FCC Part 90& Part 22 Rules
Test Report

Report No.: AGC01284180603FE10

FCC ID	:	PH3DJ-MD5
PRODUCT DESIGNATION	:	VHF/UHF DUAL BAND TRANSCEIVER
BRAND NAME	:	ALINCO
MODEL NAME	:	DJ-MD5, DJ-MD5T, DJ-MD5TGP
CLIENT	:	Alinco Incorporated, Electronics Division
DATE OF ISSUE	:	Sep. 05, 2018
STANDARD(S)	:	FCC Part 90 Rules FCC Part 22 Rules
REPORT VERSION	:	V 1.3

***A**ttestation of **G**lobal **C**ompliance (Shenzhen) Co., Ltd*

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 20, 2018	Invalid	Initial Release
V1.1	1st	Aug. 13, 2018	Invalid	Update the comments.
V1.2	2st	Aug. 29, 2018	Invalid	Update the comments.
V1.3	3rd	Sep. 05, 2018	Valid	Update the comments.

VERIFICATION OF COMPLIANCE

Applicant:	Alinco Incorporated, Electronics Division
	Yodoyabashi Dai-Bldg 13F, 4-4-9 Koraibashi, Chuo-Ku, Osaka 541-0043, Japan
Manufacturer:	Alinco Incorporated, Electronics Division
	Yodoyabashi Dai-Bldg 13F, 4-4-9 Koraibashi, Chuo-Ku, Osaka 541-0043, Japan
Product Designation:	VHF/UHF DUAL BAND TRANSCEIVER
Brand Name:	ALINCO
Test Model	DJ-MD5
Series Model	DJ-MD5T, DJ-MD5TGP
Difference description	All the same except for the model name.
Date of Test:	Jul. 14, 2018 to Jul. 20, 2018

WE HEREBY CERTIFY THAT:

The above equipment was tested by Shenzhen Attestation of Global Compliance Science & Technology Co., Ltd. The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI/TIA-603-E (2016). The sample tested as described in this report is in compliance with the FCC Rules Part 90 and FCC Rules Part 22 requirements

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

Tested by Steven Zhou

Steven Zhou(Zhou Pengyun) Jul. 20, 2018

Reviewed by Bart Xie

Bart Xie(Xie Xiaobin) Sep. 05, 2018

Approved by Forrest Lei

Forrest Lei(Lei Yonggang)
Authorized Officer Sep. 05, 2018

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

The EUT is a **VHF/UHF DUAL BAND TRANSCEIVER** designed for voice/data communication. It is designed by way of utilizing the FM/4FSK modulation achieves the system operating.
A major technical description of EUT is described as following:

Communication Type	Voice / Data
Hardware Version	V1.00
Software Version	V2.02
Modulation	FM/4FSK
Emission Type	11K0F3E, 7K60FXD, 7K60FXW
Emission Bandwidth	Analog:10.17KHz(5W-12.5 KHz),10.17KHz(2.5W-12.5 KHz) ---VHF Analog:10.17KHz(1W-12.5 KHz),10.17KHz(0.2W-12.5 KHz) ---VHF Digital: 9.755KHz(5W-12.5 KHz),9.473 KHz(2.5W-12.5 KHz) ---VHF 10.01KHz(1W-12.5 KHz),9.515KHz(0.2W-12.5 KHz) ---VHF Analog:10.17KHz(5W-12.5 KHz),10.17KHz(2.5W-12.5 KHz) ---UHF Analog:10.17KHz(1W-12.5 KHz),10.17KHz(0.2W-12.5 KHz) ---UHF Digital:9.367KHz(5W), 9.653KHz(2.5W) ---UHF 9.572KHz(1W), 9.664KHz(0.2W) ---UHF
Peak Frequency Deviation	1.98KHz
Audio Frequency Response	11.41 dB
Maximum Transmitter Power	Analog:36.88 dBm(5W-12.5 KHz)(Radiated Power), 33.89dBm (2.5W-12.5 KHz) ---VHF(Radiated Power) Analog:29.89 dBm(1W-12.5 KHz)(Radiated Power), 22.91dBm (Conducted Power) (0.2W-12.5 KHz) ---VHF Digital: 36.89 dBm(5W) (Radiated Power), 33.89dBm (2.5W) (Conducted Power) ---VHF Digital: 29.89 dBm(1W) (Conducted Power), 22.89dBm (0.2W) (Radiated Power)---VHF Analog:36.89 dBm(5W-12.5 KHz) (Conducted Power), 33.89dBm (2.5W-12.5 KHz) (Conducted Power) ---UHF Analog:29.89 dBm(1W-12.5 KHz) (Radiated Power), 22.89dBm (0.2W-12.5 KHz) (Conducted Power)---UHF Digital: 36.88 dBm(5W) (Conducted Power), 33.89dBm (2.5W) (Radiated Power)---UHF Digital: 29.89 dBm(1W) (Radiated Power) , - 22.89dBm (0.2W) (Radiated Power) ---UHF

Output power Modification	UHF/VHF:5W/2.5W/1W/0.2W (It was fixed by the manufacturer, any individual can't arbitrarily change it.)	
Data Rate	9600bps/12.5KHz(Channel Spacing)	
Antenna Designation	Detachable	
Antenna Gain	2.15 dBi	
Power Supply	DC 7.4V, 1700mAh (by battery)	
Adapter Parameter	INPUT：AC 100V-240V , 50/60Hz , 0.25A OUTPUT：DC 12V , 0.5A	
Limiting Voltage	DC 6V-8.51V	
Operation Frequency Range and Channel	Frequency Range: 136 MHz to 174 MHz (VHF)　400 MHz to 480 MHz (UHF) Channel Separation: 12.5KHz (Analog), 12.5KHz(Digital)	
	Bottom Channel: 136.025MHz Middle Channel:151.85MHz Middle Channel:155.025MHz Middle Channel:161.61MHz (Top)High Channel: 173.975MHz	Bottom Channel: 400.025MHz Middle Channel: 453.225MHz Middle Channel: 454.025MHz (Top)High Channel: 479.975MHz
Frequency Tolerance	1.142ppm	

Frequency Range (MHz)	Rated Transmit Power(W)(Conducted)	Transmit Mode/Emission Designator
400-480	1W/5W	11K0F3E(Analog Vioce;NB)
400-480	1W/5W	7K60FXD/7K60FXW(9600Data/Digital Voice NB)

Frequency Range (MHz)	Rated Transmit Power(W)(Conducted)	Transmit Mode/Emission Designator
136-174	5W/2.5W/1W/0.2W	11K0F3E(Analog Vioce;NB)
136-174	5W/2.5W/1W/0.2W	7K60FXD/7K60FXW(9600Data/Digital Voice NB)

Channel No. (6. 25KHz)	Channel No. (12.5KHz)	12.5KHz Channel Spaced 400MHz Band Plan(MHz)
1	1-2	400.025
2		
3	3-4	440.025
4		
5	5-6	479.975
6		

Channel No. (6.25KHz)	Channel No. (12.5KHz)	12.5KHz Channel Spaced 136MHz Band Plan(MHz)
1	1-2	136.025
2		
3	3-4	155.025
4		
5	5-6	173.975
6		

FCC Rules and Regulations Part 2.202: Necessary Bandwidth and Emission Bandwidth
Voice –FM Analog (12.5KHz)
Calculation:
Max modulation (M) in kHz : 3.0
Max deviation(D) in kHz:2.5
Constant factor (K): 1(assumed)
Bn= 2XM +2XDK=11.0 KHz
Emission designator: 11K0F3E
9600 Digital Vioce/date (12.5KHz)
Calculation:
Data rate in bps(R)=9600
Deviation Peak deviation of carrier(D)=2359.585
Constant factor (K): 1 (default)
Bn= 3.86D+1.27RK= 3.86(2359.585)+0.27(9600)(1)=11.7KHz
Emission designator: 11K0FXD

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for FCC ID: PH3DJ-MD5, filing to comply with Part 2, Part 22, and Part 90 of the Federal Communication Commission rules.

1.3 TEST METHODOLOGY

The radiated emission testing was performed according to the procedures of ANSI/TIA-603-E (2016).

1.4 TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2F., Bldg.2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District B112-B113, Bldg.12, Baoan Bldg Materials Center, No.1 of Xixiang Inner Ring Road, Baoan District, Shenzhen 518012
NVLAP LAB CODE	600153-0
Designation Number	CN5028
FCC Test Firm Registration Number	682566
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by National Voluntary Laboratory Accreditation program, NVLAP Code 600153-0

1.5 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

1.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 GENERAL TECHNICAL REQUIREMENTS

For FCC Part 90& Part 22 requirements:
(1). Section 90.205 &22.565: RF Output Power
(2). Section 90.207: Modulation Characteristic
(3). Section 90.209 &22.359: Occupied Bandwidth
(4). Section 90.210&22.359: Emission Mask
(5). Section 90.213&22.355: Frequency Tolerance
(6). Section 90.214: Transient Frequency Behavior

2.4 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System

Table 2-1 Equipment Used in Tested System

Item	Equipment	Model No.	Identifier	Note
1	VHF/UHF DUAL BAND TRANSCEIVER	DJ-MD5	FCC ID: PH3DJ-MD5	EUT

3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§90.205 & 22.565	Maximum Transmitter Power	Compliant
§90.207	Modulation Characteristic	Compliant
§90.209& 22.359	Occupied Bandwidth	Compliant
§90.210& 22.359	Emission Mask	Compliant
§90.213& 22.355	Frequency Tolerance	Compliant
§90.214	Transient Frequency Behavior	Compliant

LIST OF EQUIPMENTS USED

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 12, 2018	Jun. 11, 2019
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec.08, 2017	Dec.07, 2018
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep.20, 2017	Sep.19, 2018
preamplifier	ChengYi	EMC184045SE	980508	Sep.15, 2017	Sep.14, 2018
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 18, 2017	May 17, 2019
Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-205	Jun. 12, 2018	Jun. 11, 2019
HORN ANTENNA	EM	EM-AH-10180	/	Mar.01, 2018	Feb.29, 2020
SIGNAL GENERATOR	AGILENT	E4421B	122501288	Jun. 12, 2018	Jun. 11, 2019
SIGNAL GENERATOR	R&S	SMT03	A0304261	Jun. 12, 2018	Jun. 11, 2019
ANTENNA	SCHWARZBECK	VULB9168	VULB9168-494	Mar.01, 2018	Feb.29, 2019
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep.28, 2017	Sep.27, 2018
Modulation Domain Analyzer	HP	53310A	3121A02467	May. 17, 2017	May. 18, 2019
Small environmental tester	ESPEC	SH-242	--	Mar.02, 2018	Mar. 01, 2019
RF Communication Test Set	HP	8920B	--	Jun. 20, 2017	Jun. 19, 2018
Loop Antenna	A.H.Systems,Inc	SAS-562B	--	Mar.01, 2018	Feb.28, 2019

Note: 8920B can generate audio modulation frequency.

4. DESCRIPTION OF TEST MODES

RF TEST MODES

The EUT (VHF/UHF DUAL BAND TRANSCEIVER) has been tested under normal operating condition. (The top channel, the middle channel and the bottom channel) are chosen for testing at each channel separation.

Analog:

No.	TEST MODES	CHANNEL SEPARATION
1	Low Channel	12.5 KHz
2	Middle Channel	12.5 KHz
3	High Channel	12.5 KHz

Digital:

No.	TEST MODES	CHANNEL SEPARATION
1	Low Channel	12.5 KHz
2	Middle Channel	12.5 KHz
3	High Channel	12.5 KHz

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

5. FREQUENCY TOLERANCE

5.1 PROVISIONS APPLICABLE

a). According to FCC §2.1055, § 22.355 and §90.213, the frequency stability shall be measured with variation of ambient temperature from –30℃ to +50℃ centigrade.

b). According to FCC Part 2 Section 2.1055(d)(2), for battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacturer.

c). According to FCC Part 90 Section 90.213, the frequency tolerance must be maintained within 0.00025% for 12.5 KHz channel separation and 0.0001% for 6.25 KHz channel separation.

5.2 MEASUREMENT PROCEDURE

5.2.1 Frequency stability versus environmental temperature

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

5.2.2 Frequency stability versus input voltage

1. Setup the configuration per figure 1 for frequencies measured at temperature if it is within 15℃ to 25℃. Otherwise, an environment chamber set for a temperature of 20℃ shall be used. The EUT shall be powered by DC 7.4V.
2. Set SA center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 1 KHz and Video Resolution Bandwidth to 1KHz. Record this frequency as reference frequency.
3. Supply the EUT primary voltage at the operating end point which is specified by manufacturer and record the frequency.

5.3 TEST SETUP BLOCK DIAGRAM

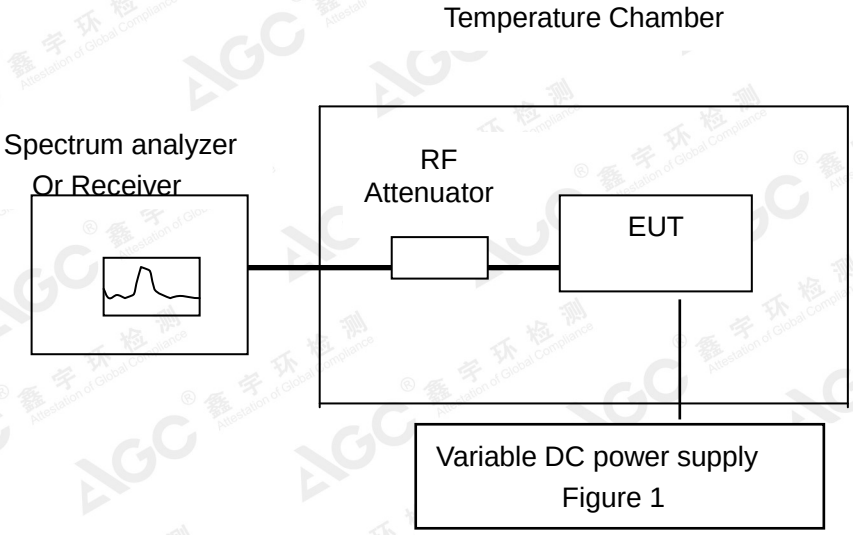


Figure 1

TEST RESULT

VHF-Analog:

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-5W-12.5KHz**

Environment Temperature(℃)	Power Supply (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40 V	0.972	0.653	1.045	5
40	DC 7.40 V	0.952	0.566	0.752	
30	DC 7.40 V	0.823	0.991	0.908	
20	DC 7.40 V	1.061	0.587	0.602	
10	DC 7.40 V	0.528	0.867	0.684	
0	DC 7.40 V	0.729	0.945	0.671	
-10	DC 7.40 V	1.051	0.867	0.839	
-20	DC 7.40 V	1.073	0.574	0.821	
-30	DC 7.40 V	0.584	0.565	0.725	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.752	0.689	5
40	DC 7.40 V	0.344	0.803	
30	DC 7.40 V	0.987	0.590	
20	DC 7.40 V	0.783	0.575	
10	DC 7.40 V	0.640	0.785	
0	DC 7.40 V	0.664	0.519	
-10	DC 7.40 V	0.952	0.753	
-20	DC 7.40 V	0.346	0.437	
-30	DC 7.40 V	0.666	0.538	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.749	0.726	0.762	5
40	DC 6.29	1.054	0.991	1.033	
30	DC 6.29	0.649	0.934	0.586	
20	DC 6.29	0.783	0.974	0.849	
10	DC 6.29	1.084	0.703	0.854	
0	DC 6.29	0.956	0.700	0.532	
-10	DC 6.29	0.648	0.726	0.656	
-20	DC 6.29	0.808	1.063	0.950	
-30	DC 6.29	0.753	0.569	1.022	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 6.29	0.418	0.927	5
40	DC 6.29	0.417	0.388	
30	DC 6.29	0.696	0.633	
20	DC 6.29	0.718	0.666	
10	DC 6.29	0.705	0.451	
0	DC 6.29	0.767	0.919	
-10	DC 6.29	0.597	0.511	
-20	DC 6.29	0.420	0.396	
-30	DC 6.29	0.839	0.574	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 136.025MHz	Reference Frequency 155.025MHz	Reference Frequency 173.975MHz	Limit: ppm
50	DC 8.51	0.852	0.726	0.677	5
40	DC 8.51	1.047	0.676	0.675	
30	DC 8.51	0.687	0.765	0.692	
20	DC 8.51	0.559	0.712	0.667	
10	DC 8.51	0.557	0.757	0.922	
0	DC 8.51	0.557	0.649	1.023	
-10	DC 8.51	0.581	0.557	1.045	
-20	DC 8.51	0.523	0.970	0.751	
-30	DC 8.51	0.963	0.581	0.512	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 8.51	0.616	0.477	5
40	DC 8.51	0.381	0.517	
30	DC 8.51	0.375	0.726	
20	DC 8.51	0.497	0.540	
10	DC 8.51	0.997	0.584	
0	DC 8.51	0.949	0.545	
-10	DC 8.51	0.886	0.737	
-20	DC 8.51	0.413	0.503	
-30	DC 8.51	0.566	0.846	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00 V	0.657	1.035	0.895	5
40	DC 6.00 V	0.657	1.013	0.768	
30	DC 6.00 V	0.657	0.533	0.576	
20	DC 6.00 V	0.724	0.736	1.054	
10	DC 6.00 V	1.008	0.683	1.079	
0	DC 6.00 V	0.704	0.776	0.624	
-10	DC 6.00 V	1.079	0.728	0.704	
-20	DC 6.00 V	0.641	0.679	0.718	
-30	DC 6.00 V	0.634	1.090	0.883	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00 V	0.907	0.640	5
40	DC 6.00 V	0.924	0.942	
30	DC 6.00 V	0.330	0.677	
20	DC 6.00 V	0.445	0.486	
10	DC 6.00 V	0.478	0.405	
0	DC 6.00 V	0.467	0.762	
-10	DC 6.00 V	0.741	0.630	
-20	DC 6.00 V	0.875	0.991	
-30	DC 6.00 V	0.813	0.324	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40 V	0.933	0.697	0.570	5
40	DC 7.40 V	0.701	0.513	0.960	
30	DC 7.40 V	0.878	0.897	1.021	
20	DC 7.40 V	0.879	1.008	0.822	
10	DC 7.40 V	1.043	0.912	0.537	
0	DC 7.40 V	0.542	1.073	0.891	
-10	DC 7.40 V	0.597	0.790	0.979	
-20	DC 7.40 V	0.547	0.928	0.611	
-30	DC 7.40 V	1.086	0.959	0.943	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.981	0.458	5
40	DC 7.40 V	0.315	0.321	
30	DC 7.40 V	0.919	0.566	
20	DC 7.40 V	0.398	0.306	
10	DC 7.40 V	0.641	0.574	
0	DC 7.40 V	0.470	0.827	
-10	DC 7.40 V	0.383	0.315	
-20	DC 7.40 V	0.672	0.910	
-30	DC 7.40 V	0.429	0.371	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	1.070	1.033	0.556	5
40	DC 6.29	0.667	0.512	0.918	
30	DC 6.29	0.847	0.713	0.957	
20	DC 6.29	0.525	0.917	1.064	
10	DC 6.29	1.036	0.623	0.979	
0	DC 6.29	0.763	1.067	0.660	
-10	DC 6.29	0.523	0.701	0.708	
-20	DC 6.29	1.040	0.508	0.528	
-30	DC 6.29	0.997	0.611	0.683	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.29	0.717	0.885	5
40	DC 6.29	0.946	0.355	
30	DC 6.29	0.958	0.464	
20	DC 6.29	0.526	0.349	
10	DC 6.29	0.597	0.963	
0	DC 6.29	0.329	0.578	
-10	DC 6.29	0.946	0.325	
-20	DC 6.29	0.358	0.575	
-30	DC 6.29	0.851	0.373	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 8.51	1.098	0.958	0.608	5
40	DC 8.51	0.867	0.550	0.943	
30	DC 8.51	0.988	0.511	0.734	
20	DC 8.51	0.820	1.045	0.574	
10	DC 8.51	0.895	0.948	1.082	
0	DC 8.51	0.526	0.695	0.864	
-10	DC 8.51	0.956	1.028	0.695	
-20	DC 8.51	0.725	0.704	0.658	
-30	DC 8.51	0.772	0.754	0.722	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 8.51	1.016	0.861	5
40	DC 8.51	0.920	0.764	
30	DC 8.51	0.732	0.650	
20	DC 8.51	0.955	0.595	
10	DC 8.51	0.861	0.867	
0	DC 8.51	0.531	0.588	
-10	DC 8.51	0.584	0.983	
-20	DC 8.51	0.917	0.612	
-30	DC 8.51	0.794	0.627	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.712	0.704	1.027	5
40	DC 6.00	0.644	0.685	0.722	
30	DC 6.00	0.518	0.798	0.596	
20	DC 6.00	0.860	0.877	1.051	
10	DC 6.00	0.716	0.733	0.817	
0	DC 6.00	0.824	0.743	0.679	
-10	DC 6.00	1.077	0.746	0.712	
-20	DC 6.00	0.858	1.079	1.008	
-30	DC 6.00	1.025	0.624	1.014	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00 V	0.643	0.583	5
40	DC 6.00 V	0.655	0.894	
30	DC 6.00 V	1.060	0.545	
20	DC 6.00 V	0.591	1.100	
10	DC 6.00 V	0.952	0.878	
0	DC 6.00 V	0.950	0.625	
-10	DC 6.00 V	0.549	0.583	
-20	DC 6.00 V	0.945	0.987	
-30	DC 6.00 V	0.861	0.835	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-1W-12.5KHz**

Environment Temperature(℃)	Power Supply (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40 V	0.866	0.599	0.605	5
40	DC 7.40 V	0.723	0.894	0.678	
30	DC 7.40 V	0.700	0.649	0.992	
20	DC 7.40 V	1.032	0.543	0.505	
10	DC 7.40 V	0.805	0.620	0.791	
0	DC 7.40 V	0.834	1.048	0.568	
-10	DC 7.40 V	0.740	0.660	0.947	
-20	DC 7.40 V	0.610	0.929	0.812	
-30	DC 7.40 V	0.968	0.789	0.850	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.965	0.995	5
40	DC 7.40 V	0.840	0.883	
30	DC 7.40 V	0.815	0.743	
20	DC 7.40 V	0.575	0.726	
10	DC 7.40 V	0.801	0.940	
0	DC 7.40 V	0.705	1.025	
-10	DC 7.40 V	0.541	0.692	
-20	DC 7.40 V	0.926	0.810	
-30	DC 7.40 V	0.764	0.820	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	1.054	0.895	0.750	5
40	DC 6.29	0.612	1.062	1.091	
30	DC 6.29	0.997	1.016	0.625	
20	DC 6.29	0.698	1.020	0.657	
10	DC 6.29	0.545	0.863	0.956	
0	DC 6.29	0.825	0.749	1.002	
-10	DC 6.29	0.873	0.954	0.984	
-20	DC 6.29	1.024	1.047	0.892	
-30	DC 6.29	0.866	1.035	0.536	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 6.29	0.861	1.062	5
40	DC 6.29	0.757	1.064	
30	DC 6.29	0.700	0.773	
20	DC 6.29	0.938	0.774	
10	DC 6.29	0.587	0.810	
0	DC 6.29	0.571	0.846	
-10	DC 6.29	1.068	0.938	
-20	DC 6.29	0.515	0.535	
-30	DC 6.29	0.667	0.517	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 136.025MHz	Reference Frequency 155.025MHz	Reference Frequency 173.975MHz	Limit: ppm
50	DC 8.51	0.778	1.035	0.992	5
40	DC 8.51	1.059	0.553	1.094	
30	DC 8.51	0.824	0.626	0.543	
20	DC 8.51	0.586	1.005	0.839	
10	DC 8.51	0.999	1.000	1.046	
0	DC 8.51	0.709	0.837	0.939	
-10	DC 8.51	1.045	0.810	0.762	
-20	DC 8.51	0.883	0.684	0.584	
-30	DC 8.51	0.938	0.542	0.888	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 8.51	0.659	0.657	5
40	DC 8.51	1.063	0.588	
30	DC 8.51	0.591	0.842	
20	DC 8.51	0.557	0.761	
10	DC 8.51	0.934	0.806	
0	DC 8.51	0.967	1.064	
-10	DC 8.51	0.849	1.088	
-20	DC 8.51	1.041	0.620	
-30	DC 8.51	0.602	0.763	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00 V	0.718	0.923	0.615	5
40	DC 6.00 V	1.094	0.973	1.003	
30	DC 6.00 V	0.741	0.898	0.551	
20	DC 6.00 V	0.647	0.825	1.086	
10	DC 6.00 V	1.094	0.689	0.669	
0	DC 6.00 V	0.653	1.092	0.778	
-10	DC 6.00 V	1.028	0.743	1.007	
-20	DC 6.00 V	1.015	0.612	0.972	
-30	DC 6.00 V	0.708	1.065	0.916	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00 V	0.730	0.715	5
40	DC 6.00 V	0.926	1.006	
30	DC 6.00 V	0.562	0.668	
20	DC 6.00 V	0.536	0.928	
10	DC 6.00 V	1.041	0.818	
0	DC 6.00 V	0.735	0.997	
-10	DC 6.00 V	0.870	0.534	
-20	DC 6.00 V	0.732	0.861	
-30	DC 6.00 V	0.959	1.062	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40	0.949	0.650	0.879	5
40	DC 7.40	1.011	1.069	0.982	
30	DC 7.40	0.580	0.798	0.736	
20	DC 7.40	0.631	0.858	0.877	
10	DC 7.40	0.643	0.538	0.898	
0	DC 7.40	0.761	0.549	0.567	
-10	DC 7.40	1.033	0.777	0.840	
-20	DC 7.40	0.652	1.006	0.522	
-30	DC 7.40	0.555	1.070	0.806	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.735	1.057	5
40	DC 7.40 V	0.925	0.807	
30	DC 7.40 V	0.822	1.066	
20	DC 7.40 V	0.647	0.543	
10	DC 7.40 V	0.567	0.925	
0	DC 7.40 V	1.005	0.664	
-10	DC 7.40 V	0.663	1.028	
-20	DC 7.40 V	0.930	0.980	
-30	DC 7.40 V	0.552	0.652	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.716	0.539	0.549	5
40	DC 6.29	1.024	1.071	0.620	
30	DC 6.29	0.813	0.993	0.563	
20	DC 6.29	0.690	0.996	0.573	
10	DC 6.29	0.917	1.072	1.071	
0	DC 6.29	0.949	1.031	1.049	
-10	DC 6.29	1.088	1.074	0.836	
-20	DC 6.29	0.824	0.850	0.628	
-30	DC 6.29	1.029	1.098	0.582	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.29	0.673	0.716	5
40	DC 6.29	0.997	0.549	
30	DC 6.29	0.903	0.900	
20	DC 6.29	0.706	0.639	
10	DC 6.29	0.505	0.675	
0	DC 6.29	0.767	0.607	
-10	DC 6.29	0.636	0.628	
-20	DC 6.29	1.075	0.918	
-30	DC 6.29	0.870	0.733	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 8.51	0.918	1.080	0.718	5
40	DC 8.51	0.741	0.972	1.084	
30	DC 8.51	0.850	0.757	0.590	
20	DC 8.51	0.662	1.089	0.541	
10	DC 8.51	0.674	0.819	0.691	
0	DC 8.51	0.925	0.808	1.077	
-10	DC 8.51	0.864	0.521	0.610	
-20	DC 8.51	0.675	0.716	0.512	
-30	DC 8.51	0.513	0.561	0.608	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 8.51	0.516	0.766	5
40	DC 8.51	0.583	0.700	
30	DC 8.51	0.519	0.808	
20	DC 8.51	0.628	0.784	
10	DC 8.51	0.661	0.850	
0	DC 8.51	0.703	0.645	
-10	DC 8.51	0.826	0.520	
-20	DC 8.51	0.721	1.065	
-30	DC 8.51	0.587	0.995	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.804	0.598	0.516	5
40	DC 6.00	0.583	0.634	0.783	
30	DC 6.00	0.611	0.865	0.794	
20	DC 6.00	0.612	1.096	1.006	
10	DC 6.00	0.635	0.727	0.694	
0	DC 6.00	0.696	0.835	0.667	
-10	DC 6.00	0.717	0.955	0.831	
-20	DC 6.00	0.893	0.964	0.870	
-30	DC 6.00	0.618	0.975	0.834	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00 V	0.646	0.794	5
40	DC 6.00 V	0.608	1.094	
30	DC 6.00 V	0.861	1.074	
20	DC 6.00 V	0.899	0.954	
10	DC 6.00 V	0.806	1.006	
0	DC 6.00 V	0.683	0.646	
-10	DC 6.00 V	0.606	0.791	
-20	DC 6.00 V	0.965	0.876	
-30	DC 6.00 V	0.653	0.644	
Result	Pass			

Digital:

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40	0.872	0.776	1.083	5
40	DC 7.40	0.523	0.794	1.056	
30	DC 7.40	0.523	0.634	0.974	
20	DC 7.40	0.535	0.999	0.763	
10	DC 7.40	1.089	0.501	0.837	
0	DC 7.40	0.934	0.576	0.989	
-10	DC 7.40	0.886	0.727	0.756	
-20	DC 7.40	0.928	0.964	0.760	
-30	DC 7.40	0.640	1.007	0.527	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.700	0.790	5
40	DC 7.40 V	0.613	0.969	
30	DC 7.40 V	0.653	0.807	
20	DC 7.40 V	0.855	0.961	
10	DC 7.40 V	0.876	0.509	
0	DC 7.40 V	0.874	0.619	
-10	DC 7.40 V	1.040	0.578	
-20	DC 7.40 V	0.953	0.738	
-30	DC 7.40 V	0.645	0.845	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.758	1.033	0.528	5
40	DC 6.29	0.792	0.817	0.801	
30	DC 6.29	0.786	0.547	0.505	
20	DC 6.29	0.723	1.046	0.612	
10	DC 6.29	0.592	0.569	0.686	
0	DC 6.29	0.813	0.774	0.521	
-10	DC 6.29	0.770	0.996	0.618	
-20	DC 6.29	0.723	1.078	0.888	
-30	DC 6.29	1.058	0.578	0.793	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 6.29	0.692	0.867	5
40	DC 6.29	0.966	1.037	
30	DC 6.29	0.588	0.746	
20	DC 6.29	1.090	0.854	
10	DC 6.29	0.718	0.573	
0	DC 6.29	0.614	0.881	
-10	DC 6.29	0.746	0.988	
-20	DC 6.29	0.517	0.503	
-30	DC 6.29	1.022	0.728	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 136.025MHz	Reference Frequency 155.025MHz	Reference Frequency 173.975MHz	Limit: ppm
50	DC 8.51	1.010	0.906	0.870	5
40	DC 8.51	0.946	0.837	0.699	
30	DC 8.51	0.549	0.844	0.961	
20	DC 8.51	1.062	1.003	0.501	
10	DC 8.51	0.691	0.676	0.596	
0	DC 8.51	0.615	0.559	0.853	
-10	DC 8.51	1.039	1.008	0.717	
-20	DC 8.51	0.704	0.759	0.585	
-30	DC 8.51	0.789	0.583	0.904	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 8.51	0.900	1.076	5
40	DC 8.51	1.023	0.694	
30	DC 8.51	1.008	0.822	
20	DC 8.51	0.986	0.817	
10	DC 8.51	0.692	0.810	
0	DC 8.51	0.500	0.908	
-10	DC 8.51	0.820	0.601	
-20	DC 8.51	0.648	0.956	
-30	DC 8.51	1.089	0.971	
Result	Pass			

(4) Frequency stability versus input voltage(Battery endpoint is 6V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.558	0.724	0.990	5
40	DC 6.00	0.711	0.980	0.845	
30	DC 6.00	0.588	1.029	0.835	
20	DC 6.00	0.992	0.913	0.833	
10	DC 6.00	0.735	0.970	0.923	
0	DC 6.00	1.048	0.997	0.880	
-10	DC 6.00	0.510	0.812	0.958	
-20	DC 6.00	0.758	0.546	0.839	
-30	DC 6.00	0.862	0.640	0.950	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00	0.921	0.819	5
40	DC 6.00	0.920	0.522	
30	DC 6.00	1.081	0.817	
20	DC 6.00	0.975	0.858	
10	DC 6.00	0.730	0.505	
0	DC 6.00	0.998	0.787	
-10	DC 6.00	0.924	0.617	
-20	DC 6.00	0.745	1.008	
-30	DC 6.00	1.013	0.928	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40	0.756	1.009	0.597	5
40	DC 7.40	0.799	0.657	0.657	
30	DC 7.40	0.700	0.518	0.950	
20	DC 7.40	0.673	0.739	1.030	
10	DC 7.40	0.662	0.551	0.913	
0	DC 7.40	0.676	0.662	0.826	
-10	DC 7.40	0.816	0.619	0.870	
-20	DC 7.40	0.881	0.753	0.661	
-30	DC 7.40	0.945	1.098	0.869	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.871	0.602	5
40	DC 7.40 V	0.975	1.067	
30	DC 7.40 V	0.659	0.908	
20	DC 7.40 V	1.081	0.977	
10	DC 7.40 V	1.001	0.683	
0	DC 7.40 V	0.518	0.707	
-10	DC 7.40 V	0.891	0.745	
-20	DC 7.40 V	0.810	1.092	
-30	DC 7.40 V	0.732	0.946	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.951	0.669	0.696	5
40	DC 6.29	0.946	0.942	0.603	
30	DC 6.29	0.705	0.536	0.767	
20	DC 6.29	0.708	0.593	0.986	
10	DC 6.29	0.912	0.605	1.021	
0	DC 6.29	0.916	0.848	1.055	
-10	DC 6.29	0.880	0.925	0.685	
-20	DC 6.29	0.757	0.804	0.859	
-30	DC 6.29	0.545	0.689	0.772	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.29	0.661	0.693	5
40	DC 6.29	1.012	0.524	
30	DC 6.29	0.766	0.961	
20	DC 6.29	0.673	0.656	
10	DC 6.29	1.097	0.972	
0	DC 6.29	0.772	0.742	
-10	DC 6.29	0.766	1.079	
-20	DC 6.29	0.874	0.665	
-30	DC 6.29	0.585	0.871	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 8.51	1.003	0.943	0.582	5
40	DC 8.51	1.029	0.928	0.722	
30	DC 8.51	0.819	0.586	1.038	
20	DC 8.51	0.547	0.963	1.026	
10	DC 8.51	0.694	0.617	0.724	
0	DC 8.51	0.701	0.865	0.787	
-10	DC 8.51	0.665	0.687	0.677	
-20	DC 8.51	0.942	1.075	1.001	
-30	DC 8.51	0.591	0.759	0.570	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 8.51	0.984	0.585	5
40	DC 8.51	0.953	1.056	
30	DC 8.51	0.877	0.943	
20	DC 8.51	1.092	0.527	
10	DC 8.51	0.516	0.916	
0	DC 8.51	0.788	0.864	
-10	DC 8.51	0.628	0.636	
-20	DC 8.51	0.748	0.829	
-30	DC 8.51	0.877	0.544	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.741	0.864	0.539	5
40	DC 6.00	0.598	0.918	0.511	
30	DC 6.00	0.922	0.879	1.092	
20	DC 6.00	0.966	0.920	0.827	
10	DC 6.00	0.916	1.009	1.079	
0	DC 6.00	1.025	0.664	1.013	
-10	DC 6.00	0.696	1.017	0.945	
-20	DC 6.00	0.810	0.811	1.069	
-30	DC 6.00	0.727	0.925	0.564	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 6.00	0.978	0.758	5
40	DC 6.00	0.911	0.692	
30	DC 6.00	0.974	0.933	
20	DC 6.00	0.993	0.657	
10	DC 6.00	0.830	0.928	
0	DC 6.00	0.855	0.773	
-10	DC 6.00	0.926	0.963	
-20	DC 6.00	0.944	0.846	
-30	DC 6.00	0.567	0.600	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 136.025MHz	Reference Frequency 155.025MHz	Reference Frequency 173.975MHz	Limit: ppm
50	DC 7.40	0.834	0.510	0.947	5
40	DC 7.40	0.945	0.825	0.664	
30	DC 7.40	0.760	1.038	1.000	
20	DC 7.40	0.721	1.018	0.941	
10	DC 7.40	1.079	0.853	0.958	
0	DC 7.40	0.821	0.827	0.771	
-10	DC 7.40	0.571	0.897	1.012	
-20	DC 7.40	0.809	0.649	0.819	
-30	DC 7.40	0.979	0.842	0.505	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 7.40 V	0.534	1.029	5
40	DC 7.40 V	0.654	0.544	
30	DC 7.40 V	0.716	0.671	
20	DC 7.40 V	1.039	0.790	
10	DC 7.40 V	0.921	0.880	
0	DC 7.40 V	1.073	1.091	
-10	DC 7.40 V	0.926	1.020	
-20	DC 7.40 V	0.921	0.627	
-30	DC 7.40 V	0.769	0.536	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.647	0.521	0.577	5
40	DC 6.29	0.656	0.907	0.867	
30	DC 6.29	0.626	0.932	0.766	
20	DC 6.29	0.679	0.739	0.574	
10	DC 6.29	0.629	0.506	0.756	
0	DC 6.29	0.523	1.033	0.944	
-10	DC 6.29	0.947	0.831	1.031	
-20	DC 6.29	0.685	0.521	0.843	
-30	DC 6.29	0.775	0.520	0.841	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.29	0.533	0.624	5
40	DC 6.29	0.698	0.965	
30	DC 6.29	0.658	0.568	
20	DC 6.29	0.836	0.712	
10	DC 6.29	0.922	1.095	
0	DC 6.29	0.820	0.685	
-10	DC 6.29	0.812	0.557	
-20	DC 6.29	0.529	0.739	
-30	DC 6.29	0.596	0.608	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 8.51	0.782	0.730	0.727	5
40	DC 8.51	0.915	0.577	0.866	
30	DC 8.51	0.614	0.732	0.971	
20	DC 8.51	0.943	0.523	0.552	
10	DC 8.51	0.819	0.904	0.766	
0	DC 8.51	0.740	0.832	0.783	
-10	DC 8.51	0.706	0.906	0.915	
-20	DC 8.51	0.681	0.771	0.760	
-30	DC 8.51	0.741	0.872	0.912	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 8.51	0.991	0.922	5
40	DC 8.51	0.921	0.749	
30	DC 8.51	0.933	0.565	
20	DC 8.51	0.988	0.962	
10	DC 8.51	0.668	0.990	
0	DC 8.51	0.862	0.831	
-10	DC 8.51	0.736	0.624	
-20	DC 8.51	0.894	0.581	
-30	DC 8.51	0.779	0.748	
Result	Pass			

(4) Frequency stability versus input voltage(Battery endpoint is 6V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.730	0.555	0.883	5
40	DC 6.00	0.962	1.066	0.663	
30	DC 6.00	1.012	0.599	0.868	
20	DC 6.00	0.541	0.999	0.538	
10	DC 6.00	0.815	0.594	1.052	
0	DC 6.00	1.062	0.826	0.667	
-10	DC 6.00	0.540	1.004	0.741	
-20	DC 6.00	0.844	0.960	0.824	
-30	DC 6.00	0.832	0.773	0.892	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00	0.873	0.688	5
40	DC 6.00	0.794	0.650	
30	DC 6.00	0.886	0.920	
20	DC 6.00	0.709	0.612	
10	DC 6.00	1.098	0.927	
0	DC 6.00	0.943	0.679	
-10	DC 6.00	0.901	0.992	
-20	DC 6.00	0.538	0.803	
-30	DC 6.00	0.586	1.053	
Result	Pass			

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 7.40	0.930	0.598	0.694	5
40	DC 7.40	1.018	0.507	0.723	
30	DC 7.40	0.715	0.675	0.948	
20	DC 7.40	0.979	0.676	0.908	
10	DC 7.40	0.775	0.787	0.755	
0	DC 7.40	1.063	0.530	1.071	
-10	DC 7.40	0.699	1.016	0.671	
-20	DC 7.40	0.722	0.947	0.883	
-30	DC 7.40	0.665	0.989	0.796	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 7.40 V	0.525	0.975	5
40	DC 7.40 V	1.042	0.723	
30	DC 7.40 V	0.625	1.006	
20	DC 7.40 V	0.512	0.592	
10	DC 7.40 V	1.038	0.831	
0	DC 7.40 V	0.866	0.822	
-10	DC 7.40 V	0.965	0.978	
-20	DC 7.40 V	0.593	0.670	
-30	DC 7.40 V	0.736	0.740	
Result	Pass			

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.29	0.582	0.890	0.939	5
40	DC 6.29	0.611	0.708	0.942	
30	DC 6.29	0.800	0.528	1.040	
20	DC 6.29	0.881	1.072	0.893	
10	DC 6.29	0.527	0.656	0.704	
0	DC 6.29	0.596	0.503	0.957	
-10	DC 6.29	1.064	0.567	0.574	
-20	DC 6.29	0.923	0.975	0.615	
-30	DC 6.29	0.724	1.064	1.002	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 6.29	0.839	0.746	5
40	DC 6.29	0.677	0.985	
30	DC 6.29	0.538	0.918	
20	DC 6.29	1.053	1.040	
10	DC 6.29	1.054	1.015	
0	DC 6.29	0.800	0.685	
-10	DC 6.29	1.100	0.989	
-20	DC 6.29	0.739	1.007	
-30	DC 6.29	0.721	0.921	
Result	Pass			

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 136.025MHz	Reference Frequency 155.025MHz	Reference Frequency 173.975MHz	Limit: ppm
50	DC 8.51	1.073	0.873	0.801	5
40	DC 8.51	0.754	1.040	1.055	
30	DC 8.51	0.901	0.893	0.527	
20	DC 8.51	0.541	0.758	0.709	
10	DC 8.51	0.642	0.524	0.566	
0	DC 8.51	0.739	0.679	1.046	
-10	DC 8.51	0.716	0.729	1.069	
-20	DC 8.51	0.962	0.614	0.578	
-30	DC 8.51	0.649	0.716	1.053	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency 151.85MHz	Reference Frequency 161.61MHz	Limit: ppm
50	DC 8.51	0.576	0.792	5
40	DC 8.51	0.508	0.688	
30	DC 8.51	0.619	0.893	
20	DC 8.51	0.865	0.842	
10	DC 8.51	0.772	0.566	
0	DC 8.51	0.999	0.910	
-10	DC 8.51	0.570	0.769	
-20	DC 8.51	0.965	0.793	
-30	DC 8.51	0.632	0.953	
Result	Pass			

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		136.025MHz	155.025MHz	173.975MHz	
50	DC 6.00	0.693	0.851	0.856	5
40	DC 6.00	1.015	0.920	1.082	
30	DC 6.00	0.868	0.636	0.922	
20	DC 6.00	0.896	0.845	0.833	
10	DC 6.00	0.800	0.993	1.046	
0	DC 6.00	0.928	0.579	0.709	
-10	DC 6.00	0.560	1.012	0.612	
-20	DC 6.00	0.774	0.707	0.740	
-30	DC 6.00	0.527	0.900	0.738	
Result	Pass				

Environment Temperature(℃)	Power (V)	Reference Frequency		Limit: ppm
		151.85MHz	161.61MHz	
50	DC 6.00	0.886	0.723	5
40	DC 6.00	0.885	0.748	
30	DC 6.00	0.642	0.699	
20	DC 6.00	0.544	1.084	
10	DC 6.00	0.611	0.608	
0	DC 6.00	1.008	0.889	
-10	DC 6.00	0.829	0.572	
-20	DC 6.00	0.631	0.514	
-30	DC 6.00	0.926	0.886	
Result	Pass			

UHF:

Analog:

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 7.40	0.748	1.091	0.590	2.5
40	DC 7.40	0.579	0.738	0.932	
30	DC 7.40	1.009	0.856	0.812	
20	DC 7.40	1.038	1.044	0.597	
10	DC 7.40	0.716	0.751	0.575	
0	DC 7.40	1.037	0.667	0.501	
-10	DC 7.40	0.632	0.555	0.953	
-20	DC 7.40	0.736	0.578	0.907	
-30	DC 7.40	0.589	0.824	0.712	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 6.29	1.047	0.515	0.812	2.5
40	DC 6.29	0.748	0.802	0.560	
30	DC 6.29	0.750	0.564	0.566	
20	DC 6.29	0.958	0.515	0.883	
10	DC 6.29	0.954	0.858	0.642	
0	DC 6.29	0.959	1.005	0.971	
-10	DC 6.29	0.614	0.795	0.884	
-20	DC 6.29	0.564	0.835	1.044	
-30	DC 6.29	0.562	0.848	0.509	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 8.51	0.949	0.758	1.019	2.5
40	DC 8.51	0.716	0.845	0.881	
30	DC 8.51	0.773	1.018	0.690	
20	DC 8.51	0.707	0.843	0.834	
10	DC 8.51	0.917	0.766	0.818	
0	DC 8.51	0.883	0.642	0.860	
-10	DC 8.51	0.809	0.739	0.838	
-20	DC 8.51	0.951	1.060	0.691	
-30	DC 8.51	0.800	0.776	0.702	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.00 V	0.711	1.021	0.668	2.5
40	DC 6.00 V	0.797	0.632	0.945	
30	DC 6.00 V	0.889	0.549	0.681	
20	DC 6.00 V	0.673	0.623	0.938	
10	DC 6.00 V	0.555	0.941	1.020	
0	DC 6.00 V	0.790	0.823	0.898	
-10	DC 6.00 V	0.520	0.916	0.605	
-20	DC 6.00 V	0.951	0.982	1.043	
-30	DC 6.00 V	0.844	0.649	0.693	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 7.40	0.809	0.736	0.809	2.5
40	DC 7.40	0.765	0.778	0.966	
30	DC 7.40	0.579	0.942	0.798	
20	DC 7.40	0.767	1.010	0.902	
10	DC 7.40	0.709	0.580	0.914	
0	DC 7.40	0.547	0.602	0.746	
-10	DC 7.40	0.937	0.509	0.880	
-20	DC 7.40	0.906	0.963	0.787	
-30	DC 7.40	0.856	0.512	0.701	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.29	0.893	0.751	1.026	2.5
40	DC 6.29	0.931	1.015	0.909	
30	DC 6.29	0.657	0.588	0.782	
20	DC 6.29	0.875	0.813	0.630	
10	DC 6.29	0.892	0.806	1.045	
0	DC 6.29	0.791	0.520	1.088	
-10	DC 6.29	0.625	0.995	0.686	
-20	DC 6.29	1.087	0.649	0.515	
-30	DC 6.29	1.100	1.047	1.033	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 8.51	0.822	0.996	0.525	2.5
40	DC 8.51	1.077	0.811	0.770	
30	DC 8.51	1.056	0.676	0.970	
20	DC 8.51	0.754	1.017	0.795	
10	DC 8.51	0.911	0.791	1.078	
0	DC 8.51	0.661	0.967	0.908	
-10	DC 8.51	0.752	1.065	0.506	
-20	DC 8.51	0.963	0.620	0.586	
-30	DC 8.51	0.509	0.801	1.062	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.00 V	0.533	0.636	0.679	2.5
40	DC 6.00 V	0.758	0.840	0.859	
30	DC 6.00 V	0.720	0.993	0.896	
20	DC 6.00 V	0.698	0.559	0.985	
10	DC 6.00 V	0.703	1.030	0.968	
0	DC 6.00 V	0.927	0.875	0.716	
-10	DC 6.00 V	0.836	0.784	0.803	
-20	DC 6.00 V	0.851	0.688	0.835	
-30	DC 6.00 V	0.624	0.695	1.033	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 7.40	0.712	0.847	0.929	2.5
40	DC 7.40	0.626	1.094	0.876	
30	DC 7.40	0.694	1.086	0.555	
20	DC 7.40	0.615	0.862	0.985	
10	DC 7.40	0.507	0.504	0.991	
0	DC 7.40	0.603	0.696	1.037	
-10	DC 7.40	0.907	0.887	0.510	
-20	DC 7.40	0.682	0.565	0.564	
-30	DC 7.40	0.822	0.903	0.597	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 6.29	0.942	0.550	0.648	2.5
40	DC 6.29	0.653	0.868	0.657	
30	DC 6.29	0.987	0.570	0.940	
20	DC 6.29	0.955	1.058	1.063	
10	DC 6.29	0.832	0.780	1.002	
0	DC 6.29	0.761	0.734	0.750	
-10	DC 6.29	0.663	0.834	0.803	
-20	DC 6.29	0.904	0.513	0.639	
-30	DC 6.29	0.785	0.621	0.552	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 8.51	1.042	0.681	0.502	2.5
40	DC 8.51	0.919	0.792	0.580	
30	DC 8.51	0.843	1.097	0.827	
20	DC 8.51	0.744	0.746	0.754	
10	DC 8.51	0.509	0.516	0.847	
0	DC 8.51	0.609	0.537	0.629	
-10	DC 8.51	0.771	1.017	0.518	
-20	DC 8.51	0.892	0.686	0.509	
-30	DC 8.51	0.833	0.609	0.680	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 6.00	0.949	0.741	0.939	2.5
40	DC 6.00	0.936	0.950	0.975	
30	DC 6.00	0.591	0.590	0.798	
20	DC 6.00	0.978	0.644	0.847	
10	DC 6.00	0.618	0.543	0.930	
0	DC 6.00	1.094	0.788	0.684	
-10	DC 6.00	0.724	1.093	1.045	
-20	DC 6.00	0.724	0.956	0.999	
-30	DC 6.00	1.068	0.976	0.644	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 7.40	0.853	0.641	0.895	2.5
40	DC 7.40	0.805	0.761	0.908	
30	DC 7.40	0.763	0.876	0.930	
20	DC 7.40	0.663	1.035	0.799	
10	DC 7.40	1.023	0.825	1.013	
0	DC 7.40	1.077	0.696	0.938	
-10	DC 7.40	0.835	0.652	0.631	
-20	DC 7.40	0.775	0.732	1.034	
-30	DC 7.40	0.537	0.535	1.033	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 6.29	0.906	0.513	0.548	2.5
40	DC 6.29	0.577	0.837	0.723	
30	DC 6.29	0.941	1.050	0.538	
20	DC 6.29	0.654	0.791	0.575	
10	DC 6.29	1.010	0.691	0.551	
0	DC 6.29	0.869	0.856	0.618	
-10	DC 6.29	0.518	0.872	0.819	
-20	DC 6.29	0.801	0.659	1.080	
-30	DC 6.29	0.503	1.025	0.869	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 8.51	0.774	0.785	0.853	2.5
40	DC 8.51	0.797	0.617	1.000	
30	DC 8.51	1.028	1.098	0.575	
20	DC 8.51	0.626	1.090	1.033	
10	DC 8.51	0.640	0.850	0.877	
0	DC 8.51	0.991	1.042	0.524	
-10	DC 8.51	0.657	0.682	0.889	
-20	DC 8.51	0.730	1.094	0.657	
-30	DC 8.51	0.839	1.070	0.941	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.00	0.965	1.086	0.699	2.5
40	DC 6.00	0.621	0.536	0.892	
30	DC 6.00	0.876	0.774	0.604	
20	DC 6.00	1.090	0.530	0.787	
10	DC 6.00	1.035	0.640	0.924	
0	DC 6.00	1.094	0.919	0.930	
-10	DC 6.00	1.008	0.807	0.837	
-20	DC 6.00	0.847	0.521	0.509	
-30	DC 6.00	0.559	1.099	0.850	
Result	Pass				

Digital:

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 7.40	0.809	0.508	0.501	2.5
40	DC 7.40	0.673	0.697	0.801	
30	DC 7.40	0.843	0.882	0.869	
20	DC 7.40	0.965	0.927	0.866	
10	DC 7.40	0.501	0.932	0.957	
0	DC 7.40	0.917	0.775	0.807	
-10	DC 7.40	0.510	0.686	0.661	
-20	DC 7.40	0.838	0.938	0.773	
-30	DC 7.40	0.958	0.581	0.701	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 6.29	0.793	0.673	0.812	2.5
40	DC 6.29	1.066	0.753	0.680	
30	DC 6.29	0.618	0.807	0.761	
20	DC 6.29	0.698	0.599	0.768	
10	DC 6.29	0.871	0.877	1.076	
0	DC 6.29	0.837	0.656	0.526	
-10	DC 6.29	0.940	0.538	0.799	
-20	DC 6.29	0.919	0.510	0.680	
-30	DC 6.29	0.624	0.651	0.634	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-5W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 8.51	0.892	0.896	0.963	2.5
40	DC 8.51	0.930	0.822	0.830	
30	DC 8.51	0.791	0.866	0.536	
20	DC 8.51	0.573	0.583	1.061	
10	DC 8.51	0.840	0.789	0.777	
0	DC 8.51	0.627	0.891	0.619	
-10	DC 8.51	0.549	0.714	0.802	
-20	DC 8.51	0.675	0.543	0.992	
-30	DC 8.51	0.927	0.623	0.991	
Result	Pass				

(4) Frequency stability versus input voltage(Battery endpoint is 6V) **-5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 6.00	0.584	0.915	0.795	2.5
40	DC 6.00	0.588	0.747	0.542	
30	DC 6.00	0.897	0.545	0.814	
20	DC 6.00	0.998	0.797	0.685	
10	DC 6.00	0.642	1.012	0.683	
0	DC 6.00	0.940	0.728	0.544	
-10	DC 6.00	0.963	0.884	0.534	
-20	DC 6.00	0.606	0.945	1.068	
-30	DC 6.00	0.608	1.042	1.054	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 7.40	0.956	1.050	0.998	2.5
40	DC 7.40	0.836	0.528	0.977	
30	DC 7.40	0.538	1.031	0.699	
20	DC 7.40	0.709	1.063	0.555	
10	DC 7.40	0.617	0.794	0.940	
0	DC 7.40	1.009	0.907	0.724	
-10	DC 7.40	0.699	0.924	0.990	
-20	DC 7.40	0.847	0.528	1.028	
-30	DC 7.40	0.635	0.638	0.503	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency 400.025MHz	454.025MHz	479.975MHz	Limit: ppm
50	DC 6.29	0.503	0.752	1.053	2.5
40	DC 6.29	0.531	1.018	0.911	
30	DC 6.29	0.878	0.892	0.707	
20	DC 6.29	0.732	0.554	1.051	
10	DC 6.29	0.658	0.891	0.885	
0	DC 6.29	0.729	0.525	0.908	
-10	DC 6.29	0.680	0.751	0.614	
-20	DC 6.29	0.880	0.843	0.819	
-30	DC 6.29	0.502	0.939	0.860	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 8.51	1.100	0.820	0.887	2.5
40	DC 8.51	0.534	0.638	0.682	
30	DC 8.51	0.905	0.771	0.928	
20	DC 8.51	0.956	1.009	1.019	
10	DC 8.51	0.983	0.828	0.851	
0	DC 8.51	0.921	0.589	1.091	
-10	DC 8.51	0.666	0.976	0.941	
-20	DC 8.51	1.064	0.674	0.661	
-30	DC 8.51	0.936	0.679	1.033	
Result	Pass				

(4) Frequency stability versus input voltage(Battery endpoint is 6V) **-2.5W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.00	0.628	0.683	0.549	2.5
40	DC 6.00	0.836	0.781	0.791	
30	DC 6.00	1.084	0.533	0.679	
20	DC 6.00	0.543	0.786	0.855	
10	DC 6.00	0.726	0.893	0.704	
0	DC 6.00	0.706	0.824	0.510	
-10	DC 6.00	1.054	0.855	0.865	
-20	DC 6.00	0.770	0.836	0.640	
-30	DC 6.00	0.968	0.918	1.051	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-1W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 7.40	0.810	0.681	0.749	2.5
40	DC 7.40	0.899	0.630	0.846	
30	DC 7.40	0.537	0.668	0.926	
20	DC 7.40	0.932	0.782	0.843	
10	DC 7.40	0.944	0.502	0.568	
0	DC 7.40	0.934	0.896	0.766	
-10	DC 7.40	0.837	0.589	0.650	
-20	DC 7.40	0.539	0.518	0.727	
-30	DC 7.40	0.670	0.877	0.825	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 6.29	0.513	1.088	1.000	2.5
40	DC 6.29	0.976	0.529	0.587	
30	DC 6.29	0.844	0.813	0.724	
20	DC 6.29	0.851	0.514	0.791	
10	DC 6.29	0.903	0.639	1.040	
0	DC 6.29	0.715	0.654	0.570	
-10	DC 6.29	1.083	1.049	0.858	
-20	DC 6.29	0.548	0.913	0.795	
-30	DC 6.29	0.931	0.550	1.044	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 8.51	0.658	1.096	0.610	2.5
40	DC 8.51	0.715	0.801	0.585	
30	DC 8.51	0.560	0.968	0.919	
20	DC 8.51	0.530	0.900	0.825	
10	DC 8.51	0.532	0.549	0.860	
0	DC 8.51	0.559	0.700	0.776	
-10	DC 8.51	0.793	0.983	0.533	
-20	DC 8.51	1.010	0.721	1.007	
-30	DC 8.51	1.027	0.737	0.595	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-1W-12.5KHz**

Environment	Power	Reference Frequency			Limit:
Temperature(℃)	(V)	400.025MHz	454.025MHz	479.975MHz	ppm
50	DC 6.00	0.979	0.922	0.757	2.5
40	DC 6.00	0.677	0.507	1.008	
30	DC 6.00	1.057	1.017	0.907	
20	DC 6.00	1.005	1.096	0.849	
10	DC 6.00	1.006	0.882	0.829	
0	DC 6.00	0.663	0.886	0.824	
-10	DC 6.00	0.716	0.915	0.935	
-20	DC 6.00	0.979	0.511	1.085	
-30	DC 6.00	0.759	0.758	0.792	
Result	Pass				

(1) Frequency stability versus input voltage (Supply nominal voltage is 7.40V)**-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 7.40	0.625	0.585	0.999	2.5
40	DC 7.40	0.817	1.074	1.010	
30	DC 7.40	0.729	0.861	0.659	
20	DC 7.40	0.592	1.072	0.865	
10	DC 7.40	0.553	1.048	0.734	
0	DC 7.40	0.967	0.737	0.542	
-10	DC 7.40	0.823	0.883	0.905	
-20	DC 7.40	0.968	0.536	0.533	
-30	DC 7.40	1.081	0.858	0.540	
Result	Pass				

(2) Frequency stability versus input voltage (Battery limiting voltage is 6.29V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.29	0.581	0.963	0.738	2.5
40	DC 6.29	0.501	1.082	1.093	
30	DC 6.29	1.064	0.730	0.501	
20	DC 6.29	0.979	0.796	0.935	
10	DC 6.29	0.814	1.002	0.947	
0	DC 6.29	0.716	1.049	0.680	
-10	DC 6.29	0.626	0.527	0.636	
-20	DC 6.29	0.910	0.647	0.674	
-30	DC 6.29	1.000	0.515	0.568	
Result	Pass				

(3) Frequency stability versus input voltage (Battery Fully Charged voltage is 8.51V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 8.51	1.048	0.963	0.664	2.5
40	DC 8.51	0.677	0.600	0.509	
30	DC 8.51	0.795	1.053	1.045	
20	DC 8.51	0.663	1.088	1.066	
10	DC 8.51	0.614	0.619	0.540	
0	DC 8.51	0.684	0.911	1.053	
-10	DC 8.51	0.959	0.678	0.540	
-20	DC 8.51	0.889	1.084	0.926	
-30	DC 8.51	0.671	1.025	0.919	
Result	Pass				

(4) Frequency stability versus input voltage (Battery endpoint is 6V) **-0.2W-12.5KHz**

Environment Temperature(℃)	Power (V)	Reference Frequency			Limit: ppm
		400.025MHz	454.025MHz	479.975MHz	
50	DC 6.00	0.516	0.720	0.588	2.5
40	DC 6.00	0.649	1.060	0.549	
30	DC 6.00	1.021	0.997	1.048	
20	DC 6.00	0.826	0.706	0.689	
10	DC 6.00	0.749	0.983	0.704	
0	DC 6.00	1.000	0.873	0.530	
-10	DC 6.00	0.922	0.617	1.011	
-20	DC 6.00	0.845	0.847	0.610	
-30	DC 6.00	0.641	0.519	0.964	
Result	Pass				

Note：The unit in frequency stability result is ppm.

6. EMISSION BANDWIDTH

6.1 PROVISIONS APPLICABLE

FCC Part 90 & FCC Part 22:

The authorized bandwidth shall be 11.25 KHz for 12.5 KHz channel separation and 6 KHz for 6.25 KHz channel separation.

6.2 MEASUREMENT PROCEDURE

1). The EUT was placed on a turn table which is 0.8m above ground plane.

2). The EUT was modulated by 2.5 KHz Sine wave audio signal, The level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation. Rated system deviation is 2.5 kHz (12.5 kHz channel spacing).

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

4). Set SPA Max hold. Mark peak, -26 dB.

6.3 TEST SETUP BLOCK DIAGRAM

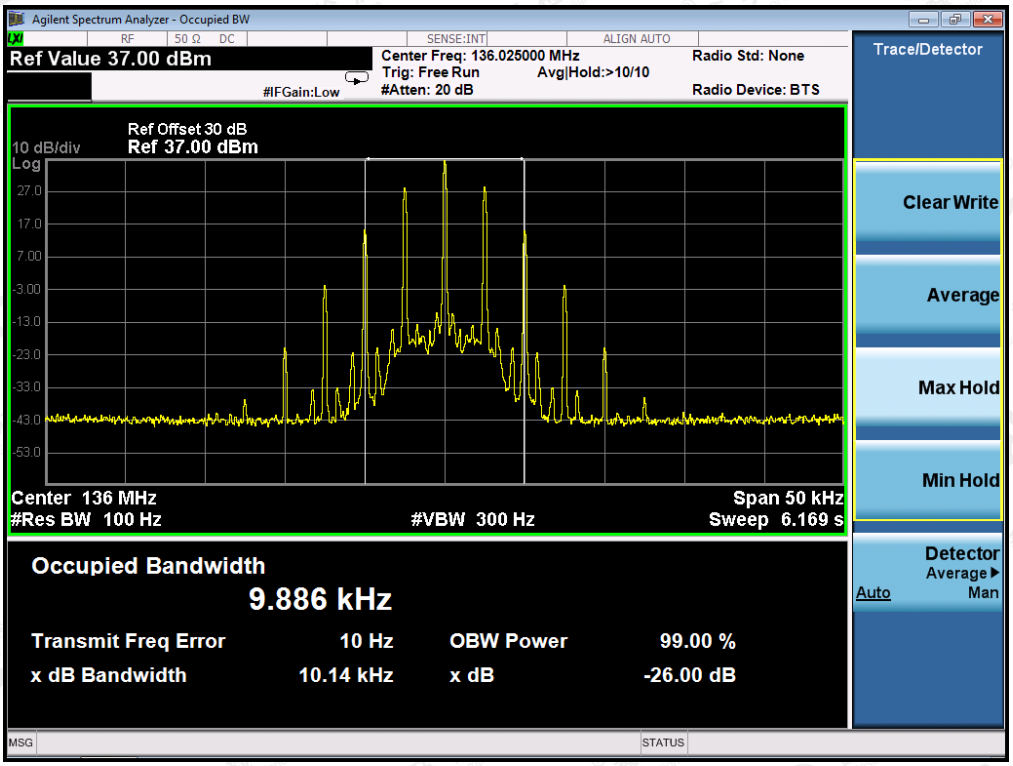
6.4 MEASUREMENT RESULT

VHF:

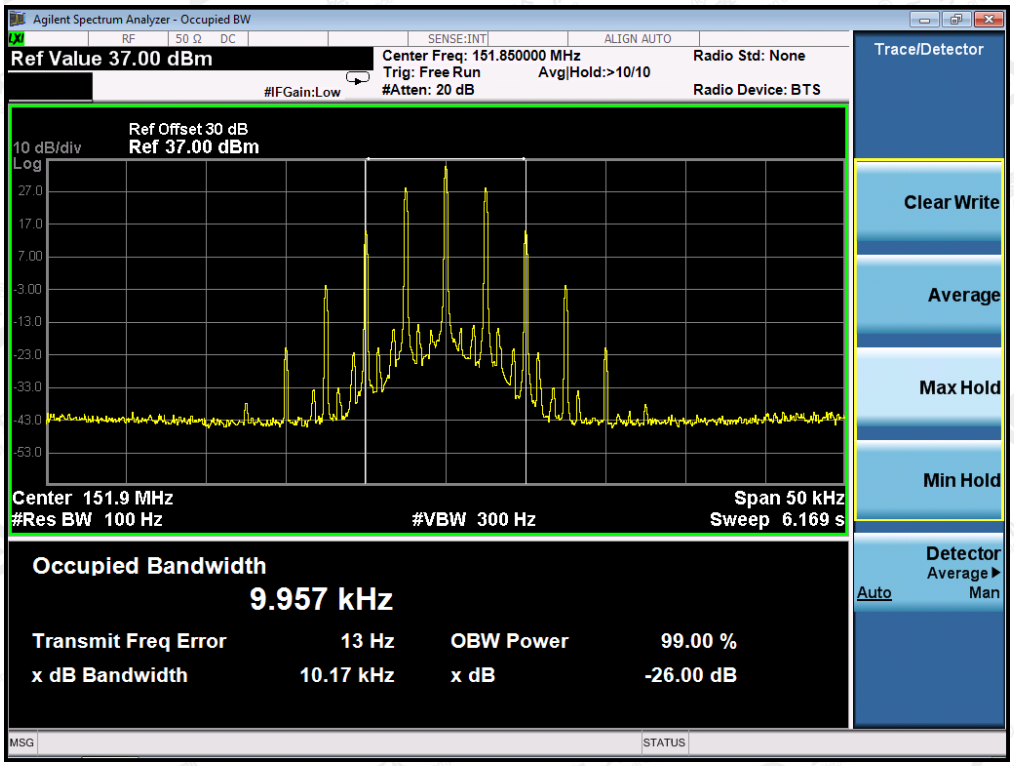
Analog:

26 dB Bandwidth Measurement Result			
Operating Frequency	12.5 KHz Channel Separation		
	Test Data	Limits	Result
136.025MHz	10.14KHz	11.25 KHz	Pass
151.850MHz	10.17KHz	11.25 KHz	Pass
161.61MHz	10.14KHz	11.25 KHz	Pass
173.975MHz	9.02KHz	11.25 KHz	Pass

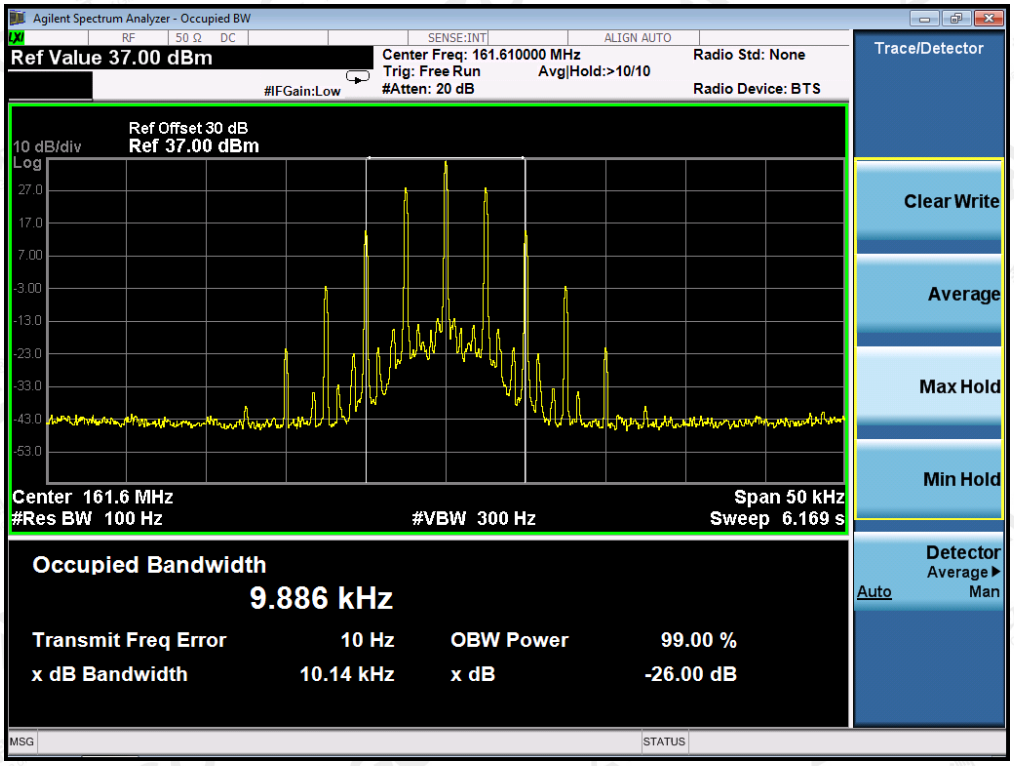
Occupied bandwidth of Bottom Channel (Maximum)-5W



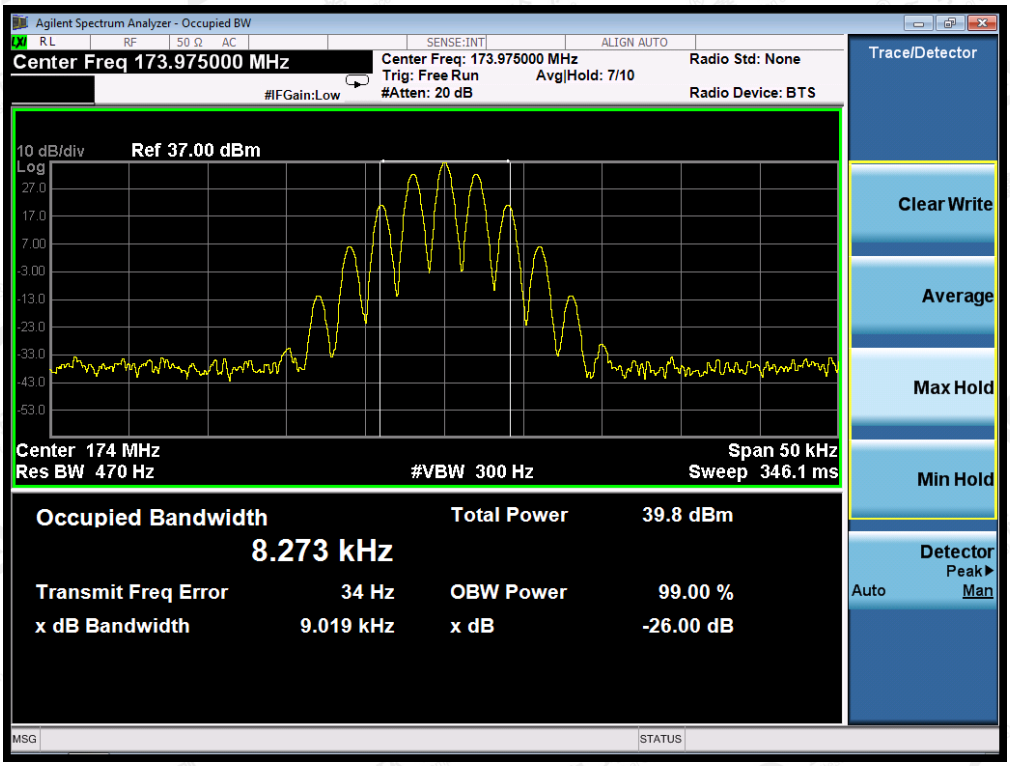
Occupied bandwidth of Middle Channel (151.850 MHz)-5W



Occupied bandwidth of Middle Channel (161.610 MHz)-5W

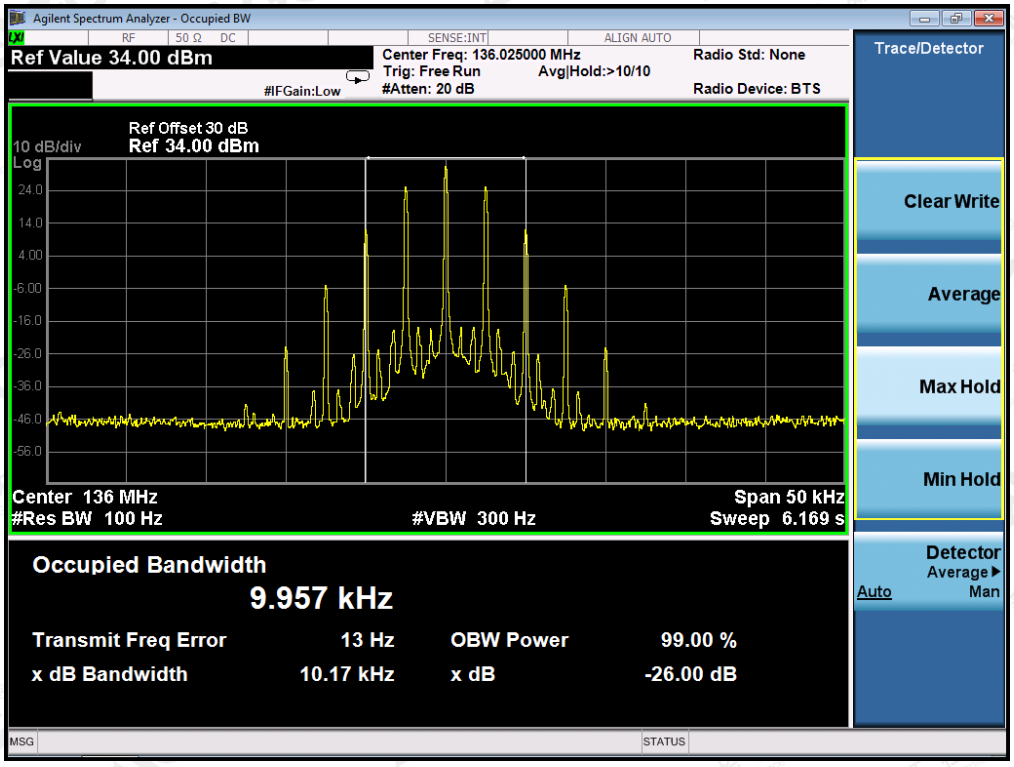


Occupied bandwidth of High Channel (Maximum)-5W

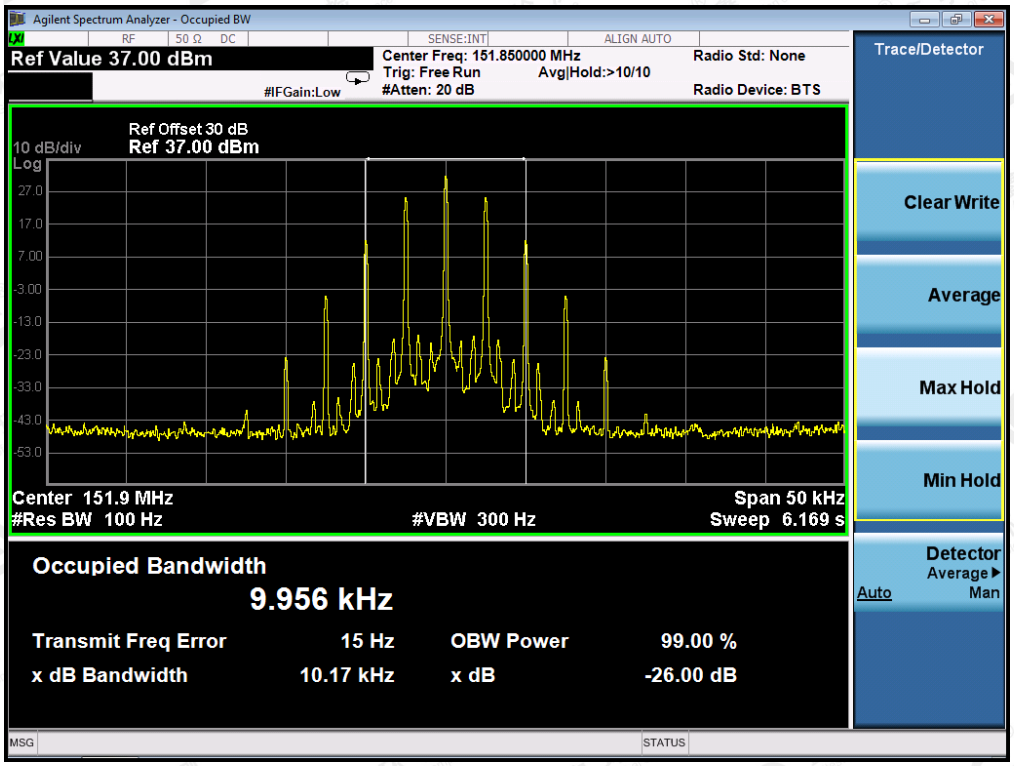


26 dB Bandwidth Measurement Result			
Operating Frequency	12.5 KHz Channel Separation		
	Test Data	Limits	Result
136.025MHz	10.17KHz	11.25 KHz	Pass
151.850MHz	10.17KHz	11.25 KHz	Pass
161.61MHz	10.17KHz	11.25 KHz	Pass
173.975MHz	9.02KHz	11.25 KHz	Pass

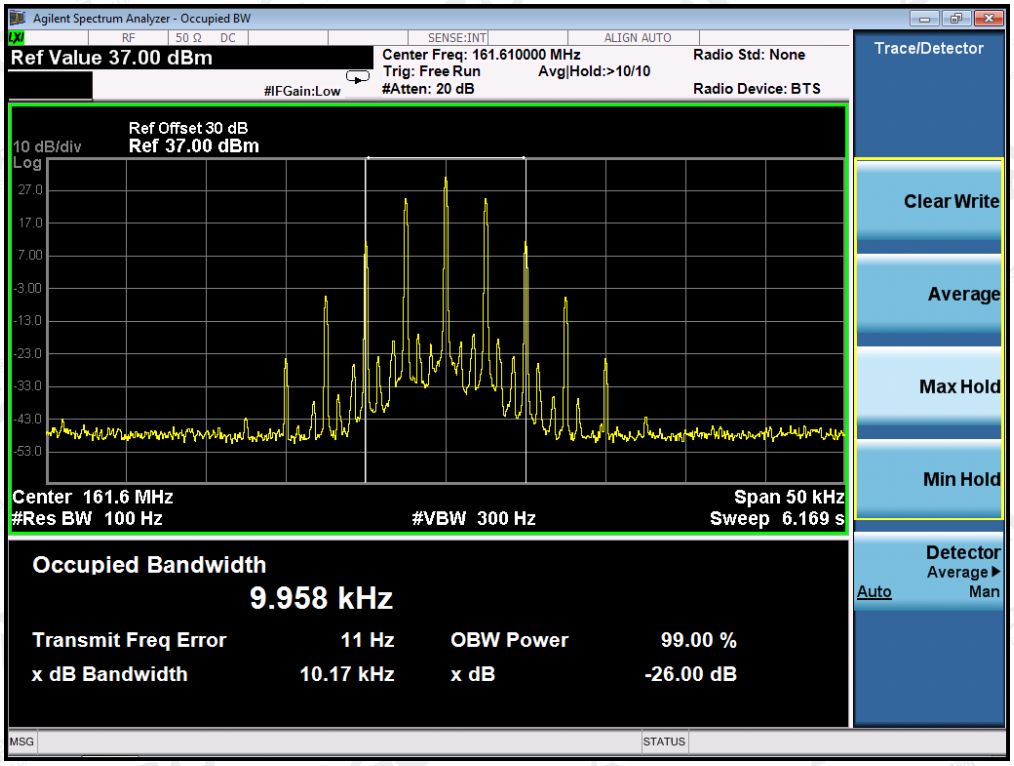
Occupied bandwidth of Bottom Channel (Maximum)-2.5W



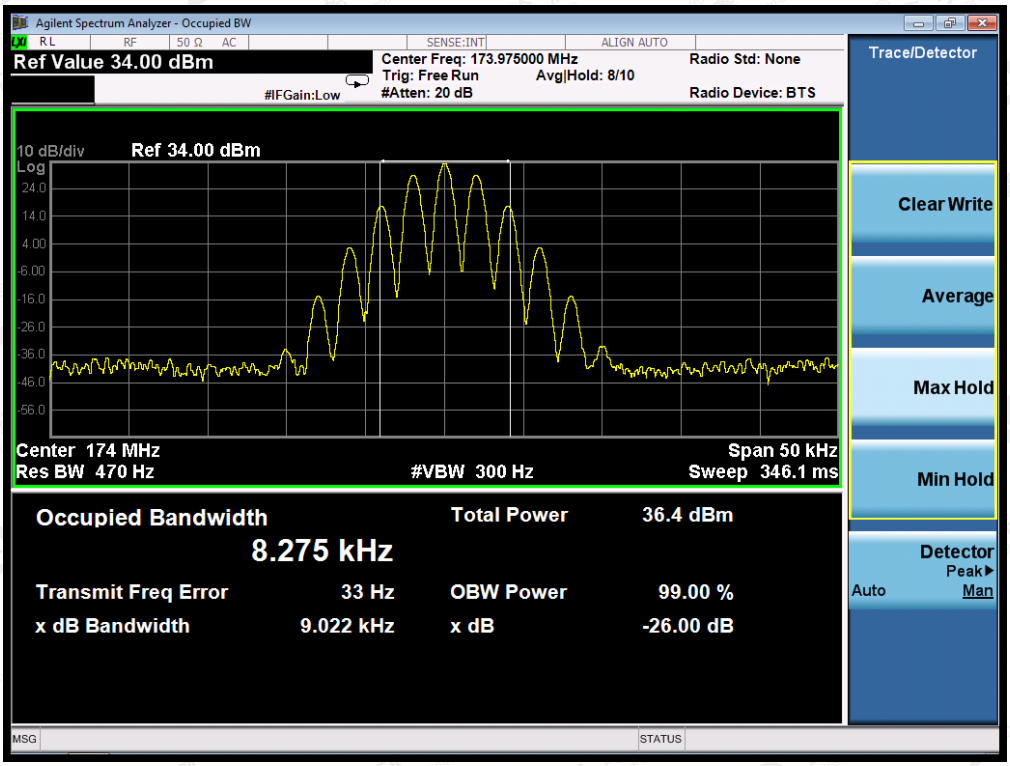
Occupied bandwidth of Middle Channel (151.850 MHz)-2.5W



Occupied bandwidth of Middle Channel (161.610 MHz)-2.5W

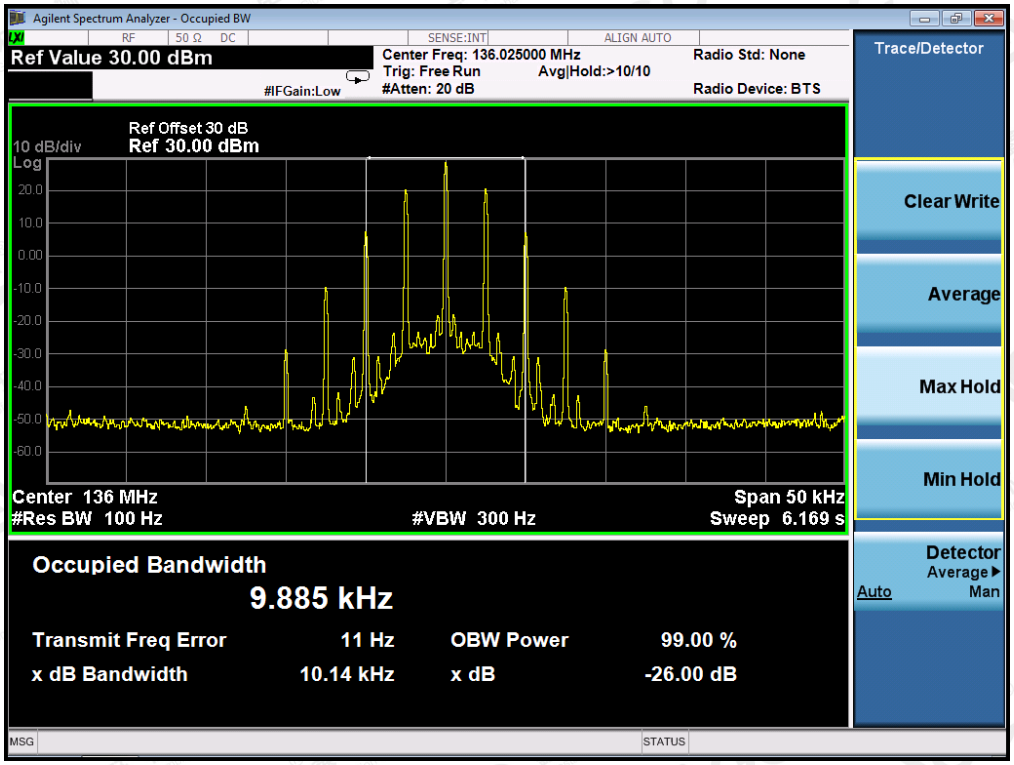


Occupied bandwidth of High Channel (173.975 MHz)-2.5W

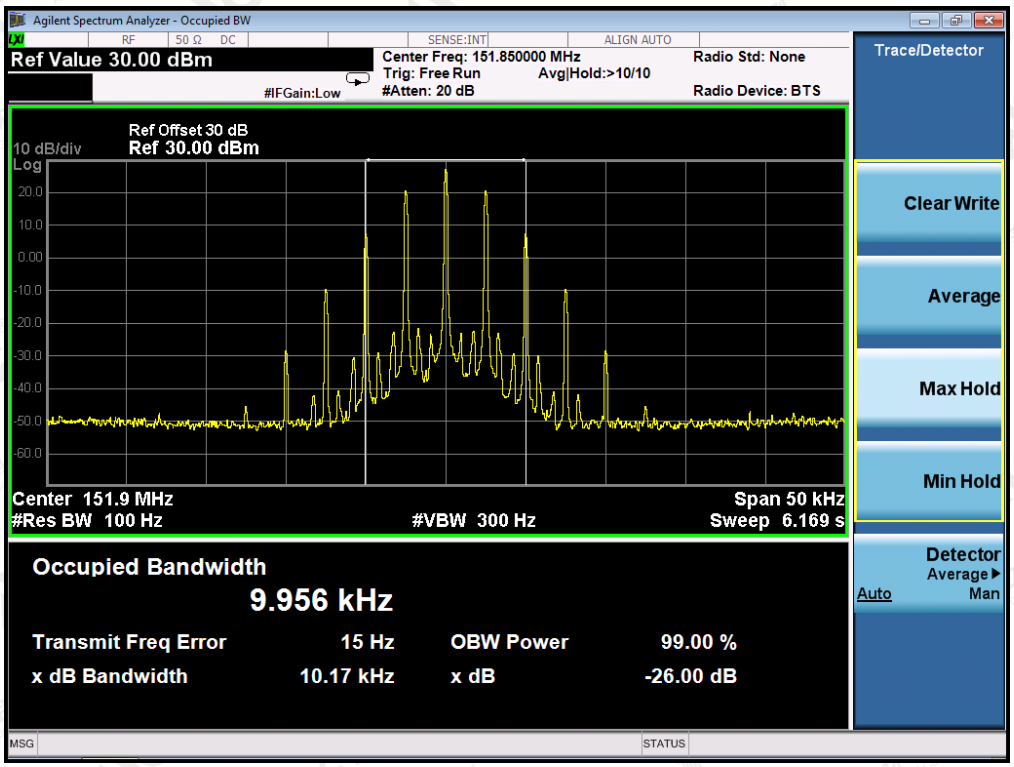


26 dB Bandwidth Measurement Result			
Operating Frequency	12.5 KHz Channel Separation		
	Test Data	Limits	Result
136.025MHz	10.14KHz	11.25 KHz	Pass
151.850MHz	10.17KHz	11.25 KHz	Pass
161.61MHz	10.17KHz	11.25 KHz	Pass
179.975MHz	9.02KHz	11.25 KHz	Pass

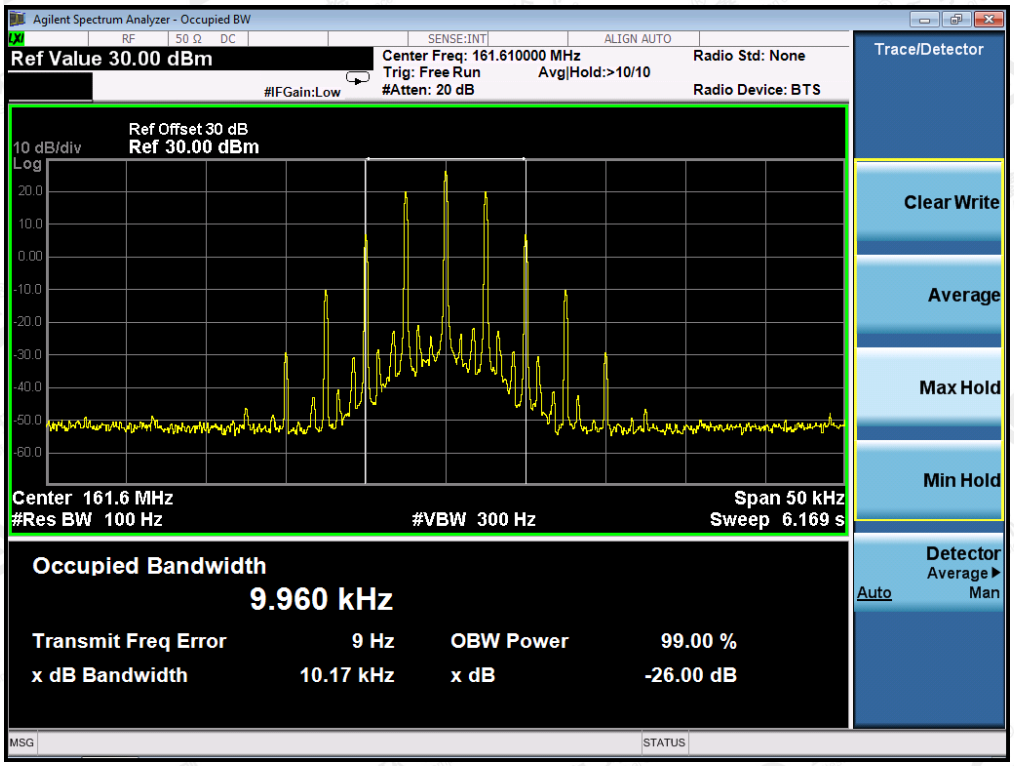
Occupied bandwidth of Bottom Channel (Maximum)-1W



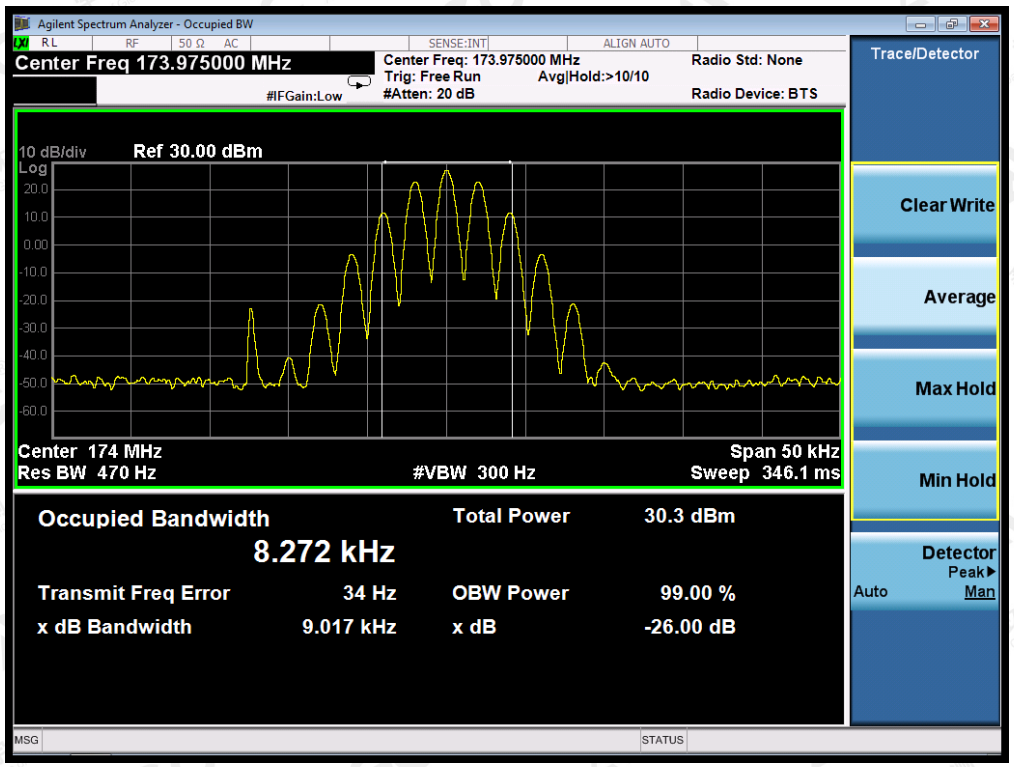
Occupied bandwidth of Middle Channel (151.850 MHz)-1W



Occupied bandwidth of Middle Channel (161.610 MHz)-1W

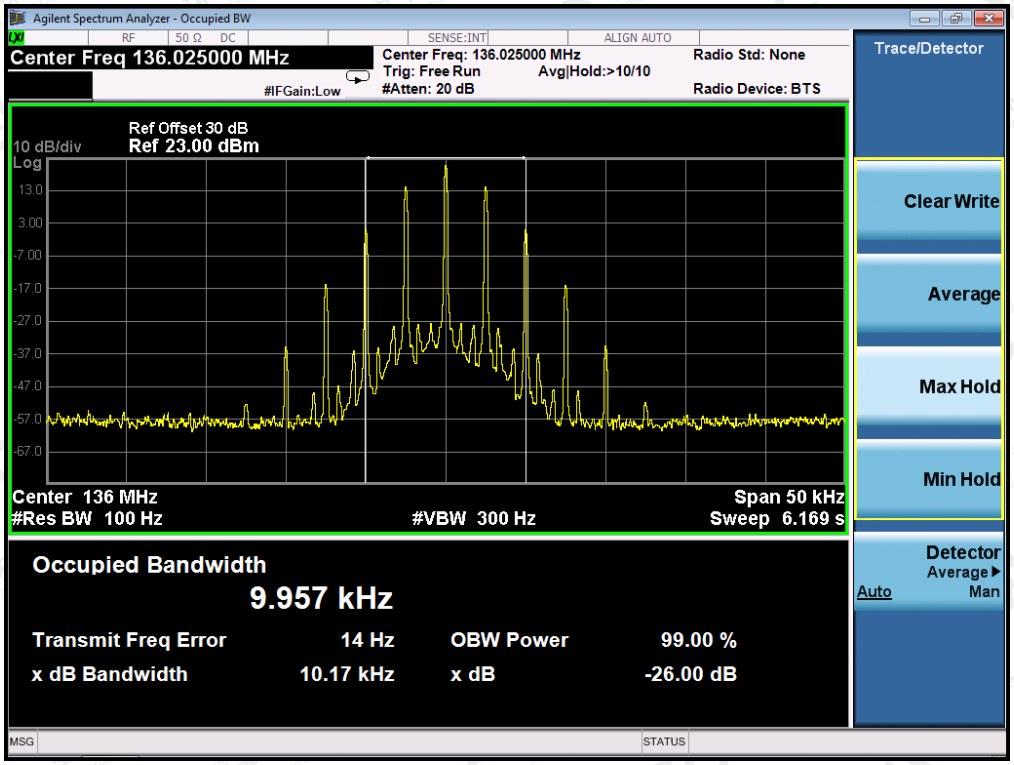


Occupied bandwidth of High Channel (Maximum)-1W

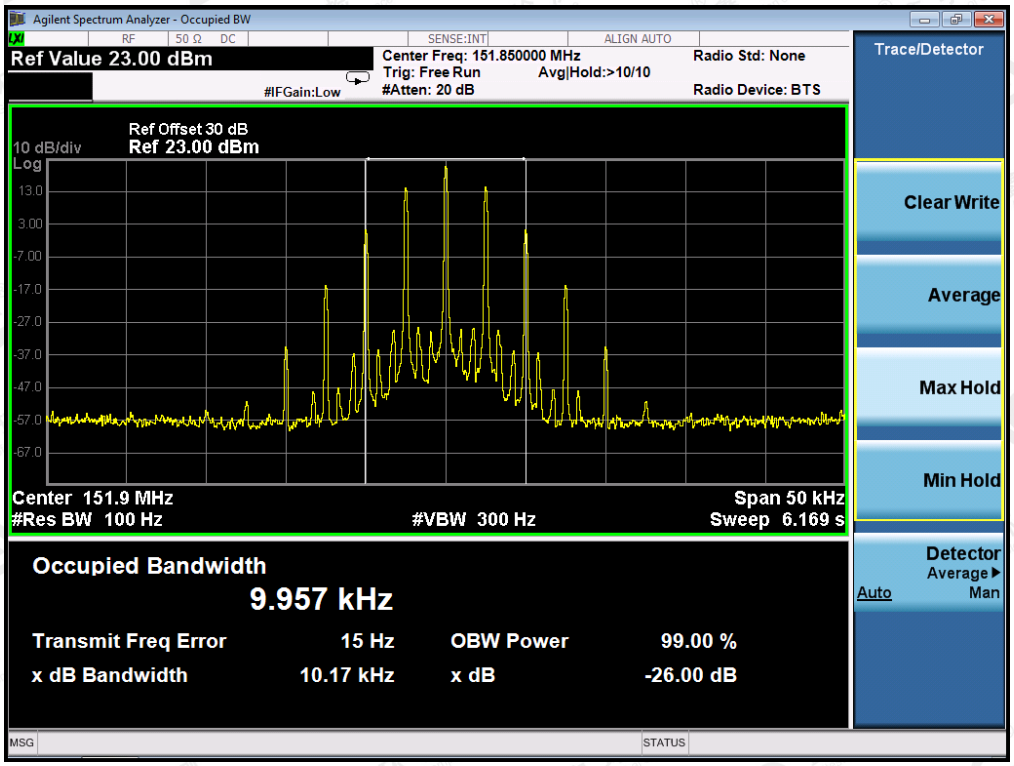


26 dB Bandwidth Measurement Result			
Operating Frequency	12.5 KHz Channel Separation		
	Test Data	Limits	Result
136.025MHz	10.17KHz	11.25 KHz	Pass
151.850MHz	10.17KHz	11.25 KHz	Pass
161.61MHz	10.17KHz	11.25 KHz	Pass
173.975MHz	9.02KHz	11.25 KHz	Pass

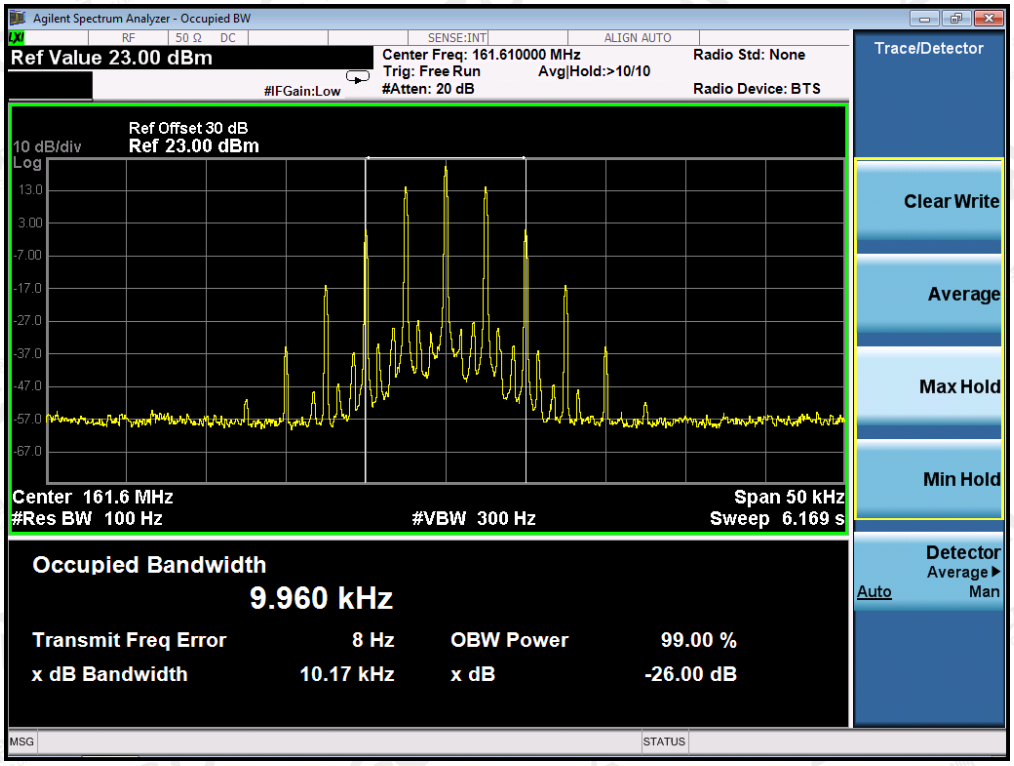
Occupied bandwidth of Bottom Channel (Maximum)-0.2W



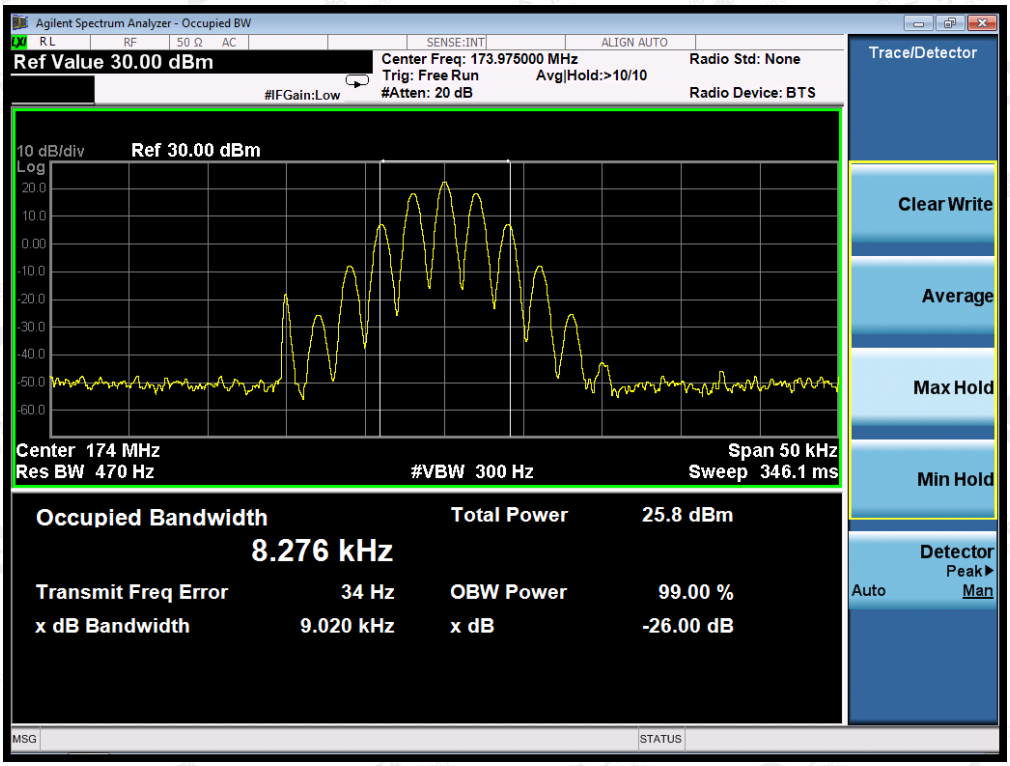
Occupied bandwidth of Middle Channel (151.850 MHz)-0.2W



Occupied bandwidth of Middle Channel (161.610 MHz)-0.2W



Occupied bandwidth of High Channel (Maximum)-0.2W

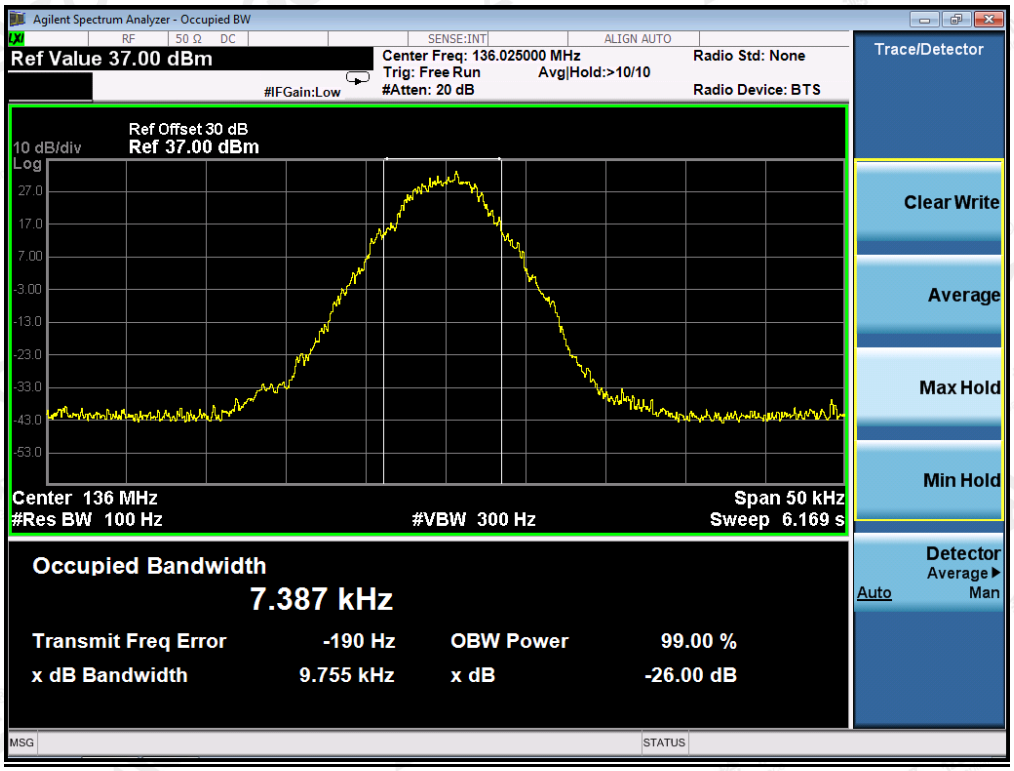


Digital:

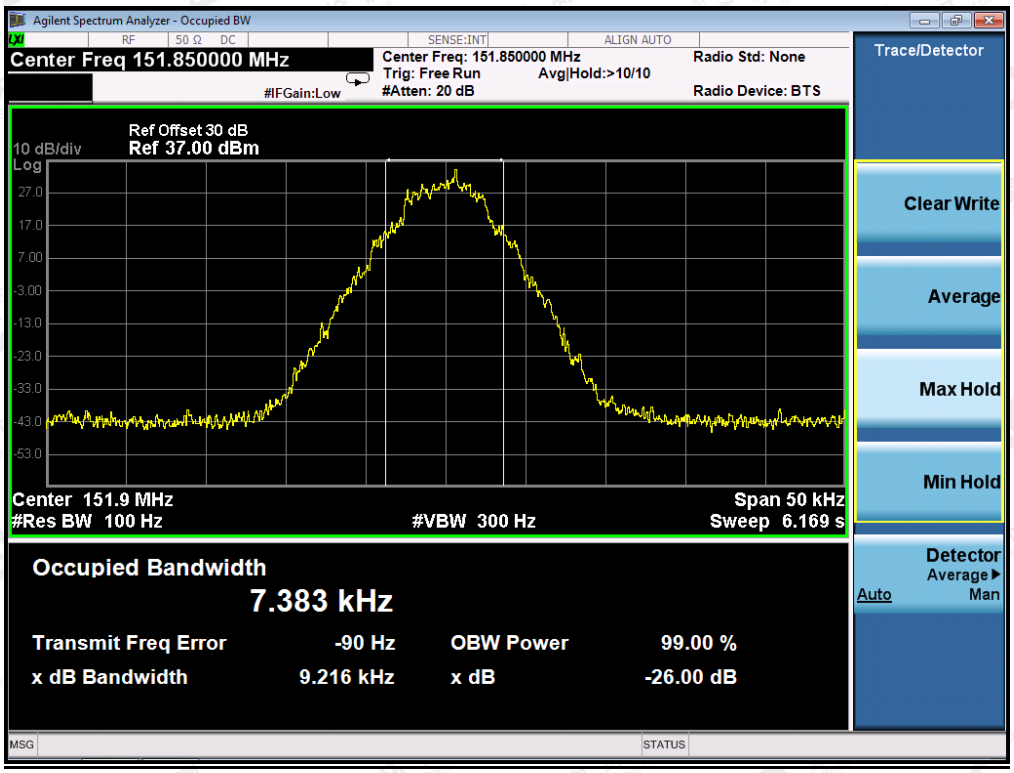
TEST RESULTS

26 DB BANDWIDTH MEASUREMENT RESULT			
Operating Frequency	12.5 KHz Channel Separation		
	Test Data	Limits	Result
136.025MHz	9.755KHz	11.25 KHz	Pass
151.850MHz	9.216KHz	11.25 KHz	Pass
161.61MHz	9.300KHz	11.25 KHz	Pass
173.975MHz	9.497KHz	11.25 KHz	Pass

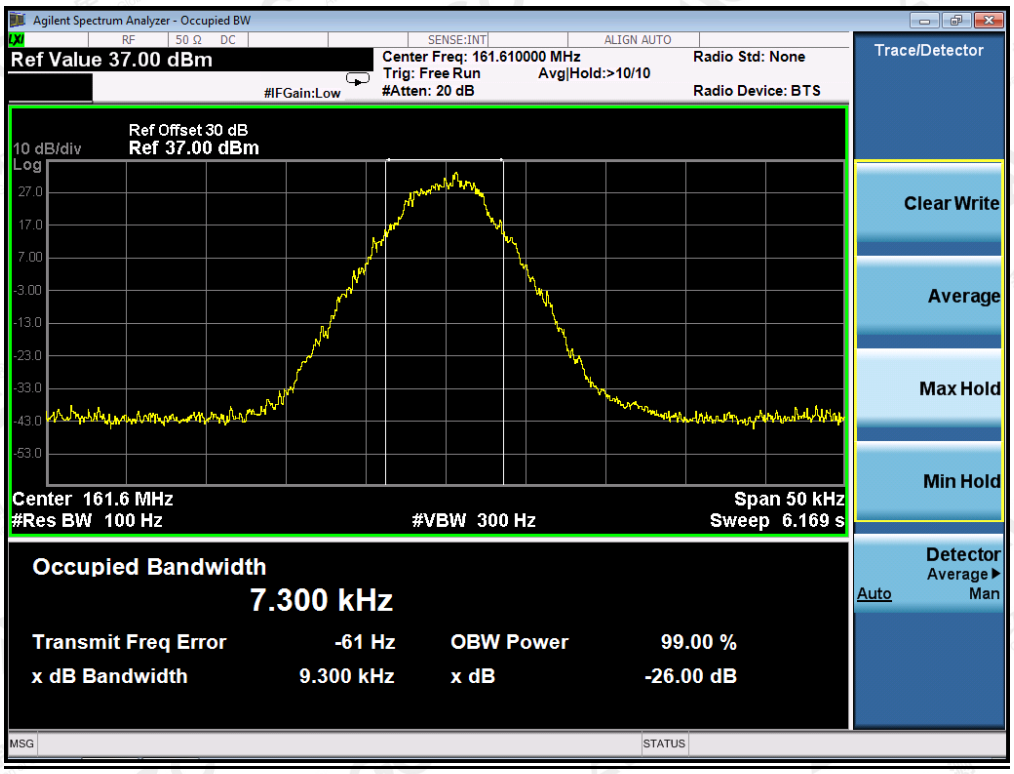
Occupied bandwidth of Bottom Channel (Maximum)-5W



Occupied bandwidth of Middle Channel (151.850 MHz)-5W



Occupied bandwidth of Middle Channel (161.610 MHz)-5W



Occupied bandwidth of High Channel (Maximum)-5W