 MHz	19.12 dBm			M3	1		27.40235 MHz	3.90 dBm			M4	1		27.407995 MHz	-0.16 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		27.40515 MHz	34.41 dBm																																									
T1	1		27.4025524 MHz	20.92 dBm	Occ Bw	5.244755245 kHz																																							
T2	1		27.4077972 MHz	19.12 dBm																																									
M3	1		27.40235 MHz	3.90 dBm																																									
M4	1		27.407995 MHz	-0.16 dBm																																									



## Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																				
TX-CB	AM	CH <sub>L</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Frequency Sweep</div><div><div>1Pk View2Pk View</div><div>M1[1] 34.77 dBm 26.9652000 MHz</div><div>CF 26.965 MHz 1001 pts 10.0 kHz/ Span 100.0 kHz</div><div>Date: 9 MAR 2020 16:58:08</div></div></div> <div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB Mode Auto FFT</div><div>1 Spurious Emissions</div><div><div>Limit Check</div><div>Line_SPURIOUS_LINE_ABS_001</div><div>PASS PASS</div><div>CF 26.965 MHz 1402 pts 100.0 kHz/ Span 1.0 MHz</div><div>2 Result Summary</div><table><thead><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>Alarm</th></tr></thead><tbody><tr><td>26.465 MHz</td><td>26.945 MHz</td><td>30.000 kHz</td><td>26.94466 MHz</td><td>-32.55 dBm</td><td>-9.55 dB</td></tr><tr><td>26.965 MHz</td><td>27.465 MHz</td><td>30.000 kHz</td><td>26.98534 MHz</td><td>-31.35 dBm</td><td>-8.35 dB</td></tr></tbody></table><div>Date: 13 OCT 2020 17:12:06</div></div></div> <td rowspan="2">CH<sub>M</sub></td> <td><div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Frequency Sweep</div><div><div>1Pk View2Pk View</div><div>M1[1] 34.71 dBm 27.1852000 MHz</div><div>CF 27.185 MHz 1001 pts 10.0 kHz/ Span 100.0 kHz</div><div>Date: 9 MAR 2020 16:56:29</div></div></div></td>	Range Low	Range Up	RBW	Frequency	Power Abs	Alarm	26.465 MHz	26.945 MHz	30.000 kHz	26.94466 MHz	-32.55 dBm	-9.55 dB	26.965 MHz	27.465 MHz	30.000 kHz	26.98534 MHz	-31.35 dBm	-8.35 dB	CH <sub>M</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att 29 dB SWT 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Frequency Sweep</div><div><div>1Pk View2Pk View</div><div>M1[1] 34.71 dBm 27.1852000 MHz</div><div>CF 27.185 MHz 1001 pts 10.0 kHz/ Span 100.0 kHz</div><div>Date: 9 MAR 2020 16:56:29</div></div></div>
		Range Low	Range Up	RBW	Frequency	Power Abs	Alarm																
26.465 MHz	26.945 MHz	30.000 kHz	26.94466 MHz	-32.55 dBm	-9.55 dB																		
26.965 MHz	27.465 MHz	30.000 kHz	26.98534 MHz	-31.35 dBm	-8.35 dB																		



## Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																		
TX-CB	AM	CH <sub>M</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB Mode Auto FFT</div><div>1 Spurious Emissions</div><div>Limit Check</div><div>Line_SPURIOUS_LINE_ABS_001</div><div>PASS</div><div>PASS</div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div><div>CF 27.185 MHz</div><div>1402 pts</div><div>100.0 kHz/</div><div>Span 1.0 MHz</div><div>2 Result Summary</div><table><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>Alt</th></tr><tr><td>26.685 MHz</td><td>27.185 MHz</td><td>30.000 kHz</td><td>27.16466 MHz</td><td>-33.95 dBm</td><td>-10.95 dB</td></tr><tr><td>27.205 MHz</td><td>27.685 MHz</td><td>30.000 kHz</td><td>27.20534 MHz</td><td>-31.72 dBm</td><td>-8.72 dB</td></tr></table><div>Measuring...</div><div>13.10.2020 17:10:43</div><div>Date: 13.OCT.2020 17:10:43</div></div>	Range Low	Range Up	RBW	Frequency	Power Abs	Alt	26.685 MHz	27.185 MHz	30.000 kHz	27.16466 MHz	-33.95 dBm	-10.95 dB	27.205 MHz	27.685 MHz	30.000 kHz	27.20534 MHz	-31.72 dBm	-8.72 dB
			Range Low	Range Up	RBW	Frequency	Power Abs	Alt													
26.685 MHz	27.185 MHz	30.000 kHz	27.16466 MHz	-33.95 dBm	-10.95 dB																
27.205 MHz	27.685 MHz	30.000 kHz	27.20534 MHz	-31.72 dBm	-8.72 dB																
<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB RBW 300 Hz Att -20 dB SWF 14 ms (~23 ms) VBW 3 kHz Mode Auto FFT</div><div>1 Frequency Sweep</div><div>1PK View</div><div>2PK View</div><div>M1[1]</div><div>34.55 dBm</div><div>27.4052000 MHz</div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>CF 27.405 MHz</div><div>1001 pts</div><div>10.0 kHz/</div><div>Span 100.0 MHz</div><div>Measuring...</div><div>09.03.2020 16:54:03</div><div>Date: 9.MAR.2020 16:54:03</div></div>																					
TX-CB	AM	CH <sub>H</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 40.00 dBm Offset 20.50 dB Mode Auto FFT</div><div>1 Spurious Emissions</div><div>Limit Check</div><div>Line_SPURIOUS_LINE_ABS_001</div><div>PASS</div><div>PASS</div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div><div>CF 27.405 MHz</div><div>1402 pts</div><div>104.0 kHz/</div><div>Span 1.04 MHz</div><div>2 Result Summary</div><table><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>Alt</th></tr><tr><td>26.885 MHz</td><td>27.385 MHz</td><td>30.000 kHz</td><td>27.38464 MHz</td><td>-34.00 dBm</td><td>-11.00 dB</td></tr><tr><td>27.425 MHz</td><td>27.925 MHz</td><td>30.000 kHz</td><td>27.42536 MHz</td><td>-30.27 dBm</td><td>-7.27 dB</td></tr></table><div>Measuring...</div><div>13.10.2020 17:15:01</div><div>Date: 13.OCT.2020 17:15:00</div></div>	Range Low	Range Up	RBW	Frequency	Power Abs	Alt	26.885 MHz	27.385 MHz	30.000 kHz	27.38464 MHz	-34.00 dBm	-11.00 dB	27.425 MHz	27.925 MHz	30.000 kHz	27.42536 MHz	-30.27 dBm	-7.27 dB
			Range Low	Range Up	RBW	Frequency	Power Abs	Alt													
26.885 MHz	27.385 MHz	30.000 kHz	27.38464 MHz	-34.00 dBm	-11.00 dB																
27.425 MHz	27.925 MHz	30.000 kHz	27.42536 MHz	-30.27 dBm	-7.27 dB																

**Appendix D:Modulation Limit**

Test Mode	Modulation Type	Test Channel	Audio input (mV)	Measured modulation response (%)		
				400	1400	2500
TX-CB	AM	CH <sub>M</sub>	1	18.7	25.2	24.5
TX-CB	AM	CH <sub>M</sub>	2	36.8	51.4	49.2
TX-CB	AM	CH <sub>M</sub>	3	55.4	62.3	60.4
TX-CB	AM	CH <sub>M</sub>	4	62.8	63.9	62.5
TX-CB	AM	CH <sub>M</sub>	5	64.5	65.0	63.7
TX-CB	AM	CH <sub>M</sub>	6	65.7	65.5	64.2
TX-CB	AM	CH <sub>M</sub>	7	66.3	65.8	64.5
TX-CB	AM	CH <sub>M</sub>	8	67.8	65.9	65.3
TX-CB	AM	CH <sub>M</sub>	9	68.0	66.4	65.8
TX-CB	AM	CH <sub>M</sub>	10	68.2	67.3	66.3
TX-CB	AM	CH <sub>M</sub>	20	68.6	70.2	69.2
TX-CB	AM	CH <sub>M</sub>	30	71.2	73.5	70.3
TX-CB	AM	CH <sub>M</sub>	40	73.3	75.1	71.9
TX-CB	AM	CH <sub>M</sub>	50	74.0	76.7	73.5
TX-CB	AM	CH <sub>M</sub>	60	74.2	78.3	74.4
TX-CB	AM	CH <sub>M</sub>	70	74.6	79.9	73.5
TX-CB	AM	CH <sub>M</sub>	80	74.9	81.5	74.4
TX-CB	AM	CH <sub>M</sub>	90	75.4	83.1	75.5
TX-CB	AM	CH <sub>M</sub>	100	75.9	84.7	78.0
TX-CB	AM	CH <sub>M</sub>	200	80.5	87.2	85.4
TX-CB	AM	CH <sub>M</sub>	300	84.5	91.2	90.2



## Appendix D:Modulation Limit

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																
TX-CB	AM	CH <sub>M</sub>	<p>Measured modulation response (%)</p> <p>Audio Input(mv)</p> <p>Legend: 400 (red), 1400 (green), 2500 (blue)</p> <table border="1"><caption>Approximate data points from the graph</caption><thead><tr><th>Audio Input (mv)</th><th>400 Hz (%)</th><th>1400 Hz (%)</th><th>2500 Hz (%)</th></tr></thead><tbody><tr><td>1</td><td>20</td><td>25</td><td>25</td></tr><tr><td>10</td><td>40</td><td>50</td><td>50</td></tr><tr><td>100</td><td>80</td><td>90</td><td>85</td></tr></tbody></table>	Audio Input (mv)	400 Hz (%)	1400 Hz (%)	2500 Hz (%)	1	20	25	25	10	40	50	50	100	80	90	85
Audio Input (mv)	400 Hz (%)	1400 Hz (%)	2500 Hz (%)																
1	20	25	25																
10	40	50	50																
100	80	90	85																

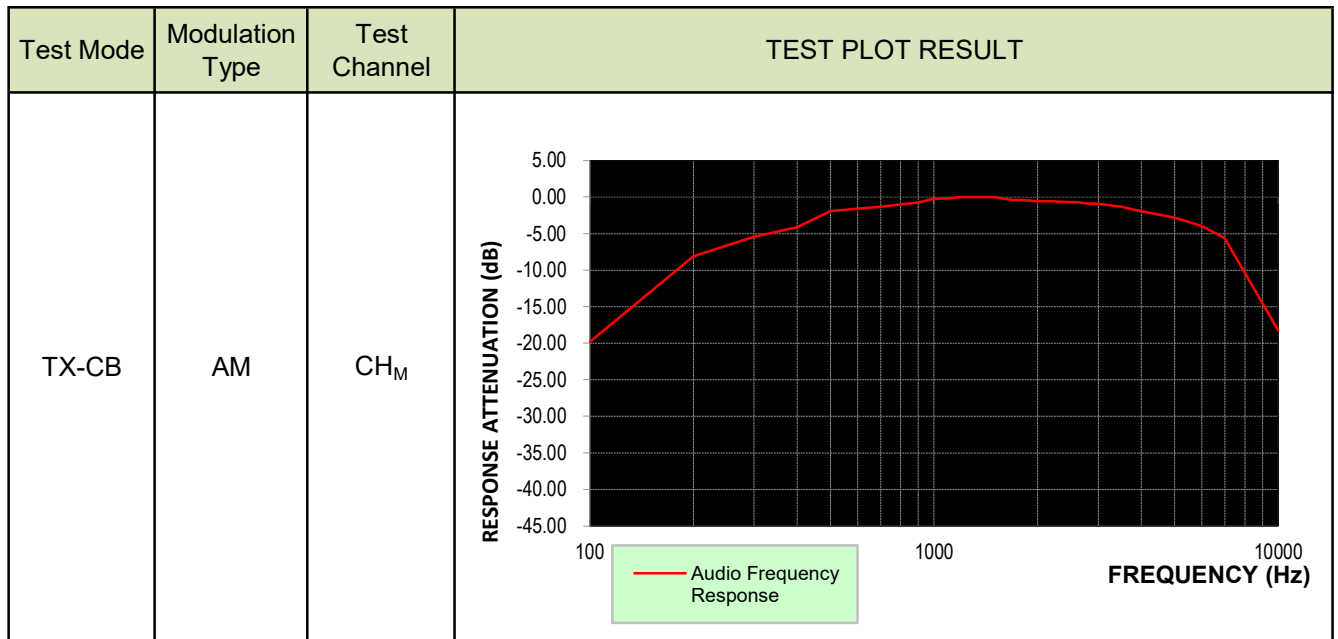
**Appendix E:Aduio Frequency Response**

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response	
				mV	dB*
TX-CB	AM	CH <sub>M</sub>	100	18.00	-19.81
TX-CB	AM	CH <sub>M</sub>	200	4.70	-8.15
TX-CB	AM	CH <sub>M</sub>	300	3.45	-5.46
TX-CB	AM	CH <sub>M</sub>	400	2.97	-4.16
TX-CB	AM	CH <sub>M</sub>	500	2.30	-1.94
TX-CB	AM	CH <sub>M</sub>	600	2.21	-1.59
TX-CB	AM	CH <sub>M</sub>	700	2.15	-1.35
TX-CB	AM	CH <sub>M</sub>	800	2.07	-1.02
TX-CB	AM	CH <sub>M</sub>	900	2.01	-0.77
TX-CB	AM	CH <sub>M</sub>	1000	1.89	-0.23
TX-CB	AM	CH <sub>M</sub>	1100	1.88	-0.19
TX-CB	AM	CH <sub>M</sub>	1200	1.85	-0.05
TX-CB	AM	CH <sub>M</sub>	1300	1.84	0.00
TX-CB	AM	CH <sub>M</sub>	1400	1.84	0.00
TX-CB	AM	CH <sub>M</sub>	1500	1.85	-0.05
TX-CB	AM	CH <sub>M</sub>	1600	1.89	-0.23
TX-CB	AM	CH <sub>M</sub>	1700	1.93	-0.41
TX-CB	AM	CH <sub>M</sub>	1800	1.93	-0.41
TX-CB	AM	CH <sub>M</sub>	1900	1.95	-0.50
TX-CB	AM	CH <sub>M</sub>	2000	1.97	-0.59
TX-CB	AM	CH <sub>M</sub>	2200	1.97	-0.59
TX-CB	AM	CH <sub>M</sub>	2400	1.99	-0.68
TX-CB	AM	CH <sub>M</sub>	2600	2.00	-0.72
TX-CB	AM	CH <sub>M</sub>	2800	2.04	-0.90
TX-CB	AM	CH <sub>M</sub>	3000	2.05	-0.94
TX-CB	AM	CH <sub>M</sub>	3500	2.15	-1.35
TX-CB	AM	CH <sub>M</sub>	4000	2.30	-1.94
TX-CB	AM	CH <sub>M</sub>	5000	2.55	-2.83
TX-CB	AM	CH <sub>M</sub>	6000	2.90	-3.95
TX-CB	AM	CH <sub>M</sub>	7000	3.52	-5.63
TX-CB	AM	CH <sub>M</sub>	10000	15.00	-18.23





## Appendix E:Aduio Frequency Response



**Appendix F:Frequency Stability Test & Temperature**

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)			Limit (ppm)	Result
		Voltage	Temperature	CH <sub>L</sub>	CH <sub>M</sub>	CH <sub>H</sub>		
TX-CB	AM	V <sub>N</sub>	-30	0.037	0.034	0.027	±50	PASS
TX-CB	AM	V <sub>N</sub>	-20	0.038	0.031	0.028	±50	PASS
TX-CB	AM	V <sub>N</sub>	-10	0.036	0.033	0.027	±50	PASS
TX-CB	AM	V <sub>N</sub>	0	0.035	0.032	0.026	±50	PASS
TX-CB	AM	V <sub>N</sub>	10	0.035	0.034	0.028	±50	PASS
TX-CB	AM	V <sub>N</sub>	20	0.035	0.031	0.026	±50	PASS
TX-CB	AM	V <sub>N</sub>	30	0.036	0.032	0.026	±50	PASS
TX-CB	AM	V <sub>N</sub>	40	0.036	0.033	0.027	±50	PASS
TX-CB	AM	V <sub>N</sub>	50	0.038	0.031	0.027	±50	PASS

**Appendix G:Frequency Stability Test & Voltage**

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)			Limit (ppm)	Result
		Voltage	Temperature	CH <sub>L</sub>	CH <sub>M</sub>	CH <sub>H</sub>		
TX-CB	AM	V <sub>L</sub>	T <sub>N</sub>	0.027	0.030	0.025	±50	PASS
TX-CB	AM	V <sub>N</sub>	T <sub>N</sub>	0.035	0.031	0.026	±50	PASS
TX-CB	AM	V <sub>H</sub>	T <sub>N</sub>	0.032	0.029	0.031	±50	PASS

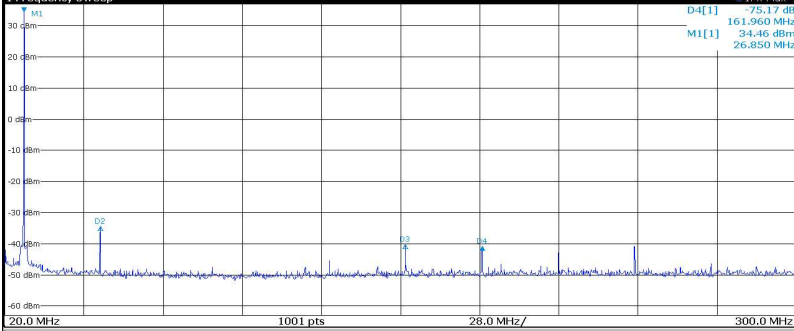
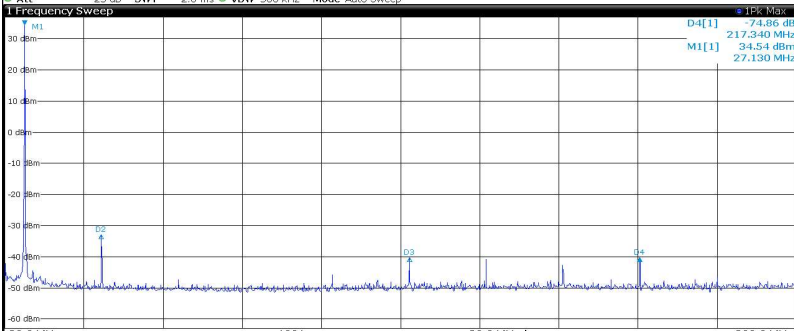
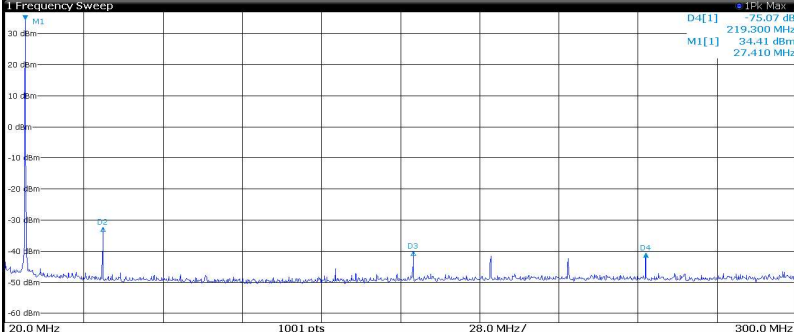


## Appendix H: Transmit Conducted Spurious Emission

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																								
TX-CB	AM	CH <sub>L</sub>	<div><div>Spectrum</div><div><div>Ref Level 40.00 dBm Offset 31.00 dB Mode Auto FFT</div><div><div>1 Max</div><div><div>M1[1]</div><div>-27.29 dBm</div><div>898.999000 MHz</div></div></div><div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div></div><div><div>SPURIOUS_LINE_ABS</div></div><div><div>Start 9.0 kHz</div><div>5701 pts</div><div>Stop 1.0 GHz</div></div><div><div>Spurious Emissions</div><table><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>ΔLimit</th></tr><tr><td>9.000 kHz</td><td>150.000 kHz</td><td>1.000 kHz</td><td>11.11198 kHz</td><td>-47.78 dBm</td><td>-200.00 dB</td></tr><tr><td>150.000 kHz</td><td>30.000 MHz</td><td>10.000 kHz</td><td>26.97023 MHz</td><td>35.04 dBm</td><td>-200.00 dB</td></tr><tr><td>30.000 MHz</td><td>1.000 GHz</td><td>100.000 kHz</td><td>898.99875 MHz</td><td>-27.29 dBm</td><td>-200.00 dB</td></tr></table></div><div><div>Measuring...</div></div></div><div>Date: 12 MAY 2020 14:05:22</div></div>	Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit	9.000 kHz	150.000 kHz	1.000 kHz	11.11198 kHz	-47.78 dBm	-200.00 dB	150.000 kHz	30.000 MHz	10.000 kHz	26.97023 MHz	35.04 dBm	-200.00 dB	30.000 MHz	1.000 GHz	100.000 kHz	898.99875 MHz	-27.29 dBm	-200.00 dB
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TX-CB	AM	CH <sub>M</sub>	<div><div>Spectrum</div><div><div>Ref Level 40.00 dBm Offset 31.00 dB Mode Auto FFT</div><div><div>1 Max</div><div><div>M1[1]</div><div>-29.77 dBm</div><div>901.179000 MHz</div></div></div><div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div></div><div><div>SPURIOUS_LINE_ABS</div></div><div><div>Start 9.0 kHz</div><div>5701 pts</div><div>Stop 1.0 GHz</div></div><div><div>Spurious Emissions</div><table><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>ΔLimit</th></tr><tr><td>9.000 kHz</td><td>150.000 kHz</td><td>1.000 kHz</td><td>9.50285 kHz</td><td>-49.79 dBm</td><td>-200.00 dB</td></tr><tr><td>150.000 kHz</td><td>30.000 MHz</td><td>10.000 kHz</td><td>27.17918 MHz</td><td>39.48 dBm</td><td>-200.00 dB</td></tr><tr><td>30.000 MHz</td><td>1.000 GHz</td><td>100.000 kHz</td><td>901.18125 MHz</td><td>-29.77 dBm</td><td>-200.00 dB</td></tr></table></div><div><div>Measuring...</div></div></div><div>Date: 12 MAY 2020 14:08:14</div></div>	Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit	9.000 kHz	150.000 kHz	1.000 kHz	9.50285 kHz	-49.79 dBm	-200.00 dB	150.000 kHz	30.000 MHz	10.000 kHz	27.17918 MHz	39.48 dBm	-200.00 dB	30.000 MHz	1.000 GHz	100.000 kHz	901.18125 MHz	-29.77 dBm	-200.00 dB
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TX-CB	AM	CH <sub>H</sub>	<div><div>Spectrum</div><div><div>Ref Level 40.00 dBm Offset 31.00 dB Mode Auto FFT</div><div><div>1 Max</div><div><div>M1[1]</div><div>-29.81 dBm</div><div>54.859000 MHz</div></div></div><div><div>30 dBm</div><div>20 dBm</div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div></div><div><div>SPURIOUS_LINE_ABS</div></div><div><div>Start 9.0 kHz</div><div>5701 pts</div><div>Stop 1.0 GHz</div></div><div><div>Spurious Emissions</div><table><tr><th>Range Low</th><th>Range Up</th><th>RBW</th><th>Frequency</th><th>Power Abs</th><th>ΔLimit</th></tr><tr><td>9.000 kHz</td><td>150.000 kHz</td><td>1.000 kHz</td><td>12.11769 kHz</td><td>-49.11 dBm</td><td>-200.00 dB</td></tr><tr><td>150.000 kHz</td><td>30.000 MHz</td><td>10.000 kHz</td><td>27.41798 MHz</td><td>34.73 dBm</td><td>-200.00 dB</td></tr><tr><td>30.000 MHz</td><td>1.000 GHz</td><td>100.000 kHz</td><td>54.85625 MHz</td><td>-29.81 dBm</td><td>-200.00 dB</td></tr></table></div><div><div>Measuring...</div></div></div><div>Date: 12 MAY 2020 14:07:05</div></div>	Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit	9.000 kHz	150.000 kHz	1.000 kHz	12.11769 kHz	-49.11 dBm	-200.00 dB	150.000 kHz	30.000 MHz	10.000 kHz	27.41798 MHz	34.73 dBm	-200.00 dB	30.000 MHz	1.000 GHz	100.000 kHz	54.85625 MHz	-29.81 dBm	-200.00 dB
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit																						
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30.000 MHz	1.000 GHz	100.000 kHz	54.85625 MHz	-29.81 dBm	-200.00 dB																						



## Appendix H: Transmit Conducted Spurious Emission-Harmonic

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																			
TX-CB	AM	CH <sub>L</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 37.00 dBm Offset 21.00 dB RBW 100 kHz Att 25 dB SWT 2.8 ms VBW 300 kHz Mode Auto Sweep</div><div>1 Frequency Sweep</div><div><div>1Pk Max</div><div>D4[1] -75.17 dB M1[1] 34.46 dBm 161.960 MHz 26.850 MHz</div></div><div></div><div>20.0 MHz 1001 pts 28.0 MHz/ 300.0 MHz</div><div>2 Marker Table</div><table><thead><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr></thead><tbody><tr><td>M1</td><td>1</td><td>1</td><td>26.85 MHz</td><td>34.46 dBm</td><td></td><td></td></tr><tr><td>D2</td><td>M1</td><td>1</td><td>27.13 MHz</td><td>-68.94 dB</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>134.83 MHz</td><td>-74.78 dB</td><td></td><td></td></tr><tr><td>D4</td><td>M1</td><td>1</td><td>161.96 MHz</td><td>-75.17 dB</td><td></td><td></td></tr></tbody></table><div>Measuring... 14.10.2020 10:11:51</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1	1	26.85 MHz	34.46 dBm			D2	M1	1	27.13 MHz	-68.94 dB			D3	M1	1	134.83 MHz	-74.78 dB			D4	M1	1	161.96 MHz	-75.17 dB		
		Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																														
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D4	M1	1	161.96 MHz	-75.17 dB																																		
CH <sub>M</sub>	<div><div>MultiViewSpectrum</div><div>Ref Level 37.00 dBm Offset 21.00 dB RBW 100 kHz Att 25 dB SWT 2.8 ms VBW 300 kHz Mode Auto Sweep</div><div>1 Frequency Sweep</div><div><div>1Pk Max</div><div>D4[1] -74.86 dB M1[1] 34.54 dBm 217.340 MHz 27.130 MHz</div></div><div></div><div>20.0 MHz 1001 pts 28.0 MHz/ 300.0 MHz</div><div>2 Marker Table</div><table><thead><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr></thead><tbody><tr><td>M1</td><td>1</td><td>1</td><td>27.13 MHz</td><td>34.54 dBm</td><td></td><td></td></tr><tr><td>D2</td><td>M1</td><td>1</td><td>27.13 MHz</td><td>-67.49 dB</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>135.94 MHz</td><td>-74.69 dB</td><td></td><td></td></tr><tr><td>D4</td><td>M1</td><td>1</td><td>217.34 MHz</td><td>-74.86 dB</td><td></td><td></td></tr></tbody></table><div>Measuring... 14.10.2020 10:12:30</div></div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1	1	27.13 MHz	34.54 dBm			D2	M1	1	27.13 MHz	-67.49 dB			D3	M1	1	135.94 MHz	-74.69 dB			D4	M1	1	217.34 MHz	-74.86 dB				
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D3	M1	1	137.06 MHz	-74.42 dB																																		
D4	M1	1	219.3 MHz	-75.07 dB																																		

End of Report