

# RADIO TEST REPORT FCC ID: 2APMJ-AIRBUDS5PROR

Product: TWS Bluetooth headset

Trade Mark: Blackview

Model No.: AirBuds 5 Pro Family Model: N/A Report No.: STR210615003002E Issue Date: 02 July. 2021

# **Prepared for**

Shenzhen DOKE Electronic Co., Ltd

13th Floor, Weidonglong Commercial Building B, Meilong Avenue, Longhua New District, Shenzhen, China

# Prepared by

Shenzhen NTEK Testing Technology Co., Ltd. 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District, Shenzhen 518126 P.R. China Tel. 400-800-6106,0755-2320 0050 / 2320 0090 Website: http://www.ntek.org.cn



# TABLE OF CONTENTS

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1	TE	ST RESULT CERTIFICATION	3
2	SU	MMARY OF TEST RESULTS	4
3	FA	CILITIES AND ACCREDITATIONS	5
	.1	FACILITIES	
-	.2 .3	LABORATORY ACCREDITATIONS AND LISTINGS MEASUREMENT UNCERTAINTY	
4		NERAL DESCRIPTION OF EUT	
-			
5		SCRIPTION OF TEST MODES	
6	SE	<b>FUP OF EQUIPMENT UNDER TEST</b>	9
6	.1	BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM	9
6	.2	SUPPORT EQUIPMENT	
6	.3	EQUIPMENTS LIST FOR ALL TEST ITEMS	
7	ТЕ	ST REQUIREMENTS	
7	.1	CONDUCTED EMISSIONS TEST	
7	.2	RADIATED SPURIOUS EMISSION	
	.3	NUMBER OF HOPPING CHANNEL	
	.4	HOPPING CHANNEL SEPARATION MEASUREMENT	
	.5	AVERAGE TIME OF OCCUPANCY (DWELL TIME)	
	.6	20DB BANDWIDTH TEST	
	.7	PEAK OUTPUT POWER	
	.8	CONDUCTED BAND EDGE MEASUREMENT.	
	.9 .10	SPURIOUS RF CONDUCTED EMISSION	
		REQUENCY HOPPING SYSTEM (FHSS) EQUIPMENT REQUIREMENTS	
8		ST RESULTS	
-	.1	DWELL TIME	
-	.2	MAXIMUM CONDUCTED OUTPUT POWER	
-	.3	OCCUPIED CHANNEL BANDWIDTH	
	.4 .5	CARRIER FREQUENCIES SEPARATION Number of Hopping Channel	
	.5 .6	NUMBER OF HOPPING CHANNEL	
	.0 .7	CONDUCTED RF SPURIOUS EMISSION	
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## **1 TEST RESULT CERTIFICATION**

Applicant's name:	Shenzhen DOKE Electronic Co., Ltd
Address:	13th Floor, Weidonglong Commercial Building B, Meilong Avenue, Longhua New District, Shenzhen, China
Manufacturer's Name:	Shenzhen Antexin Technology Co.,Ltd
Address:	3/F, Building 34, Chentian Industrial Zone, Baoan District, Shenzhen, China
Product description	
Product name:	TWS Bluetooth headset
Model and/or type reference:	AirBuds 5 Pro
Family Model:	N/A

Certificate #4298.01

#### Measurement Procedure Used:

# APPLICABLE STANDARDS

STANDARD/ TEST PROCEDURE	TEST RESULT
FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart C ANSI C63.10-2013	Complied

This device described above has been tested by Shenzhen NTEK Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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

Date of Test	:	15 June. 2021 ~ 02 July. 2021
		Krang. Hu
Testing Engineer	:	
		(Mary Hu)
		Ades
Authorized Signatory	:	Gertion
		(Alex Li)

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#### SUMMARY OF TEST RESULTS 2

FCC Part15 (15.247), Subpart C					
Standard Section Test Item Verdict Remark					
15.207	Conducted Emission	PASS			
15.209 (a) 15.205 (a)	Radiated Spurious Emission	PASS			
15.247(a)(1)	Hopping Channel Separation	PASS			
15.247(b)(1)	Peak Output Power	PASS			
15.247(a)(iii)	Number of Hopping Frequency	PASS			
15.247(a)(iii)	Dwell Time	PASS			
15.247(a)(1)	Bandwidth	PASS			
15.247 (d)	Band Edge Emission	PASS			
15.247 (d)	Spurious RF Conducted Emission	PASS			
15.203	Antenna Requirement	PASS			

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Remark:

 "N/A" denotes test is not applicable in this Test Report.
 All test items were verified and recorded according to the standards and without any deviation during the test.



## **3 FACILITIES AND ACCREDITATIONS**

#### 3.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

#### 3.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description	
CNAS-Lab.	: The Certificate Registration Number is L5516.
IC-Registration	The Certificate Registration Number is 9270A. CAB identifier:CN0074
FCC- Accredited	Test Firm Registration Number: 463705. Designation Number: CN1184
A2LA-Lab.	The Certificate Registration Number is 4298.01
Name of Firm	: Shenzhen NTEK Testing Technology Co., Ltd.
Site Location	: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

#### 3.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y\pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	±2.80dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(30MHz~1GHz)	±2.64dB
5	All emissions, radiated(1GHz~6GHz)	±2.40dB
6	All emissions, radiated(>6GHz)	±2.52dB
7	Temperature	±0.5°C
8	Humidity	±2%

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# 4 GENERAL DESCRIPTION OF EUT

Product Feature and Specification				
Equipment	TWS Bluetooth headset			
Trade Mark	Blackview			
FCC ID	2APMJ-AIRBUDS5PROR			
Model No.	AirBuds 5 Pro			
Family Model	N/A			
Model Difference	N/A			
Operating Frequency	2402MHz~2480MHz			
Modulation	GFSK, π/4-DQPSK, 8-DPSK			
Number of Channels	79 Channels			
Antenna Type	Monopole Antenna			
Antenna Gain	0.5 dBi			
Power supply	Charging Case: DC 3.8V from battery or DC 5V from USB port Earphone: DC 3.8V from battery or DC 5V from Charging Case			
Adapter	N/A			
HW Version	V1.3			
SW Version	V66.0			

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Note 1: Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.



## **Revision History**

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Report No.	Version	Description	Issued Date
STR210615003002E	Rev.01	Initial issue of report	02 July. 2021



### **5 DESCRIPTION OF TEST MODES**

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (1Mbps for GFSK modulation; 2Mbps for  $\pi$ /4-DQPSK modulation; 3Mbps for 8-DPSK modulation) were used for all test.

The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement -X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

#### Carrier Frequency and Channel list:

Channel	Frequency(MHz)
0	2402
1	2403
39	2441
40	2442
77	2479
78	2480

Note: fc=2402MHz+k×1MHz k=0 to 78

The following summary table is showing all test modes to demonstrate in compliance with the standard.

For AC Conducted Emission				
Final Test Mode	Description			
Mode 1	normal link mode			

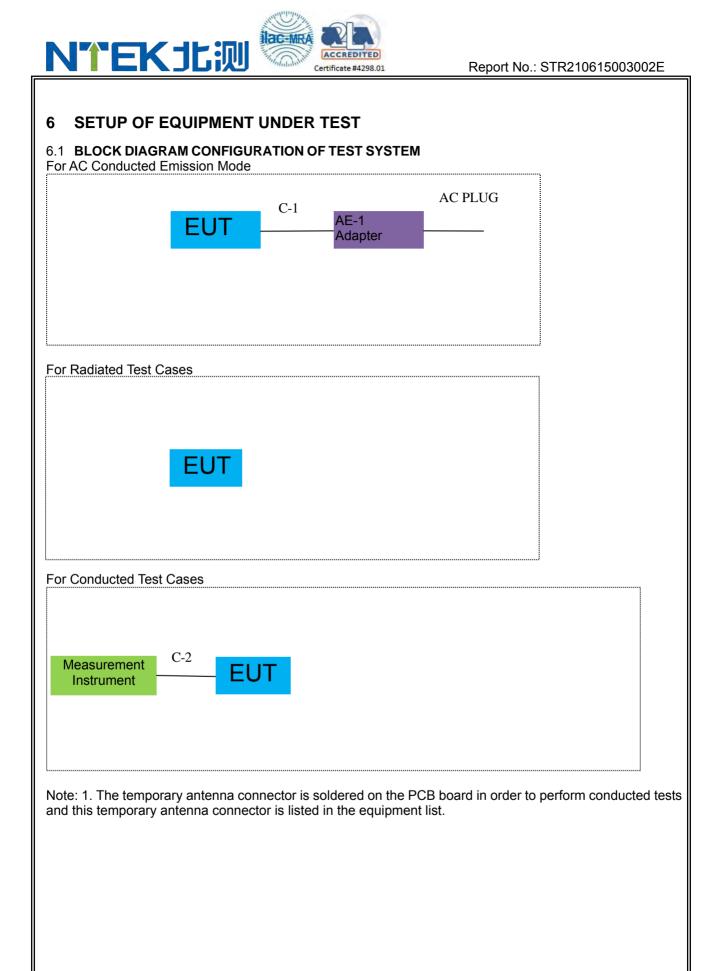
Note: AC power line Conducted Emission was tested under maximum output power.

For Radiated Test Cases		
Final Test Mode	Description	
Mode 1	normal link mode	
Mode 2	CH00(2402MHz)	
Mode 3	CH39(2441MHz)	
Mode 4	CH78(2480MHz)	

Note: For radiated test cases, the worst mode data rate 1Mbps was reported only, because this data rate has the highest RF output power at preliminary tests, and no other significantly frequencies found in conducted spurious emission.

For Conducted Test Cases			
Final Test Mode	Description		
Mode 2	CH00(2402MHz)		
Mode 3 CH39(2441MHz)			
Mode 4	CH78(2480MHz)		
Mode 5	Hopping mode		

Note: The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.





#### 6.2 SUPPORT EQUIPMENT

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
AE-1	Adapter	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	DC Cable	YES	NO	0.3m
C-2	RF Cable	YES	NO	0.1m

#### Notes:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in [Length] column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".

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#### 6.3 EQUIPMENTS LIST FOR ALL TEST ITEMS

#### Radiation& Conducted Test equipment

	estequipment				-	
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibrati on period
Spectrum Analyzer	Aglient	E4407B	MY45108040	2021.4.27	2022.4.26	1 year
Spectrum Analyzer	Agilent	N9020A	MY49100060	2020.07.13	2021.07.12	1 year
Spectrum Analyzer	R&S	FSV40	101417	2020.07.13	2021.07.12	1 year
Test Receiver	R&S	ESPI7	101318	2021.4.27	2022.4.26	1 year
Bilog Antenna	TESEQ	CBL6111D	31216	2021.03.29	2022.03.28	1 year
50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
Horn Antenna	EM	EM-AH-1018 0	2011071402	2021.03.29	2022.03.28	1 year
Broadband Horn Antenna	SCHWARZBE CK	BBHA 9170	803	2020.11.20	2021.11.19	1 year
Amplifier	EMC	EMC051835 SE	980246	2020.07.13	2021.07.12	1 year
Active Loop Antenna	SCHWARZBE CK	FMZB 1519 B	055	2020.11.20	2021.11.19	1 year
Power Meter	DARE	RPR3006W	15I00041SN 084	2020.07.13	2021.07.12	1 year
Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2019.08.06	2022.08.05	3 year
Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2019.08.06	2022.08.05	3 year
High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2020.05.11	2023.05.10	3 year
High Test Cable(1G-40G Hz)	N/A	R-04	N/A	2020.05.11	2023.05.10	1 year
Filter	TRILTHIC	2400MHz	29	2020.07.13	2021.07.12	1 year
temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A
	Kind of EquipmentSpectrum AnalyzerSpectrum AnalyzerSpectrum AnalyzerSpectrum Constal SwitchBilog Antenna50Ω Coaxial SwitchHorn AntennaBroadband Horn AntennaBroadband Horn AntennaPower MeterTest Cable (9KHz-30MHz)Test Cable (30MHz-1GHz)High Test Cable(1G-40G Hz)High Test Cable(1G-40G Hz)Filtertemporary antenna connector	Kind of EquipmentManufacturerSpectrum AnalyzerAglientSpectrum AnalyzerAgilentSpectrum AnalyzerR&STest ReceiverR&SBilog AntennaTESEQ50Ω Coaxial SwitchAnritsuHorn AntennaEMBroadband Horn AntennaSCHWARZBE CKAnalyifierEMCActive Loop AntennaSCHWARZBE CKPower MeterDARETest Cable (30MHz-1GHz)N/AHigh Test Cable(1G-40G Hz)N/AHigh Test Cable(1G-40G Hz)N/AFilterTRILTHICtemporary antenna connectorNTS	Kind of EquipmentManufacturerType No.Spectrum AnalyzerAglientE4407BSpectrum AnalyzerAgilentN9020ASpectrum AnalyzerR&SFSV40Test ReceiverR&SESPI7Bilog AntennaTESEQCBL6111D50Ω Coaxial SwitchAnritsuMP59BHorn AntennaEMEM-AH-1018 0Broadband Horn AntennaSCHWARZBE CKBBHA 9170AmplifierEMCEMC051835 SEActive Loop AntennaSCHWARZBE CKFMZB 1519 BPower MeterDARERPR3006WTest Cable (9KHz-30MHz)N/AR-01Test Cable (30MHz-1GHz)N/AR-03High Test Cable(1G-40G Hz)N/AR-03High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04High Test Cable(1G-40G Hz)N/AR-04	Kind of EquipmentManufacturerType No.Serial No.Spectrum AnalyzerAglientE4407BMY45108040Spectrum AnalyzerAglientN9020AMY49100060Spectrum AnalyzerR&SFSV40101417Test ReceiverR&SESPI7101318Bilog AntennaTESEQCBL6111D3121650Ω Coaxial SwitchAnritsuMP59B6200983705Horn AntennaEMEM-AH-1018 02011071402Broadband Horn AntennaSCHWARZBE CKBBHA 9170803AmplifierEMCEMC051835 SE980246Active Loop AntennaSCHWARZBE CKFMZB 1519 B055Power MeterDARERPR3006W15100041SN 084Test Cable (30MHz-1GHz)N/AR-01N/AHigh Test Cable(1G-40G Hz)N/AR-03N/AHigh Test Cable(1G-40G Hz)N/AR-04N/AFilterTRILTHIC2400MHz29temporary antenna connectorNTSR001N/A	Kind of EquipmentManufacturerType No.Serial No.Last calibrationSpectrum AnalyzerAglientE4407BMY451080402021.4.27Spectrum AnalyzerAglientN9020AMY491000602020.07.13Spectrum AnalyzerR&SFSV401014172020.07.13Spectrum AnalyzerR&SESPI71013182021.4.27Bilog AntennaTESEQCBL6111D312162021.03.2950Q Coaxial SwitchAnritsuMP59B62009837052020.05.11Horn AntennaEMEM-AH-1018 020110714022021.03.29Broadband Horn AntennaCKBBHA 91708032020.11.20AmplifierEMCEMC051835 SE9802462020.07.13Active Loop AntennaSCHWARZBE CKFMZB 1519 B0552020.07.13Power MeterDARERPR3006W15100041SN 0842020.07.13Test Cable (30MHz-1GHz)N/AR-01N/A2019.08.06High Test Cable(1G-40G Hz)N/AR-03N/A2020.05.11High Test Cable(1G-40G Hz)N/AR-04N/A2020.05.11High Test Cable(1G-40G Hz)N/AR-04N/A2020.05.11FilterTRILTHIC2400MHz292020.07.13Temporary antenna connectorNTSR001N/AN/A	Kind of EquipmentManufacturerType No.Serial No.Last calibrationCalibrated untilSpectrum AnalyzerAglientE4407BMY451080402021.4.272022.4.26Spectrum AnalyzerAglientN9020AMY491000602020.07.132021.07.12Spectrum AnalyzerR&SFSV401014172020.07.132021.07.12Test ReceiverR&SESPI71013182021.4.272022.4.26Bilog AntennaTESEQCBL6111D312162021.03.292022.03.2850Ω Coaxial SwitchAnritsuMP59B62009837052020.05.112023.05.10Horn AntennaEMEM-AH-1018 020110714022021.03.292022.03.28Broadband Horn AntennaEMCEMC051835 S9802462020.07.132021.07.12Active Loop AntennaSCHWARZBE CKFMZB 1519 B0552020.07.132021.07.12Power MeterDARERPR3006W15100041SN 0842020.07.132021.07.12Test Cable (9KH2-30MHz)N/AR-01N/A2019.08.062022.08.05High Test Cable(1G-40G Hz)N/AR-03N/A2020.05.112023.05.10High Test Cable(1G-40G Hz)N/AR-03N/A2020.05.112023.05.10High Test Cable(1G-40G Hz)N/AR-04N/A2020.05.112023.05.10High Test Cable(1G-40G Hz)N/AR-04N/A2020.05.112023.05.10High Tes

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Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test And this temporary antenna connector is listed within the instrument list



#### AC Conduction Test equipment Kind of Calibration Last Calibrated Manufacturer Type No. Serial No. Item Equipment calibration until period 1 **Test Receiver** R&S ESCI 101160 2020.07.13 2021.07.12 1 year 2 LISN R&S **ENV216** 101313 2020.07.13 2021.07.12 1 year SCHWARZBE 3 LISN **NNLK 8129** 2020.07.13 8129245 2021.07.12 1 year CK 50Ω Coaxial ANRITSU 4 MP59B 6200983704 2020.05.11 2023.05.10 3 year CORP Switch **Test Cable** 5 (9KHz-30MH N/A C01 N/A 2020.05.11 2023.05.10 3 year Z) Test Cable 6 (9KHz-30MH N/A C02 N/A 2020.05.11 2023.05.10 3 year Z) Test Cable C03 N/A 2020.05.11 2023.05.10 7 (9KHz-30MH N/A 3 year Z)

Note: Each piece of equipment is scheduled for calibration once a year except the Aux Equipment & Test Cable which is scheduled for calibration every 2 or 3 years.

# NTEKJLIN CERTIFICATE #4298.01

## 7 TEST REQUIREMENTS

### 7.1 CONDUCTED EMISSIONS TEST

#### 7.1.1 Applicable Standard

According to FCC Part 15.207(a)

#### 7.1.2 Conformance Limit

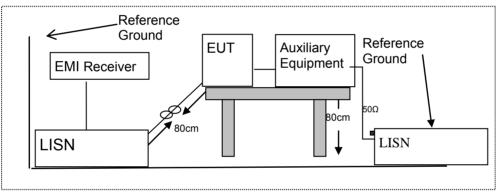
	Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average	
0.15-0.5	66-56*	56-46*	
0.5-5.0	56	46	
5.0-30.0	60	50	

Note: 1. \*Decreases with the logarithm of the frequency

2. The lower limit shall apply at the transition frequencies

3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

#### 7.1.3 Test Configuration



#### 7.1.4 Test Procedure

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
- 2. The EUT was placed on a table which is 0.8m above ground plane.
- 3. Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm long.
- 5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 6. LISN at least 80 cm from nearest part of EUT chassis.
- 7. The frequency range from 150KHz to 30MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
- 9. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 7.1.5 Test Results

Pass



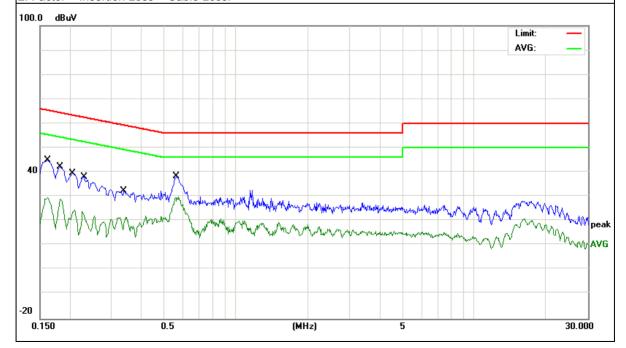
#### 7.1.6 Test Results

EUT:	TWS Bluetooth headset	Model Name :	AirBuds 5 Pro
Temperature:	21.5 ℃	Relative Humidity:	55%
Pressure:	1010hPa	Phase :	L
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 1

<b>_</b>						
Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1620	35.26	9.56	44.82	65.36	-20.54	QP
0.1620	20.04	9.56	29.60	55.36	-25.76	AVG
0.1819	32.81	9.55	42.36	64.39	-22.03	QP
0.1819	19.36	9.55	28.91	54.39	-25.48	AVG
0.2059	30.11	9.55	39.66	63.37	-23.71	QP
0.2059	14.94	9.55	24.49	53.37	-28.88	AVG
0.2300	28.49	9.55	38.04	62.45	-24.41	QP
0.2300	14.26	9.55	23.81	52.45	-28.64	AVG
0.3379	22.76	9.54	32.30	59.25	-26.95	QP
0.3379	11.89	9.54	21.43	49.25	-27.82	AVG
0.5620	28.76	9.55	38.31	56.00	-17.69	QP
0.5620	20.26	9.55	29.81	46.00	-16.19	AVG

Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.





EUT:	TWS Bluetooth headset	Model Name :	AirBuds 5 Pro
Temperature:	21.5℃	Relative Humidity:	55%
Pressure:	1010hPa	Phase :	Ν
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 1

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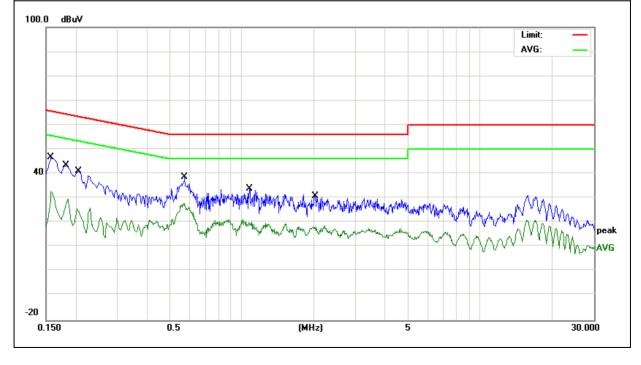
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Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1580	37.10	9.55	46.65	65.56	-18.91	QP
0.1580	23.23	9.55	32.78	55.56	-22.78	AVG
0.1819	33.89	9.54	43.43	64.39	-20.96	QP
0.1819	20.06	9.54	29.60	54.39	-24.79	AVG
0.2058	31.52	9.54	41.06	63.37	-22.31	QP
0.2058	16.54	9.54	26.08	53.37	-27.29	AVG
0.5738	29.00	9.54	38.54	56.00	-17.46	QP
0.5738	18.38	9.54	27.92	46.00	-18.08	AVG
1.0740	24.19	9.55	33.74	56.00	-22.26	QP
1.0740	11.61	9.55	21.16	46.00	-24.84	AVG
2.0299	21.37	9.57	30.94	56.00	-25.06	QP
2.0299	9.37	9.57	18.94	46.00	-27.06	AVG

Remark:

1. All readings are Quasi-Peak and Average values.

2. Factor = Insertion Loss + Cable Loss.





#### 7.2 RADIATED SPURIOUS EMISSION

#### 7.2.1 Applicable Standard

#### According to FCC Part 15.247(d) and 15.209 and ANSI C63.10-2013

#### 7.2.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). According to FCC Part15.205, Restricted bands

MHz	MHz	MHz	GHz			
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15			
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46			
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75			
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5			
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2			
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5			
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7			
6.26775-6.26825	123-138	2200-2300	14.47-14.5			
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2			
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4			
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12			
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0			
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8			
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5			
12.57675-12.57725	322-335.4	3600-4400	(2)			
13.36-13.41						

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Restricted Frequency(MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)			
	PEAK	AVERAGE		
Above 1000	74	54		

Remark :1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);



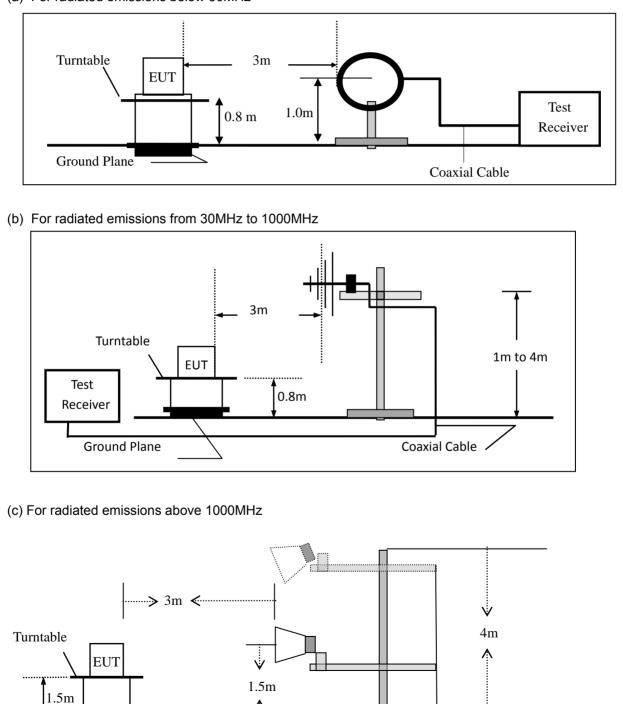
Limit line=Specific limits(dBuV) + distance extrapolation factor.

#### 7.2.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.2.4 Test Configuration

#### (a) For radiated emissions below 30MHz



A

Test Receiver

<u>Amplifie</u>



### 7.2.5 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1 MHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

- b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; 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.
- d. For the radiated emission test above 1GHz: Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- e. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- f. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- g. For the actual test configuration, please refer to the related Item -EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported



During the radiated emission test, th	ne Spectrum Analyzer was set with the following configura	ations:
	······································	

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth		
30 to 1000	30 to 1000 QP		300 kHz		
Above 1000	Peak	1 MHz	1 MHz		
Above 1000	Average	1 MHz	1 MHz		

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10\*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

#### 7.2.6 Test Results

S	purious	Emission	below	30MHz	(9KHz to 30MH	z)
---	---------	----------	-------	-------	---------------	----

EUT:	TWS Bluetooth headset Model No.: A		AirBuds 5 Pro
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu

Freq.	Ant.Pol.	Ant.Pol. Emission Level(dBuV/m) Limit 3m(dBuV/m)				Over	(dB)
(MHz)	H/V	PK	AV	PK	AV	PK	AV

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

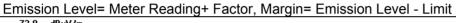


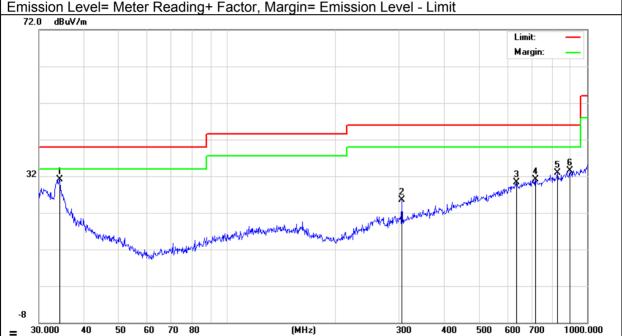
Spurious Emission below 1GHz (30MHz to 1GHz) All the modulation modes have been tested, and the worst result was report as below:

EUT:	TWS Bluetooth headset	Model Name :	AirBuds 5 Pro
Temperature:	<b>25.4</b> ℃	Relative Humidity:	47%
Pressure:	1010hPa	Test Mode:	1Mbps GFSK CH00
Test Voltage :	DC 3.8V		

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
(H/V)	(MHz)	(dBuV) (dB)		(dBuV/m)	(dBuV/m)	(dB)	
V	34.2760	15.06	16.05	31.11	40.00	-8.89	QP
V	305.6800	10.23	15.18	25.41	46.00	-20.59	QP
V	636.1340	7.16	23.15	30.31	46.00	-15.69	QP
V	719.1995	7.22	23.87	31.09	46.00	-14.91	QP
V	827.4933	7.23	25.70	32.93	46.00	-13.07	QP
V	893.8567	7.22	26.28	33.50	46.00	-12.50	QP

**Remark:** 







Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remar
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Tternar
Н	30.0000	4.54	19.44	23.98	40.00	-16.02	QP
Н	447.9822	5.99	19.33	25.32	46.00	-20.68	QP
Н	603.5392	7.27	22.39	29.66	46.00	-16.34	QP
Н	721.7259	7.50	23.88	31.38	46.00	-14.62	QP
Н	866.0879	6.90	26.13	33.03	46.00	-12.97	QP
Н	952.0937	5.99	26.94	32.93	46.00	-13.07	QP
						Margin:	
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Spurious Emission Above 1GHz (1GHz to 25GHz)											
EUT:	TWS	TWS Bluetooth headset         Model No.:         AirBuds 5 Pro									
Temperature	e: 20 °	С	Relative Humidity:			r: 48	48%				
Test Mode:	Mod	e2/Mode	3/Mode4	Test B	SV:	M	ary F	łu			
All the modulation modes have been tested, and the worst result was report as below:											
Frequency	Read Level	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limit	Limits N		Rema	rk	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV	/m)	(dB)			
Low Channel (2402 MHz)(GFSK)Above 1G											
4804.17	68.70	5.21	35.59	44.30	65.20	74.0	0	-8.80	Pk		Vertical
4804.17	43.24	5.21	35.59	44.30	39.74	54.0	0	-14.26	AV		Vertical
7206.04	61.84	6.48	36.27	44.60	59.99	74.0	0	-14.01	Pk		Vertical
7206.04	43.97	6.48	36.27	44.60	42.12	54.0	0	-11.88	AV		Vertical
4804.60	62.25	5.21	35.55	44.30	58.71	74.0	0	-15.29	Pk	H	lorizontal
4804.60	41.20	5.21	35.55	44.30	37.66	54.0	0	-16.34	AV	H	lorizontal
7206.19	59.12	6.48	36.27	44.52	57.35	74.00		-16.65	Pk	H	lorizontal
7206.19	40.63	6.48	36.27	44.52	38.86	54.0	54.00 -1		AV	H	lorizontal
		-	Mid Chanr	nel (2441 N	Hz)(GFSK)-	-Above	1G				
4882.81	63.86	5.21	35.66	44.20	60.53	74.0	0	-13.47	Pk		Vertical
4882.81	43.95	5.21	35.66	44.20	40.62	54.0	0	-13.38	AV		Vertical
7323.39	64.50	7.10	36.50	44.43	63.67	74.0	0	-10.33	Pk		Vertical
7323.39	42.01	7.10	36.50	44.43	41.18	54.0	0	-12.82	AV		Vertical
4882.49	60.47	5.21	35.66	44.20	57.14	74.0	0	-16.86	Pk	H	lorizontal
4882.49	43.92	5.21	35.66	44.20	40.59	54.0	0	-13.41	AV	H	lorizontal
7324.42	59.60	7.10	36.50	44.43	58.77	74.0	0	-15.23	Pk	H	lorizontal
7324.42	40.57	7.10	36.50	44.43	39.74	54.0	-	-14.26	AV	H	lorizontal
			High Chanr	nel (2480 M	1Hz)(GFSK)-	- Above	1G				
4959.67	67.78	5.21	35.52	44.21	64.30	74.0	0	-9.70	Pk		Vertical
4959.67	43.90	5.21	35.52	44.21	40.42	54.0	0	-13.58	AV		Vertical
7439.34	62.23	7.10	36.53	44.60	61.26	74.0	0	-12.74	Pk		Vertical
7439.34	42.30	7.10	36.53	44.60	41.33	54.0	0	-12.67	AV		Vertical
4960.86	61.10	5.21	35.52	44.21	57.62	74.0	0	-16.38	Pk	H	lorizontal
4960.86	42.36	5.21	35.52	44.21	38.88	54.0	0	-15.12	AV	H	lorizontal
7440.01	59.18	7.10	36.53	44.60	58.21	74.0	0	-15.79	Pk	H	lorizontal
7440.01	43.97	7.10	36.53	44.60	43.00	54.0	0	-11.00	AV	H	lorizontal

Note:

(1) Emission Level= Antenna Factor + Cable Loss + Read Level - Preamp Factor (2)All other emissions more than 20dB below the limit.



Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz										
EUT:	TWS Blue	tooth he	adset	Mode	l No.:		AirBuds 5 Pro			
Temperature	: <b>20</b> °C	ve Humidity	/:	48%						
Test Mode:	Mode2/ Mo	ode4		Test E	By:		Mary	Hu		
All the modulation modes have been tested, and the worst result was report as below:										
Frequency	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Lir	nits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dB	JV/m)	(dB)	Туре	
1Mbps(GFSK)- Non-hopping										
2310.00	52.93	2.97	27.80	43.80	39.90	7	74	-34.10	Pk	Horizontal
2310.00	40.28	2.97	27.80	43.80	27.25	5	54	-26.75	AV	Horizontal
2310.00	54.04	2.97	27.80	43.80	41.01	7	74	-32.99	Pk	Vertical
2310.00	42.33	2.97	27.80	43.80	29.30	5	54	-24.70	AV	Vertical
2390.00	53.09	3.14	27.21	43.80	39.64	7	74	-34.36	Pk	Vertical
2390.00	42.00	3.14	27.21	43.80	28.55	5	54	-25.45	AV	Vertical
2390.00	51.26	3.14	27.21	43.80	37.81	7	74	-36.19	Pk	Horizontal
2390.00	41.40	3.14	27.21	43.80	27.95	5	54	-26.05	AV	Horizontal
2483.50	51.43	3.58	27.70	44.00	38.71	7	74	-35.29	Pk	Vertical
2483.50	42.75	3.58	27.70	44.00	30.03	5	54	-23.97	AV	Vertical
2483.50	52.72	3.58	27.70	44.00	40.00	7	74	-34.00	Pk	Horizontal
2483.50	44.16	3.58	27.70	44.00	31.44	5	54	-22.56	AV	Horizontal
				1Mbps (GF	SK)- hoppin	g				
2310.00	54.80	2.97	27.80	43.80	41.77	7	74	-32.23	Pk	Horizontal
2310.00	43.98	2.97	27.80	43.80	30.95	5	54	-23.05	AV	Horizontal
2310.00	53.37	2.97	27.80	43.80	40.34	7	74	-33.66	Pk	Vertical
2310.00	44.33	2.97	27.80	43.80	31.30	5	54	-22.70	AV	Vertical
2390.00	51.77	3.14	27.21	43.80	38.32	7	74	-35.68	Pk	Vertical
2390.00	44.66	3.14	27.21	43.80	31.21	5	54	-22.79	AV	Vertical
2390.00	51.57	3.14	27.21	43.80	38.12	7	74	-35.88	Pk	Horizontal
2390.00	40.84	3.14	27.21	43.80	27.39	5	54	-26.61	AV	Horizontal
2483.50	53.06	3.58	27.70	44.00	40.34		74	-33.66	Pk	Vertical
2483.50	41.48	3.58	27.70	44.00	28.76	5	54	-25.24	AV	Vertical
2483.50	54.21	3.58	27.70	44.00	41.49	7	74	-32.51	Pk	Horizontal
2483.50	43.36	3.58	27.70	44.00	30.64	5	54	-23.36	AV	Horizontal

Note: (1) All other emissions more than 20dB below the limit.



Spurious Emission in Restricted Band 3260MHz-18000MHz											
EUT:		TWS Bluetooth headset			Model	Model No.:		AirBuds 5 Pro			
Temperature:		<b>20</b> ℃			Relativ	Relative Humidity:		48%			
Test Mode:		Mode2/ Mode4			Test B	Test By: Mar		Mary H	ry Hu		
All the modu	lation	modes	s have b	een testeo	I, and the	worst resu	lt wa	s repo	rt as belo	W:	
Frequency	Frequency Re		Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Li	mits	Margin	Detector	Comment
(MHz)	(dBµV)		(dB)	dB/m	(dB)	(dBµV/m)	(dB	µV/m)	(dB)	Туре	
3260	6	2.12	4.04	29.57	44.70	51.03		74	-22.97	Pk	Vertical
3260	4	8.06	4.04	29.57	44.70	36.97		54	-17.03	AV	Vertical
3260	5	7.95	4.04	29.57	44.70	46.86		74	-27.14	Pk	Horizontal
3260	46.44		4.04	29.57	44.70	35.35		54	-18.65	AV	Horizontal
3332	62.37		4.26	29.87	44.40	52.10		74	-21.90	Pk	Vertical
3332	4	5.53	4.26	29.87	44.40	35.26		54	-18.74	AV	Vertical
3332	6	3.19	4.26	29.87	44.40	52.92		74	-21.08	Pk	Horizontal
3332	44	4.27	4.26	29.87	44.40	34.00		54	-20.00	AV	Horizontal
17797	5	0.54	10.99	43.95	43.50	61.98		74	-12.02	Pk	Vertical
17797	3	6.93	10.99	43.95	43.50	48.37		54	-5.63	AV	Vertical
17788	5	3.96	11.81	43.69	44.60	64.86		74	-9.14	Pk	Horizontal
17788	3	5.38	11.81	43.69	44.60	46.28		54	-7.72	AV	Horizontal

Note: (1) All other emissions more than 20dB below the limit.



#### 7.3 NUMBER OF HOPPING CHANNEL

#### 7.3.1 Applicable Standard

According to FCC Part 15.247(a)(1) (iii)and ANSI C63.10-2013

#### 7.3.2 Conformance Limit

Frequency hopping systems in the 2400-2483.5MHz band shall use at least 15 channels.

#### 7.3.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.3.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.3.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.3

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT must have its hopping function enabled.

Use the following spectrum analyzer settings:

Span = the frequency band of operation

RBW : To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.

VBW ≥ RBW

Sweep = auto

Detector function = peak Trace = max hold

#### 7.3.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	Mode 5(1Mbps)	Test By:	Mary Hu

Test data reference attachment.

Note: All modes are predicted, and only the worst mode is recorded in the report.



#### 7.4 HOPPING CHANNEL SEPARATION MEASUREMENT

#### 7.4.1 Applicable Standard

According to FCC Part 15.247(a)(1) and ANSI C63.10-2013

#### 7.4.2 Conformance Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band shall have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

#### 7.4.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.4.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.4.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.2 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT was operating in controlled its channel. Use the following spectrum analyzer settings: Span = Measurement Bandwidth or Channel Separation RBW: Start with the RBW set to approximately 3% of the channel spacing; adjust as necessary to best identify the center of each individual channel. VBW  $\geq$  RBW Sweep = auto Detector function = peak Trace = max hold

#### 7.4.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	<b>20</b> °C	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu



#### 7.5 AVERAGE TIME OF OCCUPANCY (DWELL TIME)

#### 7.5.1 Applicable Standard

According to FCC Part 15.247(a)(1)(iii) and ANSI C63.10-2013

#### 7.5.2 Conformance Limit

The average time of occupancy on any channel shall not be greater than 0.4s within a period of 0.4s multiplied by the number of hopping channels employed.

#### 7.5.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.5.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.5.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.4 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT must have its hopping function enabled. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel RBW  $\geq$  1MHz VBW  $\geq$  RBW Sweep = as necessary to capture the entire dwell time per hopping channel Detector function = peak Trace = max hold Measure the maximum time duration of one single pulse. Set the EUT for DH5, DH3 and DH1 packet transmitting. Measure the maximum time duration of one single pulse.



#### 7.5.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu

Test data reference attachment.

Note:

A Period Time = (channel number)\*0.4 DH1 Dwell time: Reading \* (1600/2)\*31.6/(channel number) DH3 Dwell time: Reading \* (1600/4)\*31.6/(channel number) DH5 Dwell time: Reading \* (1600/6)\*31.6/(channel number)

For Example:

- 1. In normal mode, hopping rate is 1600 hops/s with 6 slots in 79 hopping channels. With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit  $(0.4 \times 79)$  (s), Hops Over Occupancy Time comes to  $(1600 / 6 / 79) \times (0.4 \times 79) = 106.67$  hops.
- In AFH mode, hopping rate is 800 hops/s with 6 slots in 20 hopping channels. With channel hopping rate (800 / 6 / 20) in Occupancy Time Limit (0.4 x 20) (s), Hops Over Occupancy Time comes to (800 / 6 / 20) x (0.4 x 20) = 53.33 hops.
- 3. Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time



#### 7.6 20DB BANDWIDTH TEST

#### 7.6.1 Applicable Standard

According to FCC Part 15.247(a)(1) and ANSI C63.10-2013

#### 7.6.2 Conformance Limit

No limit requirement.

#### 7.6.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.6.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.6.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 6.9.2 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT was operating in controlled its channel. Use the following spectrum analyzer settings: Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel RBW  $\geq$  1% of the 20 dB bandwidth VBW  $\geq$  RBW Sweep = auto Detector function = peak Trace = max hold

#### 7.6.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu



#### 7.7 PEAK OUTPUT POWER

#### 7.7.1 Applicable Standard

According to FCC Part 15.247(b)(1) and ANSI C63.10-2013

#### 7.7.2 Conformance Limit

The maximum peak conducted output power of the intentional radiator shall not exceed the following: (1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band 0.125 watts.

#### 7.7.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.7.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.7.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.5. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT was operating in controlled its channel. Use the following spectrum analyzer settings: Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel RBW  $\geq$  the 20 dB bandwidth of the emission being measured VBW  $\geq$  RBW Sweep = auto Detector function = peak Trace = max hold

#### 7.7.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu



#### 7.8 CONDUCTED BAND EDGE MEASUREMENT

#### 7.8.1 Applicable Standard

According to FCC Part 15.247(d) and ANSI C63.10-2013

#### 7.8.2 Conformance Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### 7.8.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.8.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.8.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.6.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT must have its hopping function enabled.

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW = 100KHz

VBW = 300KHz

Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used.

Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

Repeat above procedures until all measured frequencies were complete.

#### 7.8.6 Test Results

EUT:	TWS Bluetooth headset	Model No.:	AirBuds 5 Pro
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	Mode2 /Mode4/ Mode 5	Test By:	Mary Hu



#### 7.9 SPURIOUS RF CONDUCTED EMISSION

#### 7.9.1 Applicable Standard

According to FCC Part 15.247(d) and ANSI C63.10-2013.

#### 7.9.2 Conformance Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### 7.9.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.9.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.9.5 Test Procedure

Establish an emission level by using the following procedure:

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW  $\geq$  [3 × RBW].
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level. Then the limit shall be attenuated by at least 20 dB relative to the maximum

amplitude level in 100 kHz.

#### 7.9.6 Test Results

Remark: The measurement frequency range is from 30MHzHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.



#### 7.10 ANTENNA APPLICATION

#### 7.10.1 Antenna Requirement

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

#### 7.10.2 Result

The EUT antenna is permanent attached Monopole antenna (Gain: 0.5dBi). It comply with the standard requirement.

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#### 7.11 FREQUENCY HOPPING SYSTEM (FHSS) EQUIPMENT REQUIREMENTS 7.11.1 Standard Applicable

According to FCC Part 15.247(a)(1), The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals. (g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section. (h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Certificate #4298 01

#### 7.11.2 Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule. This device uses Bluetooth radio which operates in 2400-2483.5 MHz band. Bluetooth uses a radio technology called frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to 79 bands (1 MHz each; centred from 2402 to 2480 MHz) in the range 2,400-2,483.5 MHz. The transmitter switches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devices participating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (the frequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconet must know the master's device address and must synchronize their clocks with the master's clock. Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way for a Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wireless devices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. The AFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of any identified bad channels. The devices will then switch to alternative available "good" channels, away from the areas of interference, thus having no impact on the bandwidth used.

This device was tested with an bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements for FCC Part 15.247 rule.

#### 7.11.3 EUT Pseudorandom Frequency Hopping Sequence

Pseudorandom Frequency Hopping Sequence Table as below: Channel: 08, 24, 40, 56, 40, 56, 72, 09, 01, 09, 33, 41, 33, 41, 65, 73, 53, 69, 06, 22, 04, 20, 36, 52, 38, 46, 70, 78, 68, 76, 21, 29, 10, 26, 42, 58, 44, 60, 76, 13, 03, 11, 35, 43, 37, 45, 69, 77, 55, 71, 08, 24, 08, 24, 40, 56, 40, 48, 72, 01, 72, 01, 25, 33, 12, 28, 44, 60, 42, 58, 74, 11, 05, 13, 37, 45 etc.

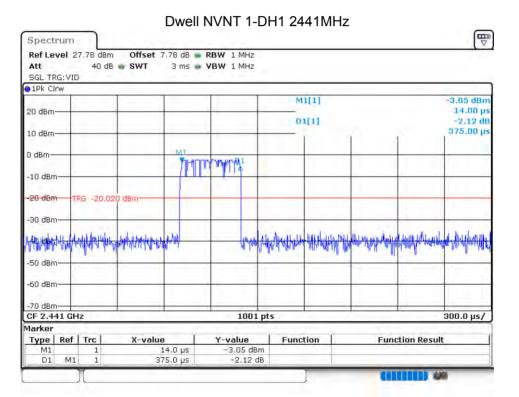
The system receiver have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.



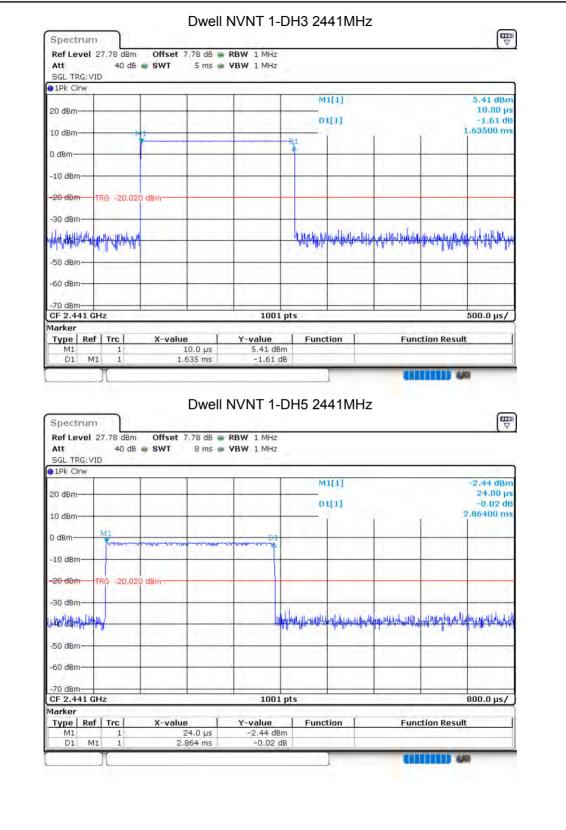
### 8 TEST RESULTS

#### 8.1 **DWELL TIME**

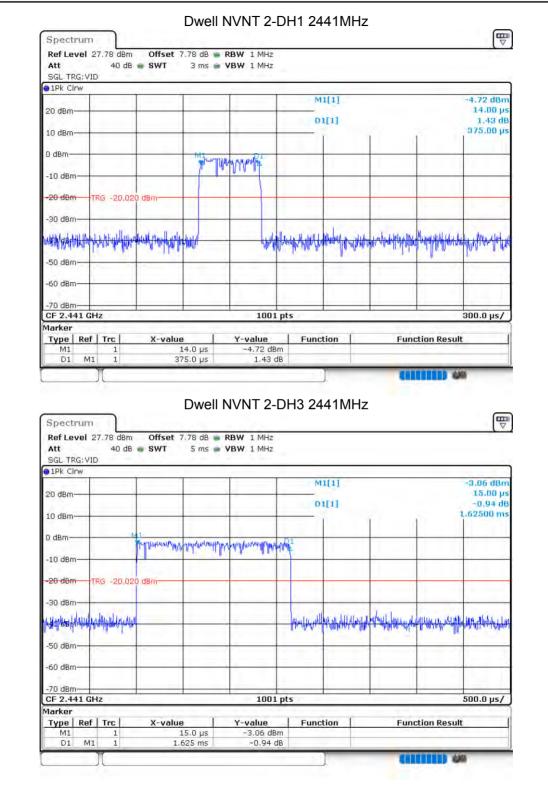
Mode	Frequency	Pulse	Total Dwell	Period	Limit	Verdict
	(MHz)	Time (ms)	Time (ms)	Time (ms)	(ms)	
1-DH1	2441	0.375	120	31600	400	Pass
1-DH3	2441	1.635	261.6	31600	400	Pass
1-DH5	2441	2.864	305.493	31600	400	Pass
2-DH1	2441	0.375	120	31600	400	Pass
2-DH3	2441	1.625	260	31600	400	Pass
2-DH5	2441	2.872	306.347	31600	400	Pass
3-DH1	2441	0.375	120	31600	400	Pass
3-DH3	2441	1.62	259.2	31600	400	Pass
3-DH5	2441	2.872	306.347	31600	400	Pass
	1-DH1 1-DH3 1-DH5 2-DH1 2-DH3 2-DH5 3-DH1 3-DH3	(MHz)           1-DH1         2441           1-DH3         2441           1-DH5         2441           2-DH1         2441           2-DH3         2441           2-DH5         2441           3-DH1         2441           3-DH1         2441           3-DH3         2441	(MHz)Time (ms)1-DH124410.3751-DH324411.6351-DH524412.8642-DH124410.3752-DH324411.6252-DH524412.8723-DH124410.3753-DH324411.62	(MHz)Time (ms)Time (ms)1-DH124410.3751201-DH324411.635261.61-DH524412.864305.4932-DH124410.3751202-DH324411.6252602-DH524412.872306.3473-DH124410.3751203-DH324411.62259.2	(MHz)Time (ms)Time (ms)Time (ms)1-DH124410.375120316001-DH324411.635261.6316001-DH524412.864305.493316002-DH124410.375120316002-DH324411.625260316002-DH524412.872306.347316003-DH124410.375120316003-DH124411.62259.231600	(MHz)Time (ms)Time (ms)Time (ms)(ms)1-DH124410.375120316004001-DH324411.635261.6316004001-DH524412.864305.493316004002-DH124410.375120316004002-DH324411.625260316004002-DH524412.872306.347316004003-DH124410.375120316004003-DH324411.62259.231600400







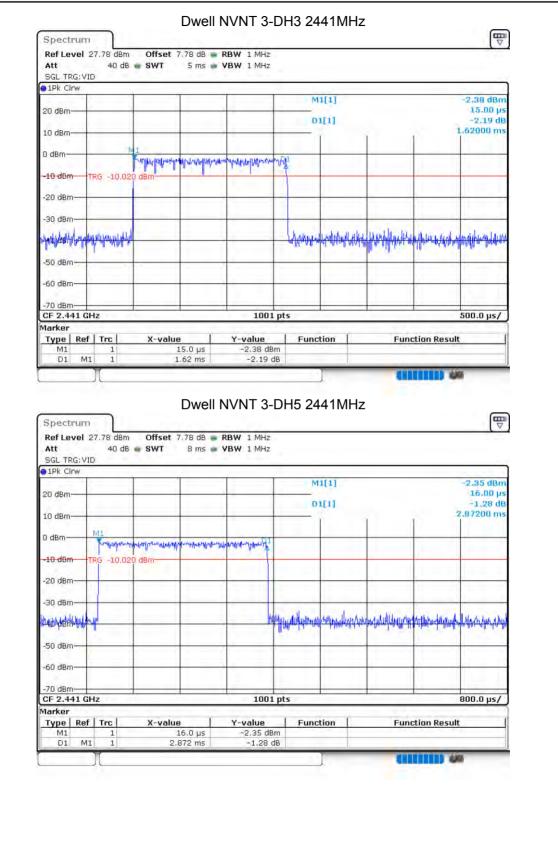






Ref Level 27.78 dBm Offs Att 40 dB e SWT	et 7.78 dB 🝙 RBW 1 MF 8 ms 👜 VBW 1 MF				
SGL TRG: VID					
1Pk Clrw	1 1	M1[1	1		-3.14 dBm
20 dBm					16.00 µs
10 dBm-		01[1			-1.58 dB 2.87200 ms
D dBm	rana wanter manager and	1			
-10 dBm		*		_	
-20 dBm TRG -20.020 dBm					
-30 dBm		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			A Gamma
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M1 1 D1 M1 1 Spectrum	Dwell NVNT 3		1MHz		, E
D1 M1 1 Spectrum Ref Level 27.78 dBm Offsi Att 40 dB SWT	Dwell NVNT :	3-DH1 244	1MHz	GIUIUD	
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D1 M1 1 Spectrum Ref Level 27.78 dBm Offs Att 40 dB SWT SGL TRG: VID 1Pk Clrw	Dwell NVNT :	3-DH1 244			-3.02 dBm
D1 M1 1 Spectrum Ref Level 27.78 dBm Offso Att 40 dB SWT SGL TRG:VID 1Pk Clrw 20 dBm	Dwell NVNT :	3-DH1 244 12 12	I	CILLIND .	-3.02 dBm 11.00 μs -3,73 dB
D1 M1 1 Spectrum Ref Level 27.78 dBm Offso Att 40 dB SWT SGL TRG:VID 1Pk Clrw 20 dBm	Dwell NVNT :	3-DH1 244	I		-3.02 dBm 11.00 ps
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D1 M1 1  Spectrum  Ref Level 27.78 dBm Offs  Att 40 dB SWT  SGL TRG:VID  1Pk Clrw  20 dBm  0 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
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D1 M1 1  Spectrum  Ref Level 27.78 dBm Offsi Att 40 dB SWT SGL TRG: VID  1Pk Clrw  20 dBm  10 dBm  -10 dBm  -10 dBm  -10 dBm  -10 dBm10,020 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
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D1         M1         1           Spectrum         Ref Level         27.78 dBm         Offs           Att         40 dB         SWT           SGL TRG: VID         IPK Clrw         IPK Clrw           20 dBm         0 dBm         0 dBm           10 dBm         TRG         -10,020 dBm           -20 dBm         -30 dBm         -10,020 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
D1         M1         1           Spectrum         Ref Level 27.78 dBm         Offsa           Att         40 dB         SWT           SGL TRG: VID         IPk Clrw           20 dBm         I0 dBm           10 dBm         ID           -10 dBm         TRG           -20 dBm         -10,020 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
D1         M1         1           Spectrum         Ref Level         27.78 dBm         Offs           Att         40 dB         SWT           SGL TRG: VID         IPK Clrw         IPK Clrw           20 dBm         0 dBm         0 dBm           10 dBm         TRG         -10,020 dBm           -20 dBm         -30 dBm         -10,020 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
D1         M1         1           Spectrum         Ref Level 27.78 dBm         Offsi           Att         40 dB         SWT           SGL TRG: VID         1Pk Clrw         20 dBm           10 dBm         0 dBm         0 dBm           -10 dBm         TRG         -10.020 dBm           -20 dBm         -30 dBm	Dwell NVNT (	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
D1         M1         1           Spectrum         Ref Level         27.78 dBm         Offs.           Att         40 dB         SWT           SGL TRG: VID         IPK CIrw         IPK CIrw           20 dBm         0 dBm         0 dBm           10 dBm         10 dBm         IPK G           -20 dBm         -10.020 dBm           -30 dBm         -60 dBm         -60 dBm           -70 dBm         -70 dBm         -70 dBm	Dwell NVNT :	3-DH1 244	I		-3.02 dBm 11.00 μs -3,73 dB
D1         M1         1           Spectrum         Ref Level 27.78 dBm         Offs.           Att         40 dB         SWT           SGL TRG:VID         Image: second secon	Dwell NVNT :	3-DH1 244		Ht Boild, webstraffe	-3.02 dBm 11.00 µs -3.73 dB 375.00 µs
D1         M1         1           Spectrum         Ref Level         27.78 dBm         Offs.           Att         40 dB         SWT           SGL TRG: VID         IPK CIrw         IPK CIrw           20 dBm         0 dBm         0 dBm           10 dBm         10 dBm         IPK G           -20 dBm         -10.020 dBm           -30 dBm         -60 dBm         -60 dBm           -70 dBm         -70 dBm         -70 dBm	Dwell NVNT :	B-DH1 244		Function Res	-3.02 dBm 11.00 µs -3.73 dB 375.00 µs





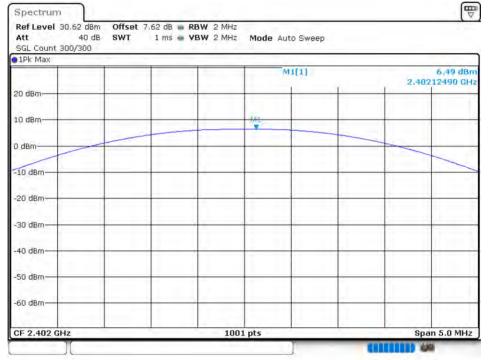


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#### 8.2 MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant 1	6.49	30	Pass
NVNT	1-DH5	2441	Ant 1	6.21	30	Pass
NVNT	1-DH5	2480	Ant 1	7.09	30	Pass
NVNT	2-DH5	2402	Ant 1	6.37	20.97	Pass
NVNT	2-DH5	2441	Ant 1	6.18	20.97	Pass
NVNT	2-DH5	2480	Ant 1	7.11	20.97	Pass
NVNT	3-DH5	2402	Ant 1	6.39	20.97	Pass
NVNT	3-DH5	2441	Ant 1	6.21	20.97	Pass
NVNT	3-DH5	2480	Ant 1	7.08	20.97	Pass

#### Power NVNT 1-DH5 2402MHz Ant1





















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### 8.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
	1-DH5	2402	Ant 1	0.946	Pass
NVNT	1-DH5	2441	Ant 1	1.038	Pass
NVN1 NVNT NVNT NVNT NVNT	1-DH5	2480	Ant 1	0.958	Pass
NVNT	2-DH5	2402	Ant 1	1.18	Pass
NVNT	2-DH5	2441	Ant 1	1.18	Pass
NVNT	2-DH5	2480	Ant 1	1.224	Pass
NVNT	3-DH5	2402	Ant 1	1.194	Pass
NVNT NVNT NVNT	3-DH5	2441	Ant 1	1.198	Pass
NVNT	3-DH5	2480	Ant 1	1.192	Pass

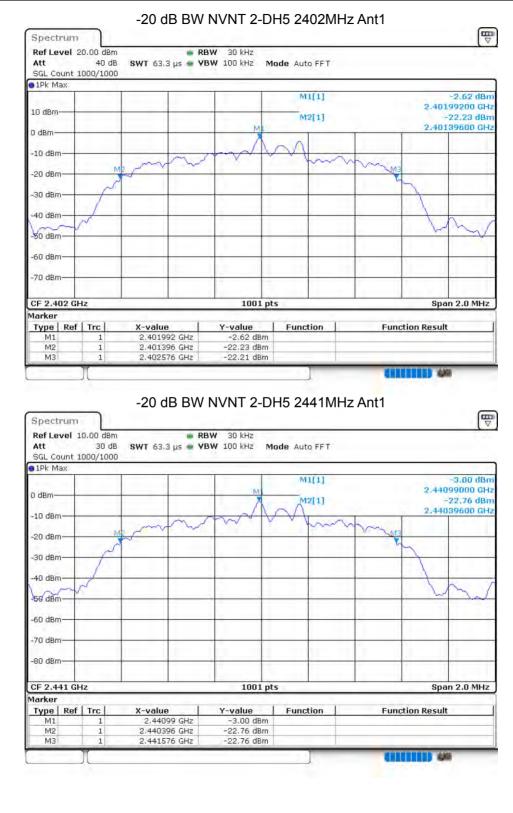


#### -20 dB BW NVNT 1-DH5 2402MHz Ant1

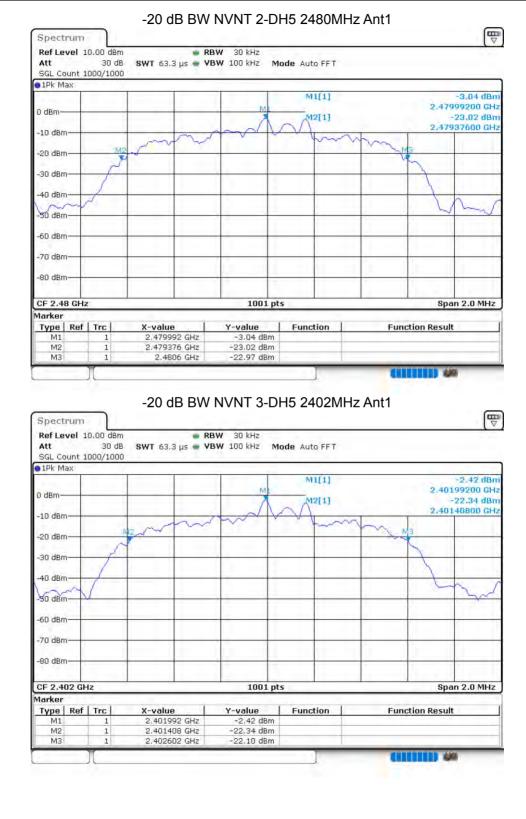




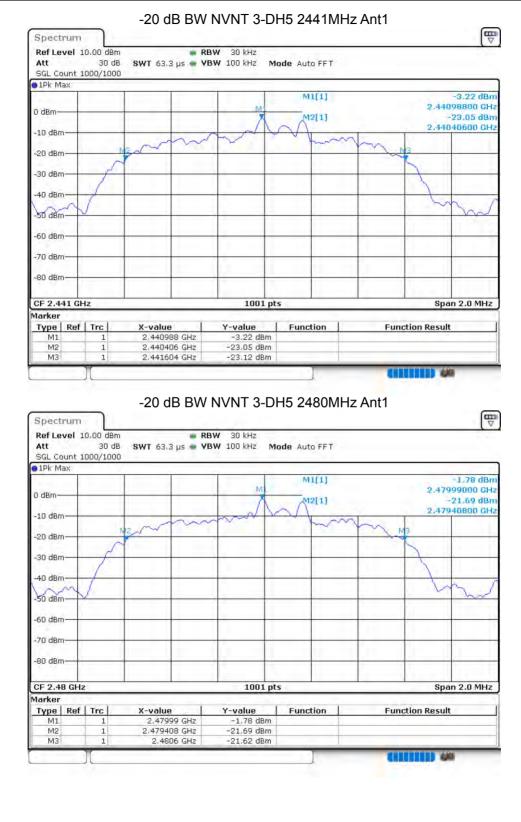










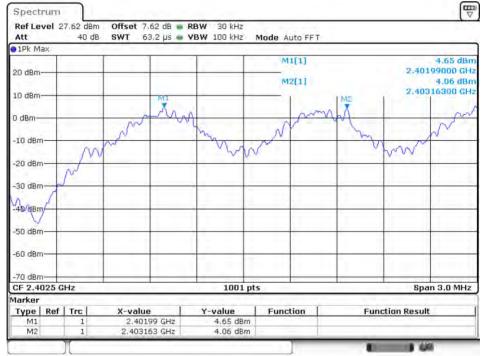




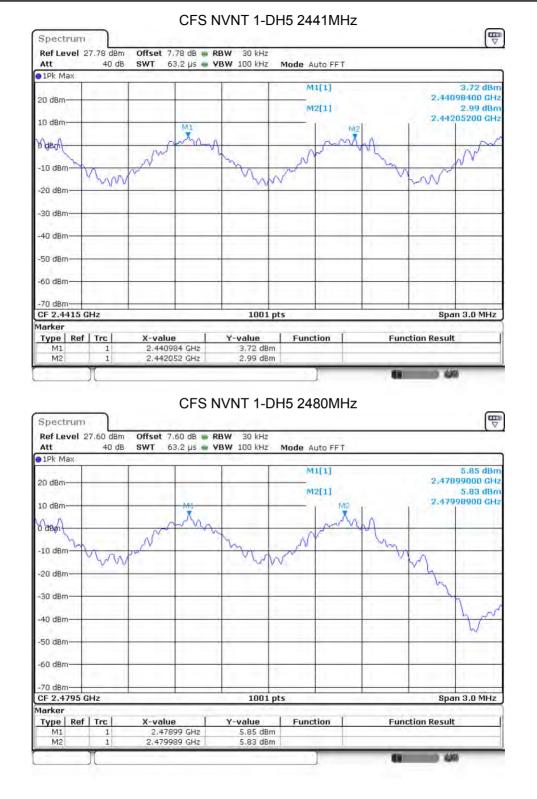
#### 8.4 CARRIER FREQUENCIES SEPARATION

Condition	Mode	Hopping Freq1	Hopping Freq2	HFS	Limit	Verdict
		(MHz)	(MHz)	(MHz)	(MHz)	
NVNT	1-DH5	2401.99	2403.163	1.173	0.946	Pass
NVNT	1-DH5	2440.984	2442.052	1.068	1.038	Pass
NVNT	1-DH5	2478.99	2479.989	0.999	0.958	Pass
NVNT	2-DH5	2401.996	2402.992	0.996	0.787	Pass
NVNT	2-DH5	2440.99	2441.989	0.999	0.787	Pass
NVNT	2-DH5	2478.987	2479.989	1.002	0.816	Pass
NVNT	3-DH5	2401.99	2402.986	0.996	0.796	Pass
NVNT	3-DH5	2441.161	2441.989	0.828	0.799	Pass
NVNT	3-DH5	2479.161	2480.163	1.002	0.795	Pass

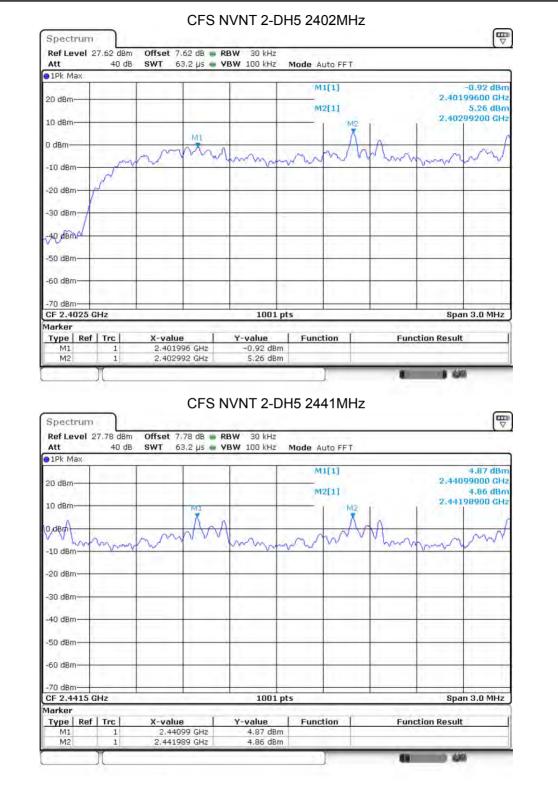
#### CFS NVNT 1-DH5 2402MHz















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#### 8.5 NUMBER OF HOPPING CHANNEL Condition Hopping Number Verdict Mode Limit NVNT 79 1-DH5 15 Pass Hopping No. NVNT 1-DH5 2402MHz Spectrum Ref Level 27.62 dBm Offset 7.62 dB 🝙 RBW 100 kHz Att 40 dB SGL Count 7000/7000 SWT 1 ms 🖷 VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] 5.71 dBn 20 dBm 2.4019205 GHz M2[1] 11.02/dBn 00765 GHz MidBm ARARAR AABAAAAA **WORDON** 4.66.66.6 **VITY** .0 dBm— 20 dBm 30 dBm 40 dBm -50 dBm -60 dBm -70 dBm-1001 pts Start 2.4 GHz Stop 2.4835 GHz Marker Type | Ref | Trc **Function Result** X-value 2.4019205 GHz Y-value 5.71 dBm Function M1 1 M2 2.4800765 GHz 11.02 dBm 1

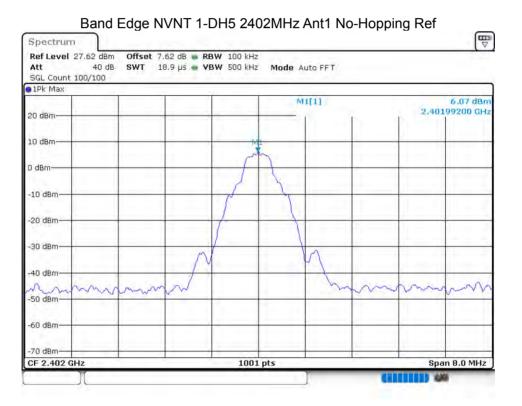
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#### 8.6 BAND EDGE

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH5	2402	Ant 1	No-Hopping	-47.73	-20	Pass
NVNT	1-DH5	2402	Ant 1	Hopping	-46.68	-20	Pass
NVNT	1-DH5	2480	Ant 1	No-Hopping	-49.28	-20	Pass
NVNT	1-DH5	2480	Ant 1	Hopping	-48.81	-20	Pass
NVNT	2-DH5	2402	Ant 1	No-Hopping	-47.45	-20	Pass
NVNT	2-DH5	2402	Ant 1	Hopping	-47.6	-20	Pass
NVNT	2-DH5	2480	Ant 1	No-Hopping	-50.4	-20	Pass
NVNT	2-DH5	2480	Ant 1	Hopping	-49.02	-20	Pass
NVNT	3-DH5	2402	Ant 1	No-Hopping	-47.96	-20	Pass
NVNT	3-DH5	2402	Ant 1	Hopping	-47.53	-20	Pass
NVNT	3-DH5	2480	Ant 1	No-Hopping	-48.38	-20	Pass
NVNT	3-DH5	2480	Ant 1	Hopping	-49.53	-20	Pass





Ref Level Att SGL Count	40 dB			RBW 100 kH: VBW 500 kH:		Auto FFT.			
●1Pk Max				i i		1011			6.00
20 dBm					IM	1[1]		2.401	6.09 ( 95000
10 dBm			1000		M	2[1]			45.46
						1		2.400	00000
0 dBm				-					
-10 dBm	the second				_		_		
-20 dBm	01 -13,927	dBm-							
				-					
-30 dBm		1	1	140		1		1.000	
-40 dBm		1.04	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	M4	0.0000	1	2.2.0	MS	Ma
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-70 dBm-	6 OL-						_	~	. 405
Start 2.30 Marker	o GHZ			1001	pts			Stop 1	2.406 G
Type   Re		X-value		Y-value	Func	tion	Fund	tion Result	
M1 M2	1		95 GHz .4 GHz	6.09 dB -45.46 dB					
M2 M3	1		39 GHz	-45.46 dB					
100	1	£.,							
M4 Bi Spectrum Ref Level Att	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	-41.66 dB VNT 1-D BW 100 kHz BW 300 kHz	H5 240	1.5.52	nt1 Hop	oping R	ef
M4 Bi Spectrun Ref Level Att SGL Count	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240	1.5.52	nt1 Hop	oping R	ef
M4 Spectrun Ref Level Att SGL Count 1Pk Max	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	1.5.52	nt1 Hop		6.77
M4 Spectrun Ref Level Att SGL Count	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77
M4 Spectrun Ref Level Att SGL Count 1Pk Max	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		ef
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N' 62 dB • R	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrum Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77 (
M4 Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77
M4 Spectrum Ref Level Att SGL Count ID dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	1 and Edg 27.62 dBm 40 dB	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240 Mode A	uto FFT	nt1 Hop		6.77
M4 Spectrum Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 and Edg 27.62 dBm 40 dB 8000/8000	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240	uto FFT	nt1 Hop	2,405	6.77
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -50 dBm -70 dBm	1 and Edg 27.62 dBm 40 dB 8000/8000	2.34 ge(Hopp offset 7.	71 GHz Ding) N'	VNT 1-D	H5 240	uto FFT	nt1 Hop	2,405	6.77



Spectrum Ref Level Att SGL Count	27.62 dBm 40 dB			RBW 100 kHz VBW 300 kHz	Mode 4	uto FFT			
1Pk Max				-					
20 dBm		1			M	1[1]		2 40	6.07 c 495000
					M	2[1]			-43.72 0
10 dBm							6	2.40	000000
0 dBm					-	-	-	-	
-10 dBm	DI -13.228	dBm-	-	-	_	_			
-20 dBm					_	-	-		
-30 dBm					-		-		
-40 dBm	2.2		M4	1.1		1	1 1 1 1	142	Ma
an manual and the	annumber	automountains	mul rollin	when many and	markenetike m	convertents	un productive property	In Tary Arrestation	mynet
-50 dBm				· · · · · ·					
-60 dBm									
-70 dBm-						_	-		1
Start 2.306 Marker	GHz	_		1001	ots	-		Stop	2.406 G
Type   Ref		X-value		Y-value	Funct	tion	Fun	ction Resul	t
M1 M2	1	2.4049	5 GHz 4 GHz	6.07 dBm -43.72 dBm	<u></u>				
MЗ	1	2.38	7 GHz	-44.40 dBm	n	1			
M4	1 -	2.34	1 GHz	-39.92 dBm	1				
Spectrum Ref Level Att	Band	Offset 7.t	50 dB 💼 I	-DH5 248 RBW 100 kHz VBW 300 kHz	13.7.		lo-Hoppi	ng Ref	
Spectrum Ref Level Att SGL Count	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	13.7.		lo-Hoppi	ng Ref	109
Spectrum Ref Level Att	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au		lo-Hoppi		6,20 ¢
Spectrum Ref Level Att SGL Count	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT	lo-Hoppi		6,20 c 994410
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT	lo-Hoppi		
Spectrum Ref Level Att SGL Count ● 1Pk Max	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT	Jo-Hoppi		
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT	lo-Hoppi		
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- 0 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -10 dBm- -20 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -20 dBm- -30 dBm- -40 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -20 dBm- -30 dBm- -40 dBm-	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm	Band 27.60 dBm 40 dB	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT			
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -50 dBm	Band 27.60 dBm 40 dB 100/100	Offset 7.t	50 dB 💼 I	RBW 100 kHz	Mode Au	uto FFT		2.47	
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -70 dBm	Band 27.60 dBm 40 dB 100/100	Offset 7.t	50 dB 💼 I	RBW 100 kHz VBW 300 kHz	Mode Au	uto FFT		2.47	994410
Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -70 dBm	Band 27.60 dBm 40 dB 100/100	Offset 7.t	50 dB 💼 I	RBW 100 kHz VBW 300 kHz	Mode Au	uto FFT		2.47	994410



● 1Pk Max	-	-		1	M	1[1]		-	6.34 dB
20 dBm		-		-	_	2[1]			105000 G
10 dBm	_		-	-		2[1]	<i>c</i>		50000 G
0 d8m								-	
-10 dBm			-	-	-	-	-		
-20 dBm-	-13,801	dBm-							
-30 dBm			1				[ <u>1</u>	1 ;	
11		1/14	1	1	1.11	1.1.1	12	1	
-50 dBm	pidenal milit	phillipping	monorman	hownedwarm	enthalithility of	mmunuther	follow and the contraction of the second s	lants body wash	muldiplan
		_	1		1.1	1			
-60 dBm			1	1			J		h
-70 dBm Start 2.476 0	GHz	I	<u> </u>	1001	pts		1	Stop	2.576 GH
Marker		W 2210				Han I	-	10.0	
Type Ref M1	1		05 GHz	Y-value 6.34 dB		uon	Func	tion Result	
M2 M3	1		35 GHz 2.5 GHz	-46.31 dB -45.96 dB					
Spectrum Ref Level 27 Att SGL Count 80	7.60 dBm 40 dB	ge(Hopp offset 7.	.60 dB 🐞 R	-43.08 dB VNT 1-D BW 100 kHz BW 300 kHz	H5 248		Ant1 Hop	oping R	ef [
Bar Spectrum Ref Level 27 Att	1d Edg 7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A		Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80	1d Edg 7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		[
Bar Spectrum Ref Level 27 Att SGL Count 80 PIPk Max 20 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 PIPk Max 20 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm 10 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 IPK Max 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 I PIK Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -40 dBm -50 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	1H5 248 Mode A	uto FFT	Ant1 Hop		6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 9 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'		Mode A	uto FFT		2.476	6.75 dB
Bar Spectrum Ref Level 27 Att SGL Count 80 SGL Count 80 IPK Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -50 dBm	7.60 dBm 40 dB	ge(Hopp offset 7.	oing) N'	VNT 1-D	Mode A	uto FFT	Ant1 Hop	2.476	6.75 de 99500 G



Att SGL Count 1	40 dB 200/1200	SWT 22	27.5 µs 🎃	VBW 300 kHz	Mode /	Auto FFT	-		
● 1Pk Max				T T	M	1[1]		0.00	6.70 dB
20 dBm					M	2[1]			995000 GI -44.56 dB
10 dBm							1	2.48	350000 GI
Did8m							1.	1 i i	1
P10 dBm	1 -13,250	dBm	-	<u></u>			-	-	
-20 cBm									1
-30 aBm	M4							-	
-40 dBmie		manne	anning marching	mangenanduryon	innertheret	maning	transfel the	without the since	in monthance
-50 dBm							-		
-60 dBm							1		1
-70 dBm	GHz			1001 p	its			Ston	2.576 GH
Marker					1.00			1.1.1.1.1.1.1.	
Type Ref M1	1		95 GHz	Y-value 6.70 dBm		tion	Fu	nction Resul	t
M2	1	2.483	35 GHz	-44.56 dBm	5				
M3	1	2	.5 GHz	-43.93 dBm	-				
M3 M4 Spectrum Ref Level 2 Att	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-43.93 dBm -42.07 dBm -DH5 2402 RBW 100 kHz VBW 300 kHz	2MHz /		No-Hopp	ing Ref	<b>م</b> ا
M3 M4 Spectrum Ref Level 2	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz	2MHz /		No-Hopp	ing Ref	<b>۵</b> (۵
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz	2MHz / Mode A		No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 1	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm-	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 1 • 1Pk Max 20 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT		1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -40 dBm -60 dBm	1 1 Band 7.62 dBm 40 dB	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz / Mode A	uto FFT	No-Hopp	1.60	5,46 de
M3 M4 Spectrum Ref Level 2 Att SGL Count 11 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm	1 1 7.62 dBm 40 dB 00/100	2 2.41 Edge N Offset 7.	VNT 2	-42.07 dBm -DH5 2402 RBW 100 kHz YBW 300 kHz	2MHz /	uto FFT	No-Hopp	2.40	5,46 de



SGL Count 1Pk Max	100/100		1						
20 dBm	_				M	1[1]		2.402	5,43 d
10 dBm			1		M	2[1]			41.87 d
0 dBm									
-10 dBm			1						
	D1 -14,540	dBm		-	-				
-20 dBm				·					
-30 dBm			M4			1		1	MB
-40 dBm-	wheed thematic wat	an in allast		multimanical	hand black by	a. March March	without manuals	M3	
-50 dBm	and a whet	and the survey			under a sed of t	and a second second	Manual Action	ound hy or ed.	- William
-60 dBm							-		
-70 dBm					-				
Start 2.30 Marker	6 GHz		-	1001	pts	-		Stop	2.406 GH
Type   Re		X-valu		Y-value	Func	tion	Fund	ction Result	
M1	1		215 GHz	5.43 dBr					
M2	1		2.4 GHZ	-41.87 aBr	n				
MЗ	1	2	2.4 GHz .39 GHz	-41.87 dBr -46.01 dBr	n				
M3 M4 Spectrur Ref Level Att SGL Count		2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr	n H5 240		Ant1 Ho	pping R	
M3 M4 B Spectrur Ref Level Att	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A		Ant1 Ho	pping R	ef
M3 M4 Spectrur Ref Level Att SGL Count	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		(
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count IPk Max 20 dBm- 10 dBm- 0 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count SGL Count I SGL Count O dBm 10 dBm -10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -50 dBm	1 1 and Edg n 27.62 dBm 40 dB	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	n H5 240 Mode A	uto FFT	Ant1 Ho		6.79 dt
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm- -20 dBm- -30 dBm- -30 dBm- -50 dBm-	1 1 27.62 dBm 40 dB 8000/8000	2 2.34 ge(Hop Offset 7	.39 GH2 426 GH2 ping) N 7.62 dB = R	-46.01 dBr -41.99 dBr /NT 2-D	Mode A	uto FFT	Ant1 Ho	2.405	6,79 d

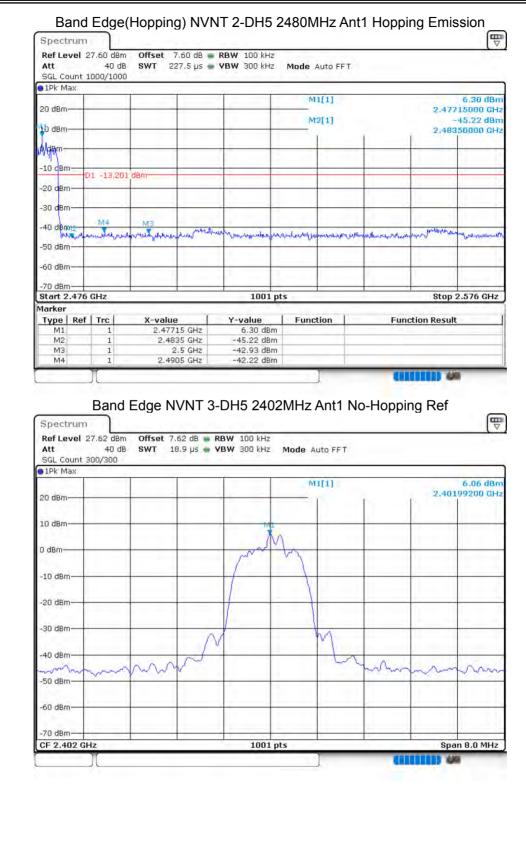


Att	27.62 dBm 40 dB 1200/1200			RBW 100 kH VBW 300 kH		Auto FFT.	_		
				12	M	1[1]		0.5	3.75
20 dBm				1	M	2[1]			395000 -44.79
10 dBm				1			()	2.40	000000
0 dBm				1	-		-		
-10 dBm	DI -13,212	dBm		-			-		1
-20 dBm					-		-	1	-
-30 dBm				1	-		-	-	
-40 dBm-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		upanel prepare	M4				M3.	MS
-50 dBm	Joseph Martin Contraction	Contraction and	and another states of the second states of the seco		one and a second of the	rentitation of management	there we all the terms of the	and a stand of the stand	the manual
-60 dBm				1		· · · · · · ·		1	
-70 dBm		-				1	1		-
Start 2.30	5 GHz		<u>.</u>	1001	pts			Stop	2.406
Marker Type   Rei	f   Tre	X-valu	ie I	Y-value	Funct	tion	Fund	tion Resu	It
M1	1	2.40	395 GHz	3.75 dB	m		run		
M2 M3	1		2.4 GHz .39 GHz	-44.79 dB -42.07 dB	and the second se				
			479 GHz	-40.81 dB	m	1			
M4 Spectrum Ref Level Att		Edge N	IVNT 2	-DH5 248	N		-Hoppir	ng Ref	105
Spectrum Ref Level	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	N		Hoppir	ng Ref	100
Spectrum Ref Level Att SGL Count	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A		-Hoppin		
Spectrum Ref Level Att SGL Count	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	-Hoppir		
Spectrum Ref Level Att SGL Count 1Pk Max	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	D-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	-Hoppir		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	e-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	p-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	p-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	-Hoppir		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	p-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	p-Hoppin		6.72
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm- -20 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT			
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT	p-Hoppin		
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT			
Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-	Band 27.60 dBm 40 dB	Edge N	IVNT 2	-DH5 248	Mode A	uto FFT			
Spectrum Ref Level Att SGL Count ID dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -70 dBm -70 dBm	Band 27.60 dBm 40 dB 100/100	Edge N	IVNT 2	-DH5 248	Mode Ar	uto FFT		2.47	
Spectrum Ref Level Att SGL Count I SGL Count I D dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -50 dBm	Band 27.60 dBm 40 dB 100/100	Edge N	IVNT 2	-DH5 248	Mode Ar	uto FFT		2.47	



SGL Count 1Pk Max	100/100			/					
20 dBm					M	1[1]		2.479	6.69 dB
10 dem-			-	1	M	2[1]		-	46.88 dB
								2.400	30000 G
0 d8m						1	1	1	
-10 cBm-	D1 -13,280	dBm		<u>a</u>	-		<del>}</del>	<u>.</u>	1
-20 dBm				1			1	1	
-30 dBm				-				-	
-40 dBm		Ma	1 un/m kal. e		-	1.00	-	Adurate - Lo	
-50 dBm-	uttpermilline market	www.theland	hand and the	and an all the age of a	robuchter	eventuality www.	after multiplication	WARAN IN COMPU	Modernhard
-60 dBm									
-70 dBm				· · · · ·		1	1	1	h
Start 2.47	6 GHz			1001	pts		1	Stop	1 2.576 GH
Marker Type   Re	f   Trc	X-value		Y-value	Fund	tion 1	Fund	tion Result	
M1	1 1	2.479	95 GHz 35 GHz	6.69 dB -46.88 dB	m		i ant		
			1.5 GHz	-46.88 dB -45.67 dB	m				
M2 M3	1								
M3 M4 Spectrur Ref Level Att SGL Count		2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	-43.69 dE /NT 2-D BW 100 kHz BW 300 kHz	0H5 248		Ant1 Hop	oping R	ef [
M3 M4 B Spectrur Ref Level Att	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop	oping R	[
M3 M4 Spectrur Ref Level Att SGL Count	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A		Ant1 Hop		
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm-	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm-	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 1Pk Max 20 dBm 10 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 1Pk Max 20 dBm 10 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3 M4           Spectrur           Ref Level           Att           SGL Count           • 1Pk Max           20 dBm           10 dBm           • 10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm	1 1 and Edg n 27.60 dBm 40 dB	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248 Mode A	uto FFT	Ant1 Hop		6,80 dB
M3         M4           Spectrur         Ref Level           Att         SGL Count           SGL Count         10 dBm           10 dBm         -           -10 dBm         -           -20 dBm         -           -30 dBm         -           -50 dBm         -	1 1 27.60 dBm 40 dB 8000/8000	2.48: ge(Hopp offset 7.	39 GHz Ding) N\ 60 dB <b></b> R	/NT 2-D	0H5 248	uto FFT	Ant1 Hop	2.476	6,80 dB

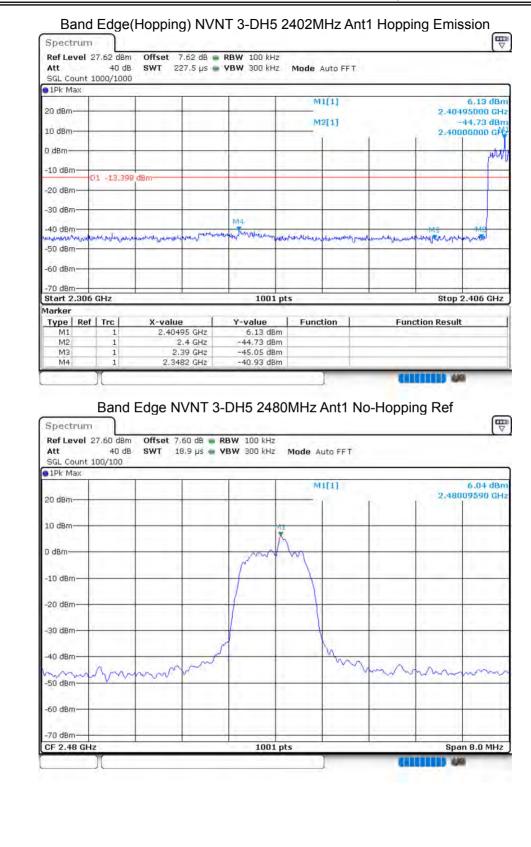






Att SGL Count	27.62 dBm 40 dB 100/100			RBW 100 kH VBW 300 kH		Auto FFT			
1Pk Max		-		Ť.	M	1[1]			4.90 d
20 dBm		-	-	M2[1]					95000 (
10 dBm			-	-		1	6		1000001
0 dBm				-				-	
-10 dBm						-			
-20 dBm-	01 -13,938	dBm							
-30 dBm						1		1	
				M4	1	1.5	1 1	1	
-40 dBm-	hemplertune	Jal harrow mon	and production	which	Mondeneral	hourshow	Mon phan what	WE We when	A MARINA
-50 dBm									
-60 dBm									
-70 dBm	6.011			1		-		-	0.405.1
Start 2.30 Marker	6 GHz		-	1001	pts		_	Stop	2.406 GI
Type   Re		X-value		Y-value	Func	tion	Fun	ction Result	t
	1		95 GHz	4.90 dB					
M1 M2	1	2	2.4 GHz	-45.04 dB					
M2 M3	1	2.	39 GHz	-46.06 dB	m				
M2 M3 M4 B Spectrur Ref Level Att		2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N		m m 0H5 240		Ant1 Ho	pping R	ef (
M2 M3 M4 B Spectrur Ref Level Att	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	pping R	(
M2 M3 M4 B Spectrur Ref Level Att SGL Count 1Pk Max	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A		Ant1 Ho	1.00	
M2 M3 M4 Spectrur Ref Level Att SGL Count	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 B Spectrur Ref Level Att SGL Count 1Pk Max	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 B Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 1 and Edg n 27.62 dBm 40 dB	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	m Mode A	uto FFT	Ant1 Ho	1.00	6,60 d
M2 M3 M4 Spectrur Ref Level Att SGL Count SGL Count 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm	1 1 27.62 dBm 40 dB 8000/3000	2. 2, ge(Hopp Offset 7.	39 GH2 35 GH2 Ding) N	-46.06 de -41.90 de VNT 3-D	Mode A	uto FFT	Ant1 Ho	2,405	6,60 d







1Pk Max	- 1	-		i i	M	1[1]		-	6,45 dB
20 dBm						2.4			05000 GI
10 08m-					M	2[1]			46.36 dB 50000 GI
0 d8m				-					
-10 cBm									
-20 dBm-	-13,960	dBm							
-30 dBm			1				<u></u>		
-40 dBm		MAND				1.00	1.1	1.2	1.11
-50 dBm	aduated and	Manual	annaphilitetimple	an magainstrange	when the many here to	u-congular Ma	Markelenakarap	Manadaharala	M. S. Manual
7- 5-			:						11
-60 dBm				1			J	1	
-70 dBm Start 2.476 G	Hz		-	1001	pts			Stop :	2.576 GH
Marker	Tro	Vl		Y-u-lu-	I. Frank	tion		otion De	
Type Ref M1	1		05 GHz	Y-value 6.45 dBr		aon	Fun	ction Result	
	1		35 GHz	-46.36 dBr					
M2 M3	1	2	2.5 GHz	-44.45 dBr	n				
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-44.45 dBr -42.34 dBr VNT 3-D BW 100 kHz BW 300 kHz	n H5 248		Ant1 Ho	pping R	ef [
M3 M4 Bar Spectrum Ref Level 27 Att	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	n H5 248 Mode Af	uto FFT	Ant1 Ho	pping R	[
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	n H5 248 Mode Af		Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	n H5 248 Mode Af	uto FFT	Ant1 Ho		
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	n H5 248 Mode Af	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	n H5 248 Mode Af	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3         M4           M4         Bar           Spectrum         Ref Level 27           Att         SGL Count 80           • 1Pk Max         20 dBm           • 1Pk Max         20 dBm           • 10 dBm         40 dBm           -30 dBm         -50 dBm           -60 dBm         -60 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho		6.75 dB
M3 M4 Bar Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 1 nd Edg 	2.49 Je(Hopp Offset 7.	78 GHz Ding) N 60 dB <b>B</b> R	-42.34 dBr	Mode A	uto FFT	Ant1 Ho	2,476	6.75 dB



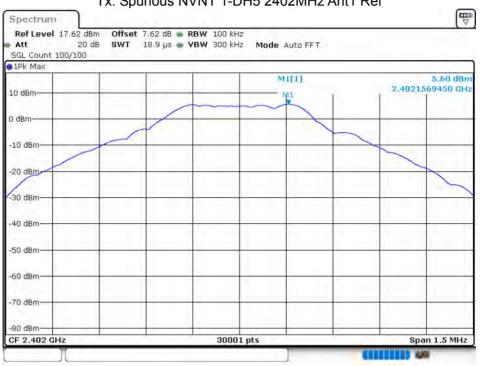
#### Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission ₽ Spectrum Ref Level 27.60 dBm Offset 7.60 dB . RBW 100 kHz 40 dB SWT 227.5 µs 💿 VBW 300 kHz Att Mode Auto FFT SGL Count 1000/1000 91Pk Max M1[1] 3.07 dBn 20 dBm-2.47805000 GHz -43.36 dBm 2.48350000 GHz M2[1] 10 dBm 0 dBm -10 cBm D1 -13,250 dBm -20 cBm -30 dBm -40 dBm And environment . Ale nevel. n water hands ain Han Alto M. Mush on h maria -50 dBm -60 dBm -70 dBm-Start 2.476 GHz 1001 pts Stop 2.576 GHz Marker Type | Ref | Trc 2.47805 GHz Y-value 3.07 dBm Function **Function Result** M1 1 M2 2.4835 GHz -43.36 dBm 1 MЗ 1 2.5 GHz -45.10 dBm 2.4862 GHz M4 1 -42.79 dBm



## **NTEK北**测

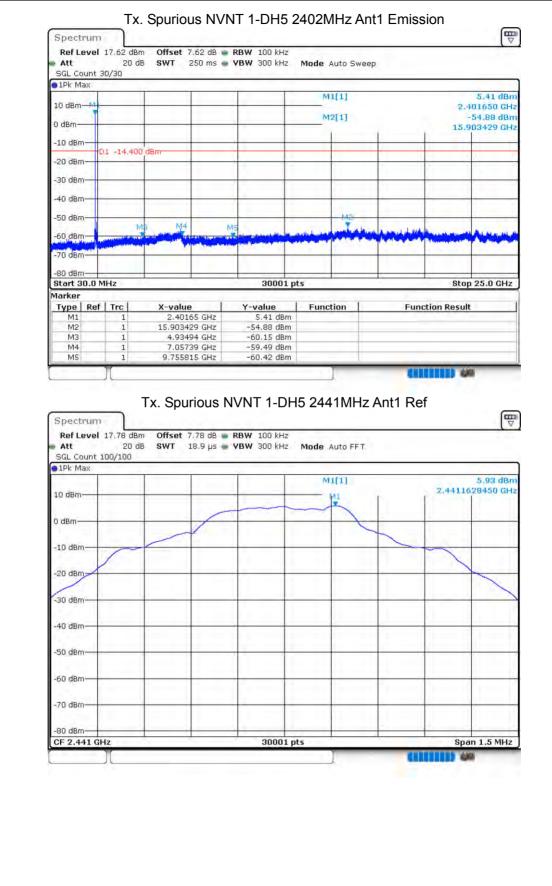
### 8.7 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant 1	-60.47	-20	Pass
NVNT	1-DH5	2441	Ant 1	-60.21	-20	Pass
NVNT	1-DH5	2480	Ant 1	-62.45	-20	Pass
NVNT	2-DH5	2402	Ant 1	-59.75	-20	Pass
NVNT	2-DH5	2441	Ant 1	-59.21	-20	Pass
NVNT	2-DH5	2480	Ant 1	-53.55	-20	Pass
NVNT	3-DH5	2402	Ant 1	-60.87	-20	Pass
NVNT	3-DH5	2441	Ant 1	-59.35	-20	Pass
NVNT	3-DH5	2480	Ant 1	-58.95	-20	Pass

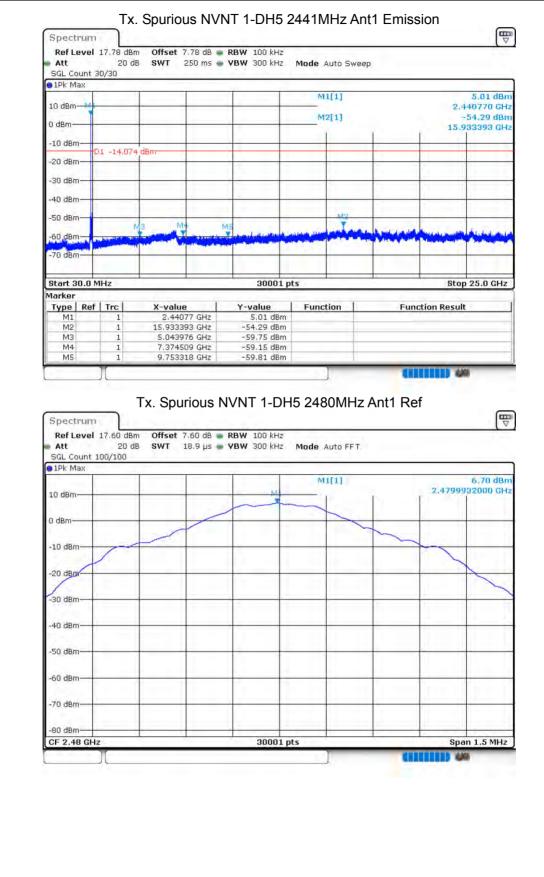


#### Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

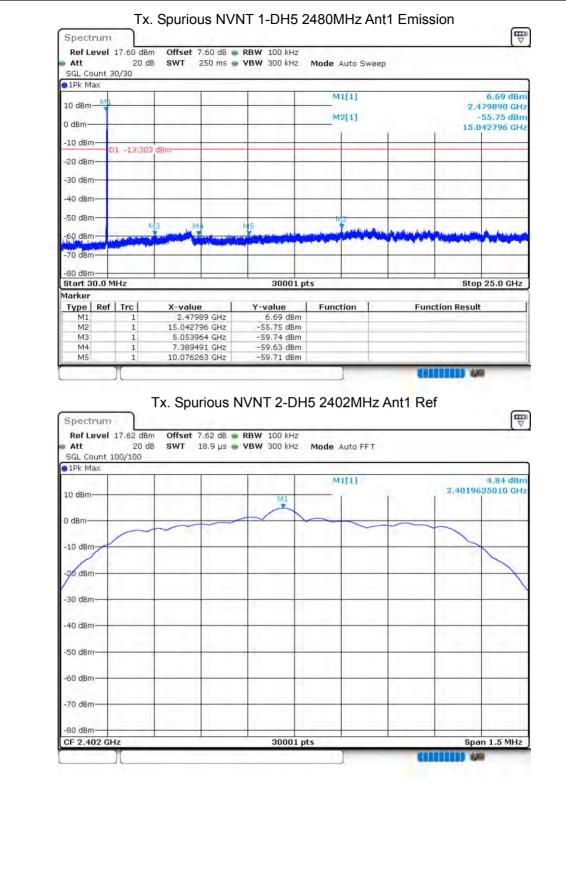




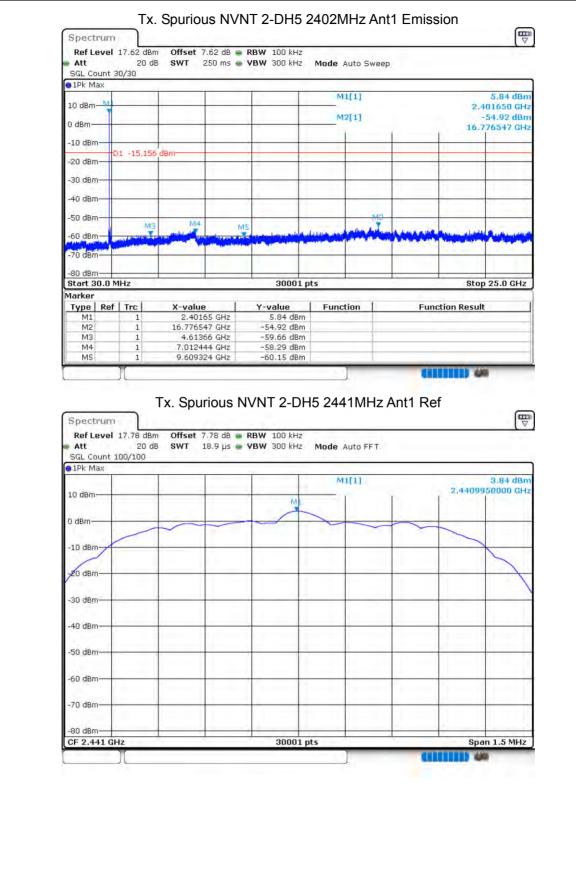




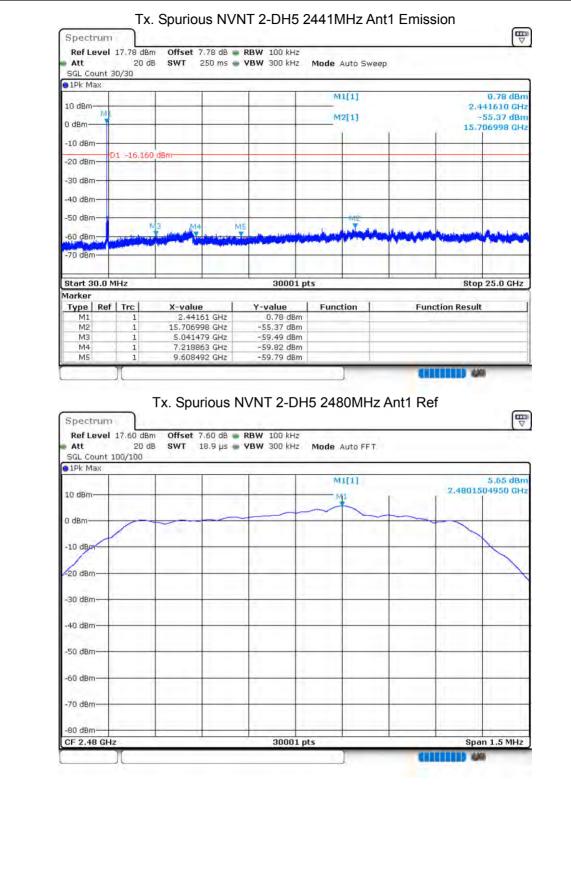




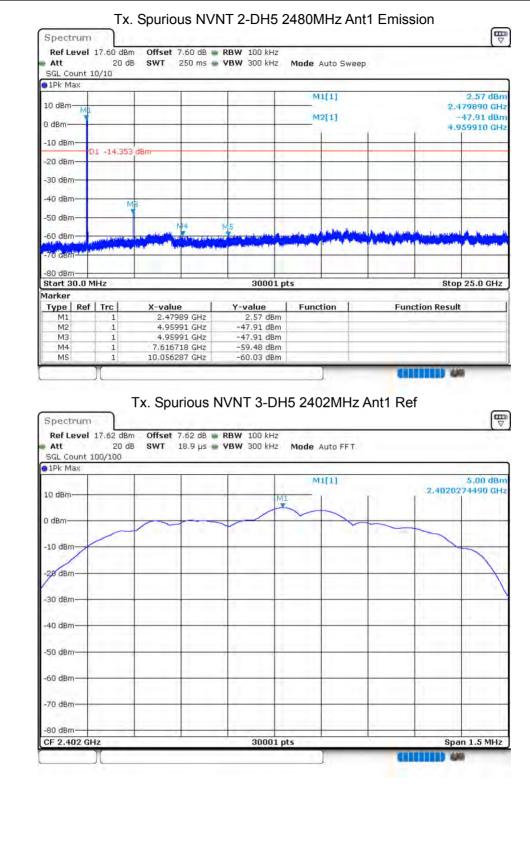




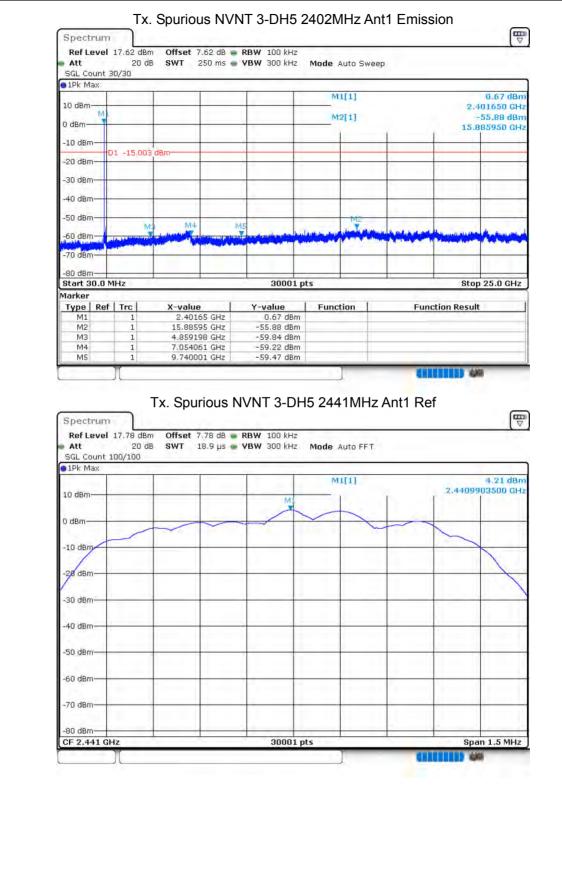




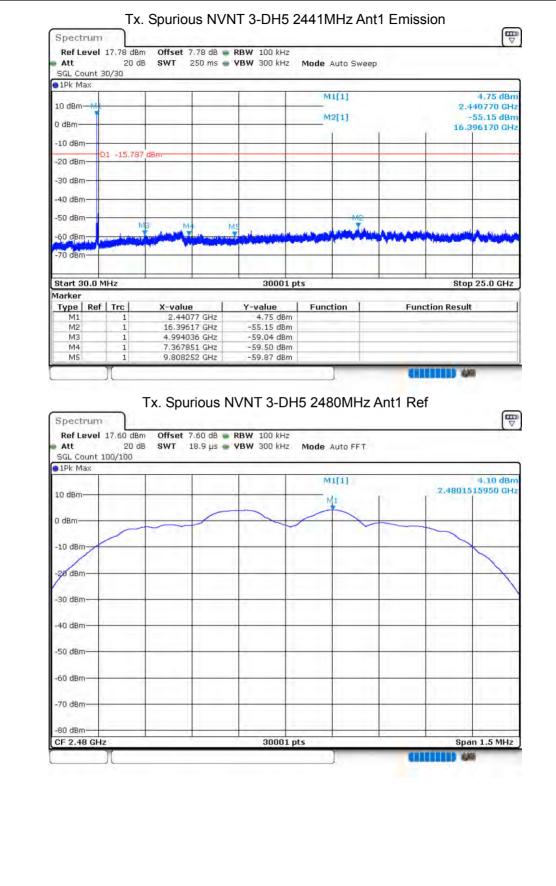




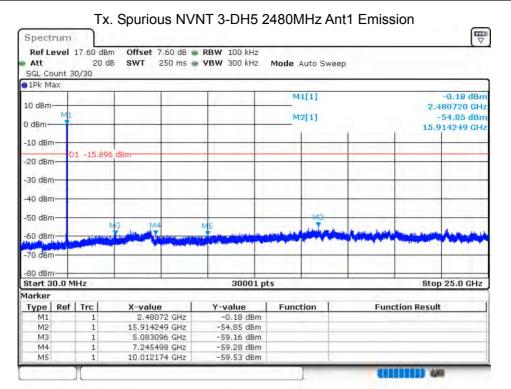












END OF REPORT