

### RADIO TEST REPORT FCC ID: 2APMJ-AIRBUDS5PROL

Product: TWS Bluetooth headset

Trade Mark: Blackview

Model No.: AirBuds 5 Pro Family Model: N/A Report No.: STR210615003001E 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



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	.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

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#### 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 Site Location	<ul> <li>Shenzhen NTEK Testing Technology Co., Ltd.</li> <li>1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.</li> </ul>

#### 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-AIRBUDS5PROL			
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
STR210615003001E	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			

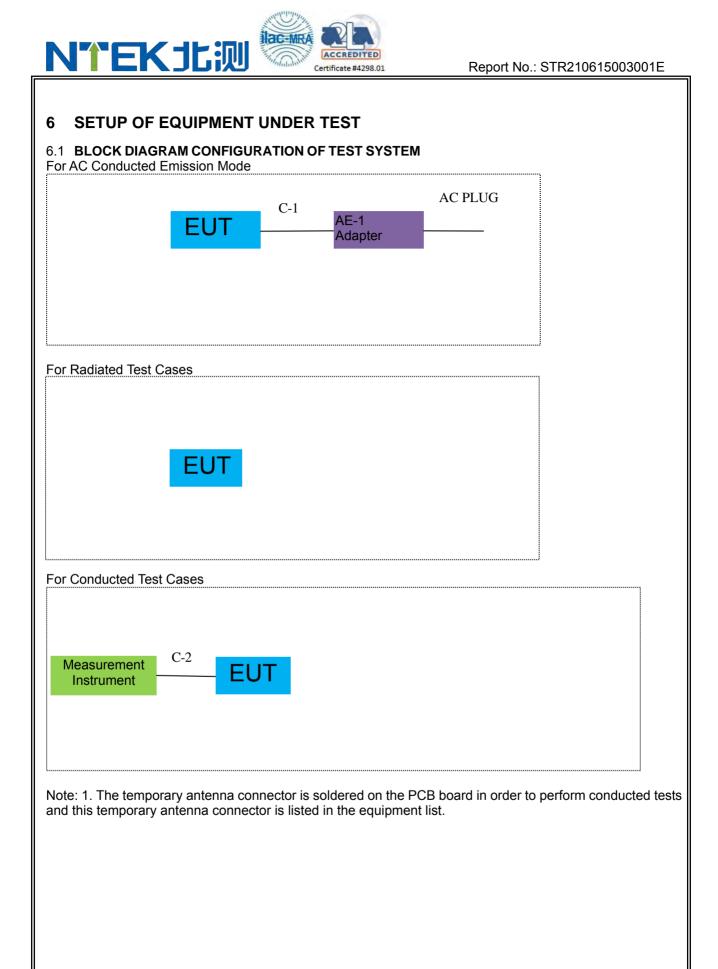
Note: AC power line Conducted Emission was tested under maximum output power.

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 AntennaTESEQCBL6111D31216500 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

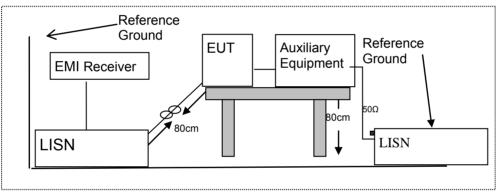
	Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average	
0.15-0.5	66-56*	56-46*	
0.5-5.0	56	46	
5.0-30.0	60	50	

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



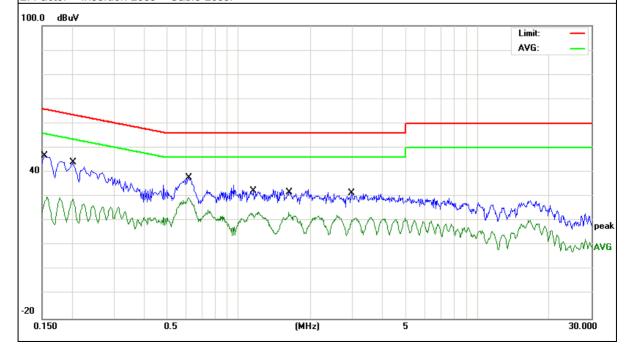
#### 7.1.6 Test Results

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

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1539	37.24	9.56	46.80	65.78	-18.98	QP
0.1539	20.26	9.56	29.82	55.78	-25.96	AVG
0.2020	34.39	9.55	43.94	63.52	-19.58	QP
0.2020	19.54	9.55	29.09	53.52	-24.43	AVG
0.6179	28.23	9.55	37.78	56.00	-18.22	QP
0.6179	20.08	9.55	29.63	46.00	-16.37	AVG
1.1538	22.74	9.56	32.30	56.00	-23.70	QP
1.1538	14.14	9.56	23.70	46.00	-22.30	AVG
1.6298	22.24	9.58	31.82	56.00	-24.18	QP
1.6298	13.99	9.58	23.57	46.00	-22.43	AVG
2.9700	21.82	9.60	31.42	56.00	-24.58	QP
2.9700	11.77	9.60	21.37	46.00	-24.63	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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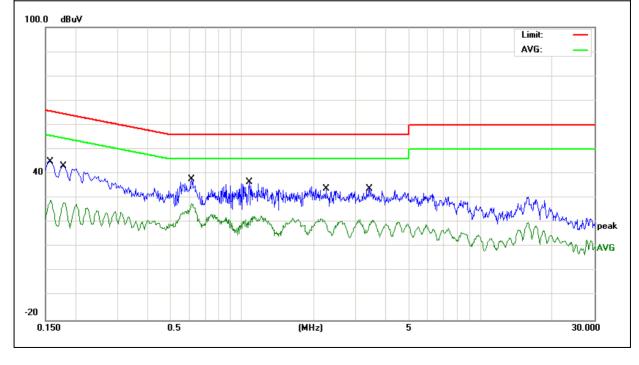
Certificate #4298.01

[					I	
Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1580	35.40	9.55	44.95	65.56	-20.61	QP
0.1580	19.58	9.55	29.13	55.56	-26.43	AVG
0.1779	33.72	9.54	43.26	64.58	-21.32	QP
0.1779	18.56	9.54	28.10	54.58	-26.48	AVG
0.6139	28.33	9.54	37.87	56.00	-18.13	QP
0.6139	18.21	9.54	27.75	46.00	-18.25	AVG
1.0740	27.03	9.55	36.58	56.00	-19.42	QP
1.0740	13.06	9.55	22.61	46.00	-23.39	AVG
2.2500	24.31	9.57	33.88	56.00	-22.12	QP
2.2500	11.89	9.57	21.46	46.00	-24.54	AVG
3.4180	24.23	9.59	33.82	56.00	-22.18	QP
3.4180	11.78	9.59	21.37	46.00	-24.63	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

Recording to 1 CC 1 dit 10.20			
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)
Frequency(winz)	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);



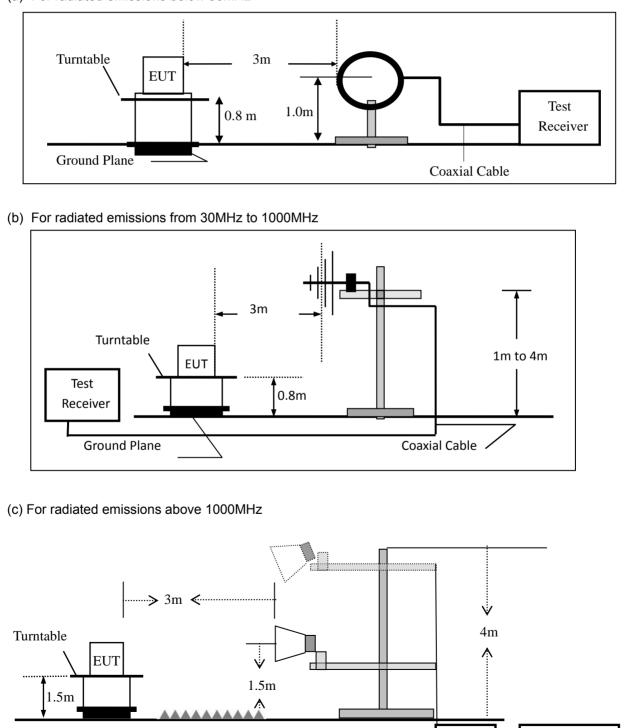
Limit line=Specific limits(dBuV) + distance extrapolation factor.

#### 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



Amplifie Test Receiver



#### 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, the S	Spectrum Analyzer was set with	the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Ah awa 4000	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

	Spurious	Emission	below	30MHz	(9KHz to 30MHz)	ļ
--	----------	----------	-------	-------	-----------------	---

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

Freq.	Ant.Pol.	Emission L	evel(dBuV/m)	Limit 3	m(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.

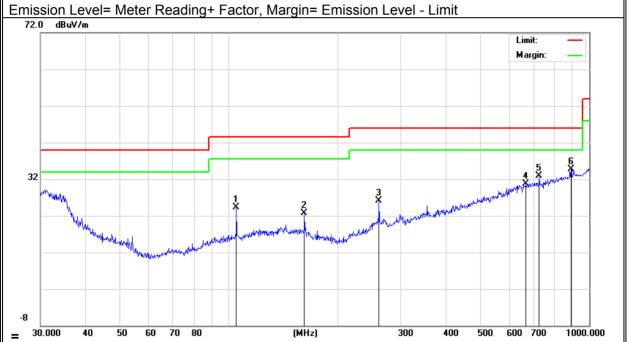


Spurious Emission below 1GHz (30MHz to 1GHz) All the modulation modes have been tested, and the worst result was report as below:

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)	lz) (dBuV) (dB)		(dBuV/m)	(dBuV/m)	(dB)	
V	104.9033	12.96	11.28	24.24	43.50	-19.26	QP
V	162.0414	10.73	12.01	22.74	43.50	-20.76	QP
V	261.0583	10.85	15.20	26.05	46.00	-19.95	QP
V	668.1422	7.04	23.65	30.69	46.00	-15.31	QP
V	726.8052	8.97	23.89	32.86	46.00	-13.14	QP
V	890.7278	8.59	26.21	34.80	46.00	-11.20	QP

Remark:





Polar	Frequ	ency		Aeter eading	Factor	Emission Level	Limits	Margin	Remar
(H/V)	(MH	iz)	(d	dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Н	30.00	000	(	6.65	19.44	26.09	40.00	-13.91	QP
Н	526.3	967	(	6.20	20.53	26.73	46.00	-19.27	QP
Н	564.6	389	(	6.82	21.54	28.36	46.00	-17.64	QP
Н	661.1	503	1	8.15	23.43	31.58	46.00	-14.42	QP
Н	739.6	603	-	7.84	24.01	31.85	46.00	-14.15	QP
Н	869.1	300	-	7.29	26.00	33.29	46.00	-12.71	QP
32							runnan uhananan ar	3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	\$
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		- Warder Alexandra	Andre for the second	μη».					
-8									



Spurious	Emission /	Above 10	GHz (1GHz	z to 25GH	z)						
EUT:	TWS	Bluetoo	th headset	Model	No.:	A	AirBuc	ls 5 Pro			
Temperature	e: 20 °C	2	Relative Humidity:			r: 4	48%				
Test Mode:	Mod	e2/Mode	3/Mode4	Test B	SV:	Ν	Mary H	Hu			
All the modul	ation mode	s have b	een tested				,		/:		
Frequency	Read Level	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Lin	nits	Margin	Rema	rk C	omment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµ	IV/m)	(dB)			
		-	Low Chan	nel (2402 N	1Hz)(GFSK)-	-Above	e 1G				
4804.66	65.67	5.21	35.59	44.30	62.17	74.	.00	-11.83	Pk	Ve	rtical
4804.66	43.70	5.21	35.59	44.30	40.20	54.	.00	-13.80	AV	Ve	rtical
7206.22	61.29	6.48	36.27	44.60	59.44	74.	.00	-14.56	Pk	Ve	rtical
7206.22	43.29	6.48	36.27	44.60	41.44	54.	.00	-12.56	AV	Ve	rtical
4804.40	64.47	5.21	35.55	44.30	60.93	74.	.00	-13.07	Pk	Hori	izontal
4804.40	40.08	5.21	35.55	44.30	36.54	54.	.00	-17.46	AV	Hori	izontal
7206.11	60.72	6.48	36.27	44.52	58.95	74.	.00	-15.05	Pk	Hori	izontal
7206.11	42.87	6.48	36.27	44.52	41.10	54.	.00	-12.90	AV	Hori	izontal
			Mid Chanr	nel (2441 N	Hz)(GFSK)-	-Above	e 1G				
4882.51	66.46	5.21	35.66	44.20	63.13	74.	.00	-10.87	Pk	Ve	rtical
4882.51	43.76	5.21	35.66	44.20	40.43	54.	.00	-13.57	AV	Ve	rtical
7323.35	64.11	7.10	36.50	44.43	63.28	74.	.00	-10.72	Pk	Ve	rtical
7323.35	43.34	7.10	36.50	44.43	42.51	54.	.00	-11.49	AV	Ve	rtical
4882.30	62.54	5.21	35.66	44.20	59.21	74.	.00	-14.79	Pk	Hor	izontal
4882.30	42.34	5.21	35.66	44.20	39.01	54.	.00	-14.99	AV	Hor	izontal
7324.51	62.58	7.10	36.50	44.43	61.75	74.	.00	-12.25	Pk	Hori	izontal
7324.51	43.44	7.10	36.50	44.43	42.61		.00	-11.39	AV	Hori	izontal
			High Chanr	nel (2480 M	1Hz)(GFSK)-	- Abov	/e 1G				
4959.25	66.62	5.21	35.52	44.21	63.14	74.	.00	-10.86	Pk	Ve	rtical
4959.25	43.59	5.21	35.52	44.21	40.11	54.	.00	-13.89	AV	Ve	rtical
7439.57	64.39	7.10	36.53	44.60	63.42	74.	.00	-10.58	Pk	Ve	rtical
7439.57	42.28	7.10	36.53	44.60	41.31		.00	-12.69	AV	Ve	rtical
4960.14	64.84	5.21	35.52	44.21	61.36	74.	.00	-12.64	Pk	Hori	izontal
4960.14	43.42	5.21	35.52	44.21	39.94	54.	.00	-14.06	AV	Hori	izontal
7440.71	61.82	7.10	36.53	44.60	60.85	74.	.00	-13.15	Pk	Hori	izontal
7440.71	42.41	7.10	36.53	44.60	41.44	54.	.00	-12.56	AV	Hori	izontal

Note:

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



Spurious	Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz										
EUT:	TWS Blue	tooth he	adset	Mode	l No.:		AirBuds 5 Pro				
Temperature	20 ℃			Relati	Relative Humidity:						
Test Mode:	Test Mode: Mode2/ Mode4 Test By: Mary Hu										
All the modu	lation mode	s have l	oeen teste	d, and the	e worst resu	ılt wa	s repo	ort as belo	ow:		
Frequency	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Lir	nits	Margin	Detector	Comment	
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµ	uV/m)	(dB)	Туре		
			1M	bps(GFSK	)- Non-hop	ping					
2310.00	56.39	2.97	27.80	43.80	43.36	7	74	-30.64	Pk	Horizontal	
2310.00	41.17	2.97	27.80	43.80	28.14		54	-25.86	AV	Horizontal	
2310.00	52.85	2.97	27.80	43.80	39.82	7	74	-34.18	Pk	Vertical	
2310.00	40.77	2.97	27.80	43.80	27.74	5	54	-26.26	AV	Vertical	
2390.00	51.99	3.14	27.21	43.80	38.54	7	74	-35.46	Pk	Vertical	
2390.00	44.18	3.14	27.21	43.80	30.73	5	54	4 -23.27 AV Vertio			
2390.00	52.13	3.14	27.21	43.80	38.68	7	74	4 -35.32 Pk Hor			
2390.00	42.43	3.14	27.21	43.80	28.98	5	64 -25.02		AV	Horizontal	
2483.50	52.47	3.58	27.70	44.00	39.75	7	74	-34.25	Pk	Vertical	
2483.50	44.44	3.58	27.70	44.00	31.72	5	54	-22.28	AV	Vertical	
2483.50	53.05	3.58	27.70	44.00	40.33	7	74	-33.67	Pk	Horizontal	
2483.50	40.26	3.58	27.70	44.00	27.54	5	54	-26.46	AV	Horizontal	
		_		1Mbps (GF	SK)- hoppin	· · · · ·					
2310.00	52.69	2.97	27.80	43.80	39.66	7	74	-34.34	Pk	Horizontal	
2310.00	44.30	2.97	27.80	43.80	31.27	5	54	-22.73	AV	Horizontal	
2310.00	51.22	2.97	27.80	43.80	38.19	7	74	-35.81	Pk	Vertical	
2310.00	43.21	2.97	27.80	43.80	30.18		54	-23.82	AV	Vertical	
2390.00	54.68	3.14	27.21	43.80	41.23	7	74	-32.77	Pk	Vertical	
2390.00	42.99	3.14	27.21	43.80	29.54	5	54	-24.46	AV	Vertical	
2390.00	50.94	3.14	27.21	43.80	37.49	7	74	-36.51	Pk	Horizontal	
2390.00	44.98	3.14	27.21	43.80	31.53		54	-22.47	AV	Horizontal	
2483.50	50.23	3.58	27.70	44.00	37.51		74	-36.49	Pk	Vertical	
2483.50	44.78	3.58	27.70	44.00	32.06	5	54	-21.94	AV	Vertical	
2483.50	51.65	3.58	27.70	44.00	38.93	7	74	-35.07	Pk	Horizontal	
2483.50	44.30	3.58	27.70	44.00	31.58	5	54	-22.42	AV	Horizontal	

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



Spurious Emission in Restricted Band 3260MHz-18000MHz												
EUT: TWS Bluetooth headset			Mode	Model No.:		AirBuds 5 Pro						
Temperature: 20 °C			Rela	Relative Humidity:		48%						
Test Mode:	N	Mode2/ Mode4			Test	Test By: Mar		Mary H	ary Hu			
All the modul	ation m	nodes	have b	een testeo	l, and th	ne w	orst resu	lt wa	s repo	rt as belo	W:	
Frequency	ency Reading Level		Cable Loss	Antenna Factor	Preamp Factor		Emission Level	Li	mits	Margin	Detector	Comment
(MHz)	(dBµ	IV)	(dB)	dB/m	(dB)	(	dBµV/m)	(dB	μV/m)	(dB)	Туре	
3260	59.4	12	4.04	29.57	44.70		48.33		74	-25.67	Pk	Vertical
3260	47.8	33	4.04	29.57	44.70		36.74		54	-17.26	AV	Vertical
3260	56.5	51	4.04	29.57	44.70		45.42		74	-28.58	Pk	Horizontal
3260	46.3	37	4.04	29.57	44.70		35.28		54	-18.72	AV	Horizontal
3332	62.3	38	4.26	29.87	44.40		52.11		74	-21.89	Pk	Vertical
3332	45.7	76	4.26	29.87	44.40		35.49		54	-18.51	AV	Vertical
3332	62.7	71	4.26	29.87	44.40		52.44		74	-21.56	Pk	Horizontal
3332	44.9	98	4.26	29.87	44.40		34.71		54	-19.29	AV	Horizontal
17797	51.4	16	10.99	43.95	43.50		62.90		74	-11.10	Pk	Vertical
17797	34.4	16	10.99	43.95	43.50		45.90		54	-8.10	AV	Vertical
17788	55.8	30	11.81	43.69	44.60		66.70		74	-7.30	Pk	Horizontal
17788	38.4	17	11.81	43.69	44.60		49.37		54	-4.63	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> ℃	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.

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#### 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.

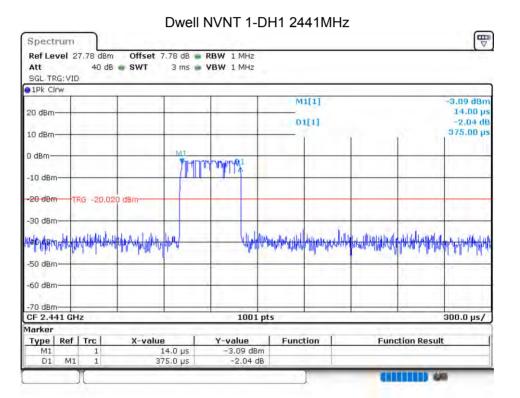
The system receiver have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.



#### 8 TEST RESULTS

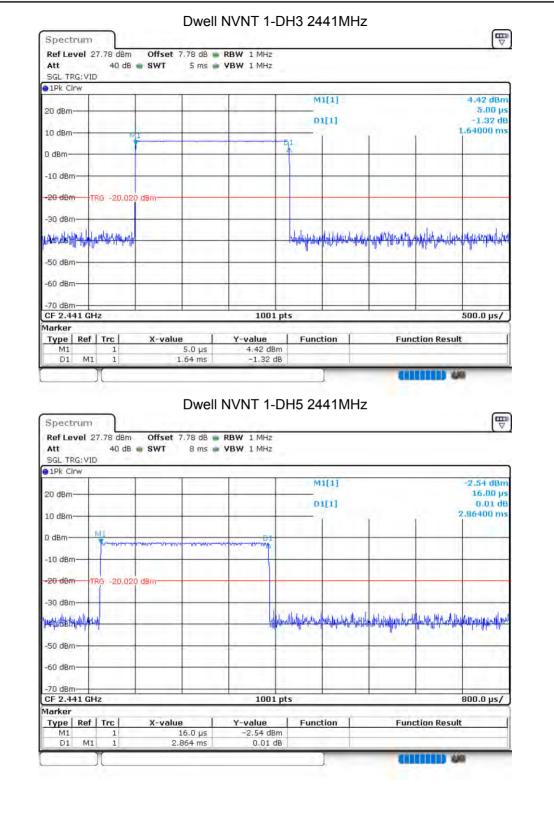
#### 8.1 **DWELL TIME**

Condition	Mode	Frequency	Pulse	Total Dwell	Period	Limit	Verdict
		(MHz)	Time (ms)	Time (ms)	Time (ms)	(ms)	
NVNT	1-DH1	2441	0.375	120	31600	400	Pass
NVNT	1-DH3	2441	1.64	262.4	31600	400	Pass
NVNT	1-DH5	2441	2.864	305.493	31600	400	Pass
NVNT	2-DH1	2441	0.375	120	31600	400	Pass
NVNT	2-DH3	2441	1.625	260	31600	400	Pass
NVNT	2-DH5	2441	2.872	306.347	31600	400	Pass
NVNT	3-DH1	2441	0.375	120	31600	400	Pass
NVNT	3-DH3	2441	1.64	262.4	31600	400	Pass
NVNT	3-DH5	2441	2.864	305.493	31600	400	Pass

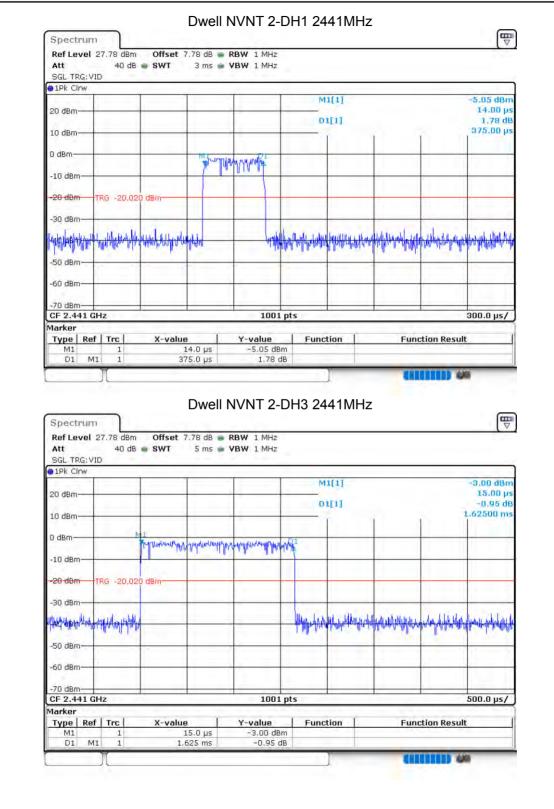


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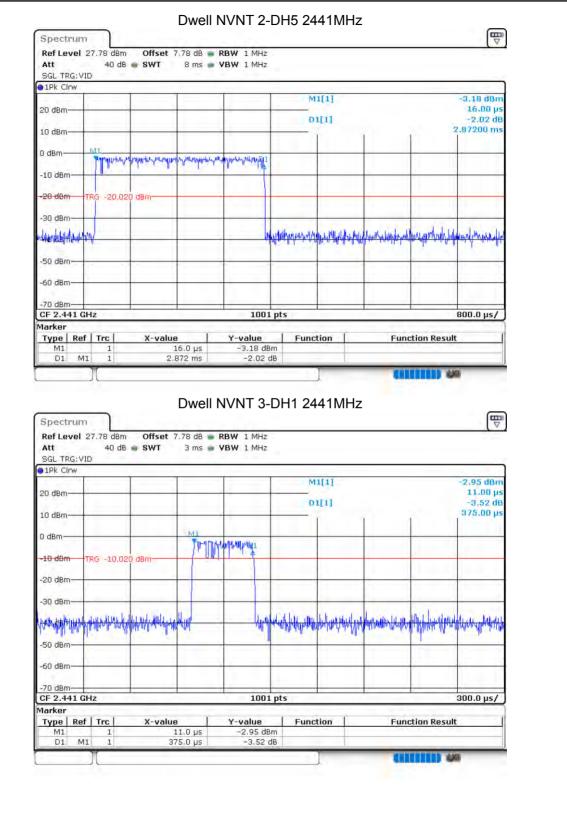








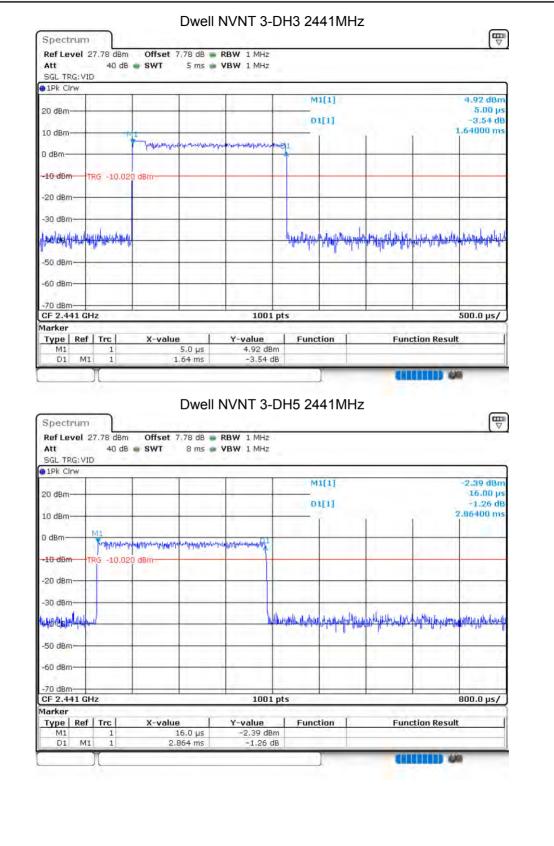




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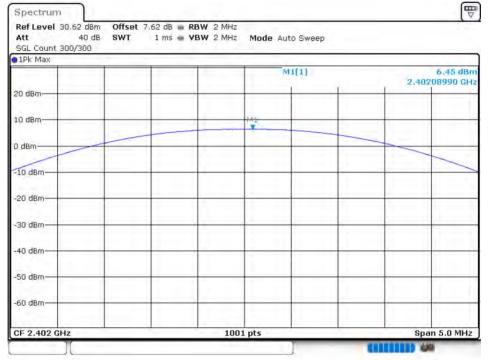


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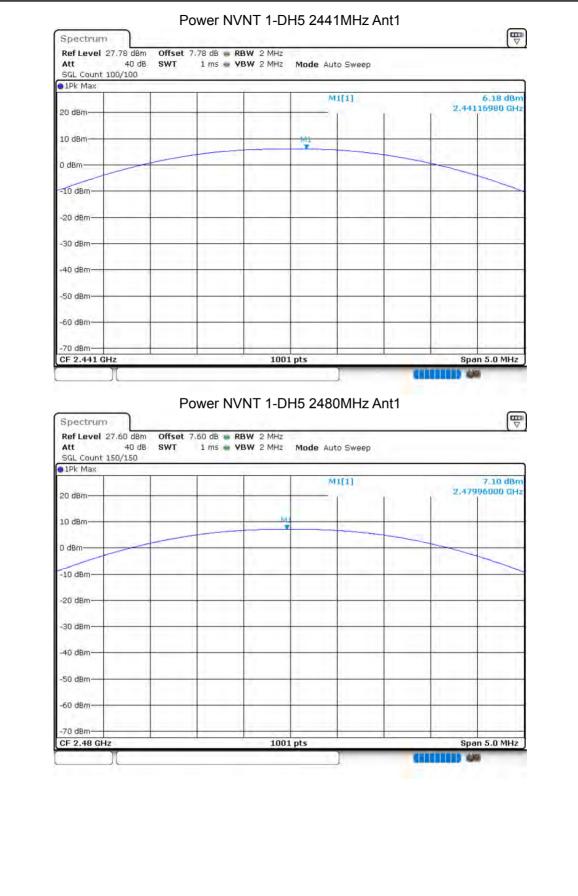
#### 8.2 MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant 1	6.45	30	Pass
NVNT	1-DH5	2441	Ant 1	6.18	30	Pass
NVNT	1-DH5	2480	Ant 1	7.01	30	Pass
NVNT	2-DH5	2402	Ant 1	6.39	20.97	Pass
NVNT	2-DH5	2441	Ant 1	6.19	20.97	Pass
NVNT	2-DH5	2480	Ant 1	7.07	20.97	Pass
NVNT	3-DH5	2402	Ant 1	6.41	20.97	Pass
NVNT	3-DH5	2441	Ant 1	6.18	20.97	Pass
NVNT	3-DH5	2480	Ant 1	7.08	20.97	Pass

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



















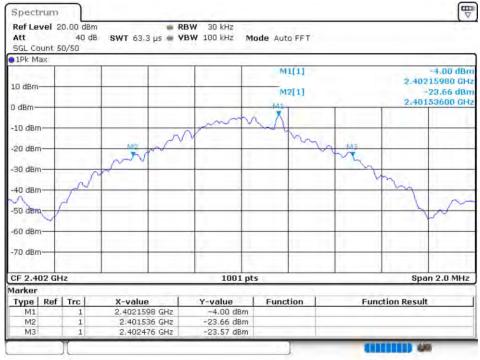


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### 8.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
	1-DH5	2402	Ant 1	0.94	Pass
NVN1 NVNT NVNT NVNT NVNT	1-DH5	2441	Ant 1	1.044	Pass
NVNT	1-DH5	2480	Ant 1	0.944	Pass
NVNT	2-DH5	2402	Ant 1	1.202	Pass
NVNT	2-DH5	2441	Ant 1	1.18	Pass
NVNT	2-DH5	2480	Ant 1	1.18	Pass
NVNT	3-DH5	2402	Ant 1	1.194	Pass
NVNT NVNT NVNT	3-DH5	2441	Ant 1	1.196	Pass
NVNT	3-DH5	2480	Ant 1	1.192	Pass

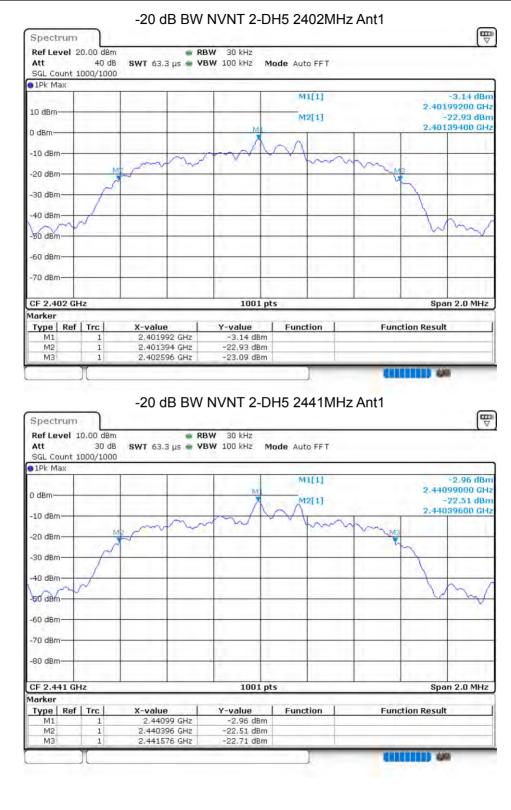
#### -20 dB BW NVNT 1-DH5 2402MHz Ant1







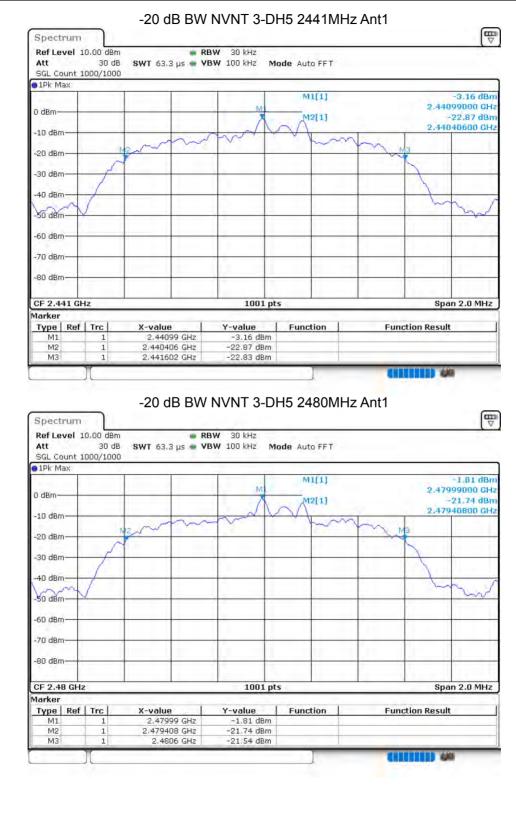












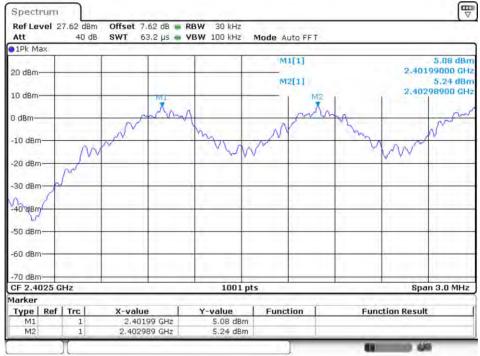


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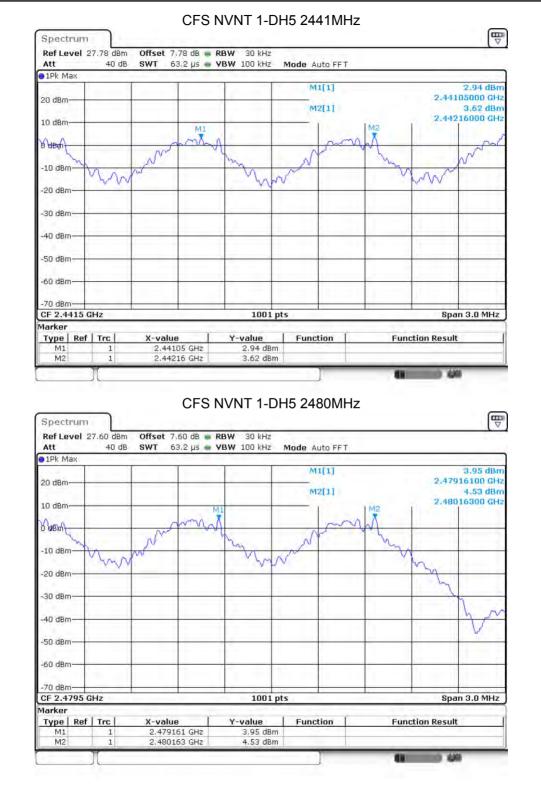
#### 8.4 CARRIER FREQUENCIES SEPARATION

Condition	Mode	Hopping Freq1	Hopping Freq2	HFS	Limit	Verdict
		(MHz)	(MHz)	(MHz)	(MHz)	
NVNT	1-DH5	2401.99	2402.989	0.999	0.94	Pass
NVNT	1-DH5	2441.05	2442.16	1.11	1.044	Pass
NVNT	1-DH5	2479.161	2480.163	1.002	0.944	Pass
NVNT	2-DH5	2402.161	2402.992	0.831	0.801	Pass
NVNT	2-DH5	2441.161	2441.992	0.831	0.787	Pass
NVNT	2-DH5	2478.927	2479.992	1.065	0.787	Pass
NVNT	3-DH5	2401.987	2403.163	1.176	0.796	Pass
NVNT	3-DH5	2440.987	2441.992	1.005	0.797	Pass
NVNT	3-DH5	2478.987	2479.992	1.005	0.795	Pass

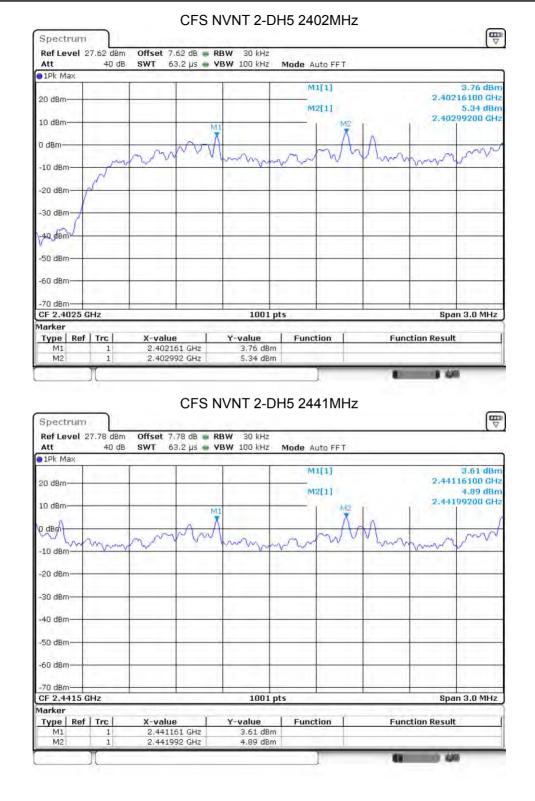
#### CFS NVNT 1-DH5 2402MHz



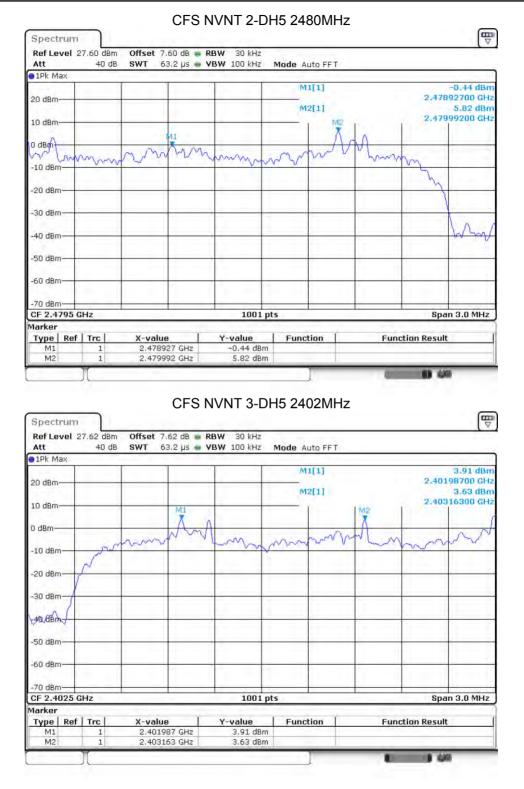








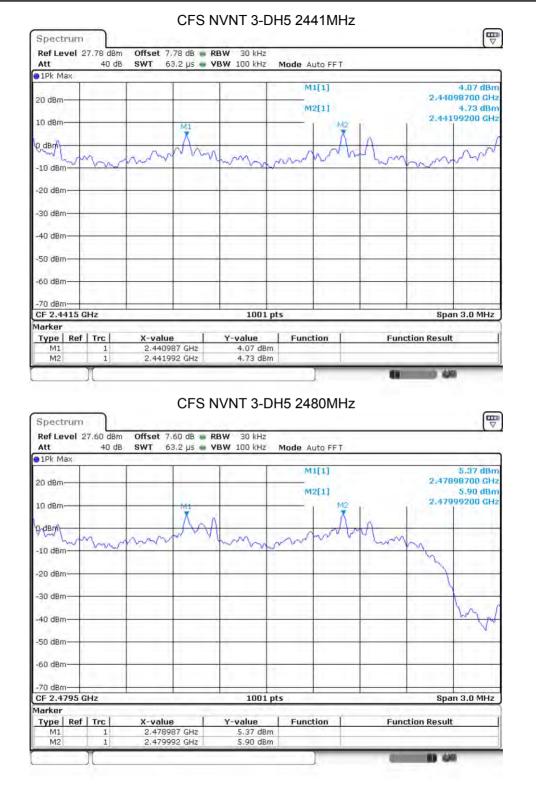




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#### 8.5 NUMBER OF HOPPING CHANNEL Condition Hopping Number Verdict Mode Limit NVNT 79 1-DH5 15 Pass Hopping No. NVNT 1-DH5 2402MHz ₩ Spectrum Ref Level 27.62 dBm Offset 7.62 dB 🝙 RBW 100 kHz Att 40 dB SGL Count 7000/7000 SWT 1 ms 🖷 VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] 5.78 dBn 20 dBm 2.4020040 GHz M2[1] 10.79/den 00765 GHz 101dBm o damaaaa AAAAAA ADDADADADADADADA AAAAAAA 1000000 88868888 11111 WHA LO dBr 20 dBm 80 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 2.402004 GHz Function Y-value 5.78 dBm M1 1 M2 2.4800765 GHz 10.79 dBm 1

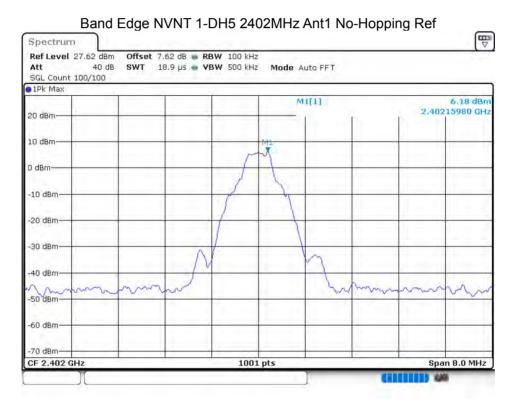
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#### 8.6 BAND EDGE

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH5	2402	Ant 1	No-Hopping	-47.62	-20	Pass
NVNT	1-DH5	2402	Ant 1	Hopping	-47.62	-20	Pass
NVNT	1-DH5	2480	Ant 1	No-Hopping	-49.91	-20	Pass
NVNT	1-DH5	2480	Ant 1	Hopping	-48.26	-20	Pass
NVNT	2-DH5	2402	Ant 1	No-Hopping	-46.09	-20	Pass
NVNT	2-DH5	2402	Ant 1	Hopping	-47.35	-20	Pass
NVNT	2-DH5	2480	Ant 1	No-Hopping	-49.92	-20	Pass
NVNT	2-DH5	2480	Ant 1	Hopping	-49.09	-20	Pass
NVNT	3-DH5	2402	Ant 1	No-Hopping	-46.13	-20	Pass
NVNT	3-DH5	2402	Ant 1	Hopping	-46.64	-20	Pass
NVNT	3-DH5	2480	Ant 1	No-Hopping	-49.55	-20	Pass
NVNT	3-DH5	2480	Ant 1	Hopping	-49.03	-20	Pass





Att SGL Coun	27.62 dBm 40 dB t 100/100			RBW 100 kHz VBW 500 kHz	Mode Auto FF	T.		
●1Pk Max		í –	-	i i	M1[1]			5.60 d
20 dBm				-				05000
10 dBm			-		M2[1]	1		48.38 d
0 dBm			-			_		
-10 dBm	-							
-20 dBm-	01 -13.817	dBm-				_		
-30 dBm							1	12
-40 dBm-		-		M4				
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-60 dBm-			-	·				
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-70 dBm- Start 2.30	l6 GHz	1:	1	1001 pt	s	1	Stop 2	2.406 G
Marker Type   Re	(   +			Q. contract	Function	E.m.	ation Docult	
						Fur	nction Result	
M1	1		205 GHz	Y-value 5.60 dBm	Function			
	1	2.402 2	205 GHz 2.4 GHz	5.60 dBm -48.38 dBm	Function			
M1 M2 M3 M4 Spectrur Ref Level Att	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm	5 2402MH		opping R	ef
M1 M2 M3 M4 Spectrur Ref Level Att	1 1 1 2 and Edg	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH		opping R	ef
M1 M2 M3 M4 Spectrur Ref Level Att SGL Coun	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 B Spectrur Ref Level Att SGL Coun	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrur Ref Level Att SGL Coun	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			ef
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun SGL Coun 1Pk Max 20 dBm-	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun IPk Max 20 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun SGL Coun 1Pk Max 20 dBm-	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrue Ref Level Att SGL Coun SGL Coun 10 dBm- 10 dBm- 0 dBm- -10 dBm-	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrur Ref Level Att SGL Coun O dBm 10 dBm 0 dBm -10 dBm -20 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrue Ref Level Att SGL Coun SGL Coun 10 dBm- 10 dBm- 0 dBm- -10 dBm-	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrur Ref Level Att SGL Coun O dBm 10 dBm 0 dBm -10 dBm -20 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrur Ref Level Att SGL Coun 0 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun • 10 dBm • 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -60 dBm	1 1 1 27.62 dBm 40 dB	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH			6,77 d
M1 M2 M3 M4 Spectrui Ref Level Att SGL Coun • 1Pk Max 20 dBm • 1Pk Max 20 dBm - 10 dBm - 20 dBm - 20 dBm - 30 dBm - 30 dBm - 30 dBm	1 1 1 1 27.62 dBm 40 dB ± 8000/8000	2.402 2. 2.35 ge(Hop) offset 7 swr 1	205 GHz 2.4 GHz 39 GHz 518 GHz ping) N	5.60 dBm -48.38 dBm -46.41 dBm -41.44 dBm IVNT 1-DH RBW 100 kHz	5 2402MH. Mode Auto FFT MI[1]		2,405	6,77 0



Att SGL Coun			227.5 µs 🖷	VBW 300 kHz	Mode Au	uto FFT	21		
●1Pk Max	T.	1	1	1	MI	[1]			5.86
20 dBm								2.4	10495000
10 dBm				1	M2	11	1	2.4	-45.40
0 dBm						_	_		10.0
-10 dBm—	DT	226 dBm						-	
-20 dBm—	D1 -13	220 0000				_			
-30 dBm—					_		_		
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-60 dBm-				1					
				1					1 1 1 1 1
-70 dBm— Start 2.3	D6 GHz		-	1001 j	ots		1	Ste	op 2.406 C
Marker Type   R	of   Tro	X-valı	ie I	Y-value	Functi	on I		unction Res	alt
M1	1	2.40	495 GHz	5.86 dBm		Un		inction Kes	suit
			2.4 GHz	-45.40 dBm					
M2 M3	1		387 GHz	-42.76 dBm	5				
M3 M4 Spectru Ref Leve Att	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	7.60 dB 🐞	-42.76 dBm -40.85 dBm -DH5 248 RBW 100 kHz yBW 100 kHz yBW 300 kHz	) OMHz A		No-Hop	oing Re	é#
M3 M4 Spectru Ref Leve	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	) OMHz A		No-Hop	oing Re	f
M3 M4 Spectru Ref Leve Att SGL Cour IPk Max	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	) OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Coun	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Cour IPk Max	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm- 10 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT			6,66
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT			6,66
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm- 10 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT			6,66
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm- 10 dBm- 0 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT			
M3 M4 Spectru Ref Leve Att SGL Coun IPk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Cour SGL Cour ID dBm- 10 dBm- 0 dBm- -10 dBm- -20 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT		2.4	6,66
M3 M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT	No-Hop		6,66
M3 M4 Spectru Ref Leve Att SGL Cour • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -30 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT		2.4	6,66
M3 M4 Spectru Ref Leve Att SGL Cour • 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-	Bar m 1 27.60 c 40	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz	OMHz A	to FFT		2.4	6,66
M3 M4 Spectru Ref Leve Att SGL Coun 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -50 dBm	1 1 1 1 1 27.60 ct 40 t 100/10	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm		to FFT		2.4	6,66 +7999200
M3 M4 Spectru Ref Leve Att SGL Coun 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -30 dBm- -50 dBm- -50 dBm-	1 1 1 1 1 27.60 ct 40 t 100/10	2. 2.3 Id Edge N Bm Offset dB SWT	501 GHz NVNT 1 7.60 dB •	-40.85 dBm -DH5 248 RBW 100 kHz		to FFT		2.4	6,66



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20 dBm	_		-			11[1]			6.27 dB
10 dBm-			-		M	2[1]	20		-45.76 dB 350000 GI
0 d8m			_						
-10 dBm					200.000	1 1 1 1	1	1 1	1
-20 cBm-	DI -13,344	dBm		1				1	
-30 dBm				<u> </u>	-		<u>1</u>	<u> </u>	
	M4				1	11	1.	1.75	
-40 dBnorz		ulan manual	y white the start	Her handroamables	monoulauna	perferences	equipments phylosom	de Ularath other	algunan
-50 dBm									
-60 dBm				1					
-70 dBm	CUE		-	1001	nte			Ctop	2.576 GH
Marker	GHZ			1001	prs	1.1.1.1		Stup	2.070 GH
Type Ref M1	Trc 1	X-value 2.479	e	Y-value 6.27 dB	Func m	tion	Fund	ction Result	t
M2	1		335 GHz	-45.76 dB					
the state of the	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		and the state of the						
Spectrum Ref Level Att SGL Count	27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	60 dB 💼 F	-46.41 dB -43.25 dB VNT 1-D RBW 100 kHz VBW 300 kHz	m H5 248		Ant1 Ho	pping R	
M4 Ba Spectrum Ref Level Att	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	pping R	<b>[</b>
M4 Spectrum Ref Level Att SGL Count	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A		Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm 0 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm 0 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT		-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	ef (4 6.88 dB 716280 GH
M4 Ba Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Ba Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Ba Spectrum Ref Level Att SGL Count I Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Ba Spectrum Ref Level Att SGL Count I Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT		-	6,88 dB
M4 Spectrum Ref Level Att SGL Count IPk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -60 dBm	1 and Edg 27.60 dBm 40 dB	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	m 1H5 248 Mode A	uto FFT	Ant1 Ho	-	6,88 dB
M4 Spectrum Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 and Edg 27.60 dBm 40 dB 8009/8009	2.48 ge(Hop) Offset 7	ping) N	-43.25 dB	Mode A	uto FFT	Ant1 Ho	2.47	6,88 dB



Att SGL Count	40 dB t 1200/1200	SWT 23	- 110 Hz	VBW 300 kHz	Mode Au				
	ľ			1	M1[	[1]		12/14	6.34 dB
20 dBm					M2[	1]			605000 G -44.56 dB
10 dBm					1		í	2.48	350000 G
) d6m	-						-	-	
-10 dBm-	D1 -13.120	dBm							
-20 cBm—	100 100						-		-
-30 dBm-	·								
-40 dBm	M4	MB						lb. a. a.	
-50 dBm	monduryay	andhollogentrand	all man and a state	when the manufacture of the	anti-personal taxon	antologyan	vinderthall durade	the strategies	and the second second
1									
-60 dBm	1						·	1	
-70 dBm- Start 2.47	6 GHz	-	-	1001 p	its		1	Stop	2.576 GH
Marker						1-1-		1.1.1	
Type Re	ef Trc	2.476	9 D5 GHz	Y-value 6.34 dBm	Functio	on	Fun	ction Resul	t
M1			35 GHz	-44.56 dBm	6				
M2	1		the second se		d 1				
	1 1 1	2	2.5 GHz 49 GHz	-44.19 dBm -41.39 dBm					
M2 M3 M4 Spectrur Ref Level Att	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm	2MHz A		o-Hoppi	ng Ref	• [1
M2 M3 M4 Spectrur Ref Level	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A		o-Hoppi	ng Ref	<b>۵</b>
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm-	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm 10 dBm - 10 dBm - 10 dBm - 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT			5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT	o-Hoppi		5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm • 10 dBm • -10 dBm • -20 dBm • -30 dBm • -30 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT			5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm • 10 dBm • -10 dBm 20 dBm 30 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT			5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm • 10 dBm • -10 dBm • -20 dBm • -30 dBm • -30 dBm	1 1 Band 27.62 dBm 40 dB	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A Mode Aut	O FFT			5,79 de
M2 M3 M4 Spectrur Ref Level Att SGL Count • 1Pk Max 20 dBm • 10 dBm • 10 dBm • -10 dBm 20 dBm 30 dBm 50 dBm 50 dBm	1 1 1 27.62 dBm 40 dB 100/100	2 2. Edge N Offset 7.	2.5 GHZ 49 GHZ VNT 2	-44.19 dBm -41.39 dBm -DH5 2402 RBW 100 kHz	2MHz A	O FFT		2.403	5,79 de



Att SGL Count 1Pk Max	40 dB 100/100	SWT 22	стю рь	<b>VBW</b> 300 kH	- moue	Auto FFT.			
	1			1	M	1[1]		0.5	4.58 d
20 dBm					M	2[1]			195000 C -46.11 d
10 dBm	1					1	1	2.40	0000000
0 dBm				-	-		-	1	1 1
-10 dBm	D1 -14.208	dBm		-	-		-		
-20 dBm					-		-	-	
-30 dBm				-	-			-	
-40 dBm	an and		M4	I tales at the				MIS	Ma
-50 dBm-	harmontation	whenterhander	1. Hall and the	and a marine the second	now when the second	transmaalidadee	m-Anathenter	Analy Monthly	u but nu an
-60 dBm				-					
-70 dBm				1		1	1 1		1.000
Start 2.30 Marker	6 GHz			1001	pts			Stop	2.406 GI
Type   Re		X-value		Y-value	Func	tion	Fun	ction Resu	lt
		2 401	95 GHz	4.58 dB					
M1 M2	1	2	2.4 GHz	-46.11 dB					
M1		2.		-46.11 dB -45.66 dB -40.30 dB	m				
M1 M2 M3 M4 B Spectrun Ref Level Att	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB	m m H5 240		Ant1 Ho	pping F	Ref (
M1 M2 M3 M4 B Spectrun Ref Level Att	and Edg	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m m H5 240		Ant1 Ho	pping F	
M1 M2 M4 M4 Spectrun Ref Level Att SGL Count	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A		Ant1 Ho		6,35 d
M1 M2 M3 M4 B3 Spectrun Ref Level Att SGL Count	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		(
M1 M2 M4 M4 Spectrun Ref Level Att SGL Count	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm-	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 B Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -20 dBm -40 dBm	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 B Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -20 dBm -40 dBm	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT	Ant1 Ho		6,35 d
M1 M2 M3 M4 B Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -60 dBm	1 1 1 27.62 dBm 40 dB	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	m Mode A	uto FFT			6,35 d
M1 M2 M3 M4 B Spectrun Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 1 1 27.62 dBm 40 dB 8000/8000	2 2. 2.34 ge(Hopp Offset 7.	2.4 GHz 39 GHz 05 GHz Ding) N	-45.66 dB -40.30 dB VNT 2-D	Mode A	uto FFT	Ant1 Ho	2,40	6,35 d

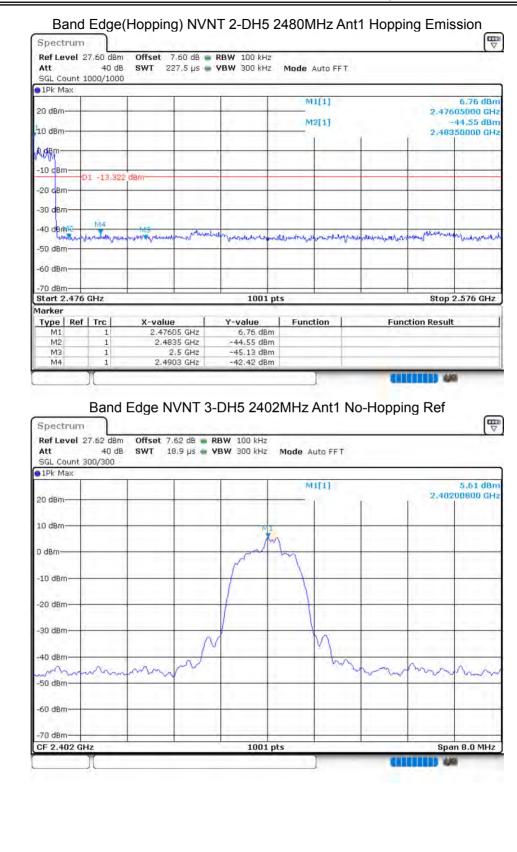


SGL Count 1200/1200 1Pk Max 20 dBm-		Mode A	uto FFT			
20 dBm	7					
		M1	[1]		2.40	3.21 595000
10 dBm	1.1	M2	[1]			-44.64
				()	2.400	
0 dBm-	1					
-10 dBm - D1 -13,649 dBm				-	-	1
-20 dBm-				-	1	1
-30 dBm-		_				-
-40 dBm	And A Mercula a	0.00			MS	MS
umahahapatententententententententententententent	annear annear and a	a regra standed years	and for a state of the state of	And an Internation	chrony markens	lamene verse
-60 dBm					1	1
-70 dBm	1001	pts			Stop	2.406
Marker			1-6-		1	
Type         Ref         Trc         X-value           M1         1         2.40595 GHz	Y-value 3.21 dBn	Funct	on	Fund	tion Result	t
M2 1 2.4 GHz	-44.64 dBn	n				
M3         1         2.39 GHz           M4         1         2.3407 GHz	-45.25 dBn -41.00 dBn					
	A 63.2	10.21		o-Hoppii	ng Ref	
Spectrum Ref Level 27.60 dBm Offset 7.60 dB	RBW 100 kHz	Mode Au	to FF T	o-Hoppiı	ng Ref	
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au		o-Hoppiı		6,69
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB att           Att         40 dB         SWT 18.9 µs att           SGL Count 100/100         SWT 18.9 µs att	RBW 100 kHz	Mode Au	to FF T	o-Hoppiı		6,69 999200
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au	to FF T	o-Hoppiı		
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au	to FF T	o-Hoppiı		
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au	to FF T	-Hoppiı		
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB str           Att         40 dB         SWT 18.9 µs str           SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100           IPk Max         Image: SGL Count 100/100         Image: SGL Count 100/100           O dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB and the set 7.60 dB and th	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB str           Att         40 dB         SWT 18.9 µs str           SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100           IPk Max         Image: SGL Count 100/100         Image: SGL Count 100/100           O dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100           ID dBm         Image: SGL Count 100/100         Image: SGL Count 100/100	RBW 100 kHz	Mode Au	to FF T			
Spectrum         Offset 7.60 dBm           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µ5 d           SGL Count 100/100         SWT 18.9 µ5 d           IPk Max         20 dBm           10 dBm         0           -10 dBm         0           -20 dBm         0	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB stress           Att         40 dB         SWT 18.9 µ5 stress           SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SWT 18.9 µ5 stress         Image: SWT 18.9 µ5 stress           Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100           Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100           Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100         Image: SGL Count 100/100           Image: SGL Count 100/100         Image: SGL C	RBW 100 kHz	Mode Au	to FF T			
Spectrum         Offset 7.60 dBm           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µ5 d           SGL Count 100/100         SWT 18.9 µ5 d           IPk Max         20 dBm           10 dBm         0           -10 dBm         0           -20 dBm         0	RBW 100 kHz	Mode Au	to FF T			
Spectrum         Offset 7.60 dBm           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µ5 f           SGL Count 100/100         SWT 18.9 µ5 f           IPk Max         20 dBm           10 dBm         0           -10 dBm         0           -20 dBm         0           -30 dBm         0	RBW 100 kHz	Mode Au	to FF T			
Spectrum         Offset 7.60 dBm           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µ5 f           SGL Count 100/100         SWT 18.9 µ5 f           IPk Max         20 dBm           10 dBm         0           -10 dBm         0           -20 dBm         0           -30 dBm         0	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µs is sGL Count 100/100           • IPk Max           • IPk Max           20 dBm           • 10 dBm           • 0 dBm	RBW 100 kHz	Mode Au	to FF T			
Spectrum           Ref Level 27.60 dBm         Offset 7.60 dB sWT 18.9 µs is 5GL Count 100/100           SGL Count 100/100           IPk Max           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	RBW 100 kHz	Mode Au	to FF T		2,479	



● 1Pk Max 20 dBm	-					_	1[1]			6.69 dBn 95000 GH
10 dBm-		-			16	M	2[1]	<i>.</i>		46.03 dBr 50000 GH
0 d8m		_			-					
-10 cBm—	DI CIT	-	dD exi	-		_		-		
-20 GBm-	DI -13	,313	ubin			_	-			
-30 dBm-		- 1								1
-40 dBm	14		645	1	6	1	1.1		11 11 11	1.221
-50 dBm-	Astonball	when	Marina	an manual and the second	and the second sec	undersations of the	pushimum Manu	lever have been and the	al notion production of a local statements of	the here we have been and
				1	· · · · · · · · · · · · · · · · · · ·					
-60 dBm—	1				1		1		1	h
-70 dBm— Start 2.4	76 GHz	_		1	1001	pts	1		Stop	2.576 GHz
Marker Type   R	ef   Tro	1	X-value	. 1	Y-value	Fund	tion	Frin	ction Result	
M1	1		2.479	95 GHz	6.69 dBr	n		, and	CON NESUR	
M2 M3	1	1	2	35 GHz 2.5 GHz	-46.03 dBr -46.35 dBr	n				
			2 49	56 GHz	-43.24 dBr	n				
M4 Spectru Ref Leve Att SGL Coun	m I 27.60 4(	Edg	je(Hopj offset 7	Ding) N	IVNT 2-D	13.25		Ant1 Ho	pping R	ef (T
M4 Spectru Ref Leve Att	Band I	Edg	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A		Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Coun	Band I	Edg	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		<b>E</b> ▼
M4 Spectru Ref Leve Att SGL Coun • 1Pk Max	Band I	Edg	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 110 dBm-	Band I	Edg	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Coun 1Pk Max 20 dBm-	Band I	Edg	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 110 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 110 dBm- -10 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour IPk Max 20 dBm- 10 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 110 dBm- -10 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour IPk Max 20 dBm- IO dBm- -10 dBm- -20 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4           E           Spectru           Ref Leve           Att           SGL Count           ID dBm           D dBm           ID dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve Att SGL Cour 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	Ding) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4           E           Spectru           Ref Leve           Att           SGL Count           ID dBm           D dBm           ID dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	oing) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
E Spectru Ref Leve Att SGL Coun 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -30 dBm- -50 dBm- -50 dBm-	Band I	Edg dBm 0 dB 000	je(Hopj offset 7	oing) N	IVNT 2-DI RBW 100 kHz	Mode A	uto FFT	Ant1 Ho		6,68 dBn
M4 Spectru Ref Leve SGL Coun Ito dBm- Ito dBm- Ito dBm- -20 dBm- -30 dBm- -30 dBm- -50 dBm-	Band I m I 27.60 40 40 40 40	Edg dBm 0 dB 000	je(Hopj offset 7	oing) N	IVNT 2-DI RBW 100 kHz		uto FFT	Ant1 Ho	2.476	6,68 dBn
M4           Spectru           Ref Leve           SGL Coun           SGL Coun           1Pk Max           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm	Band I m I 27.60 40 40 40 40	Edg dBm 0 dB 000	je(Hopj offset 7	oing) N	IVNT 2-D		uto FFT	Ant1 Ho	2.476	6,68 dBn







SGL Count 1Pk Max	100/100			7						
20 dBm					M	1[1]		2.40	6.06 195000	
10 dBm					M	2[1]			-45.94	
0 dBm										
-10 dBm					1			1	1	
	D1 -14.391	dBm		-	-					
-20 dBm							1			1
-30 dBm	-		M4			1				1
-40 dBm	water this much	mound	T	and the group of	an could		h der en s	M3	HILL WILL	Ly.
-50 dBm-	manthering	annen understratte	mentan		nutrianentation	and have and reasons	III malkar lowers	Hilly and Markensky Ma	a granne	-
-60 dBm		-		-	-			1	1	
-70 dBm							1			
Start 2.30	6 GHz		<u></u>	1001	pts			Stop	2.406 0	GHz
Marker Type   Re	f   Trc	X-valu	e	Y-value	Func	tion	Fun	ction Result	t	
	1		195 GHz	6.06 dB						
M1				-45.94 dB						
M1 M2 M3	1		2.4 GHz .39 GHz	-45.70 dB	m					
M2 M3 M4 B Spectrun Ref Level Att	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB		m H5 240		Ant1 Ho	pping R	ef	(R
M2 M3 M4 Spectrun Ref Level Att SGL Count	and Edg	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m H5 240		Ant1 Ho	pping R	ef	E V
M2 M3 M4 B Spectrun Ref Level Att	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m 1H5 240 Mode A		Ant1 Ho	pping R	ef 6,69	
M2 M3 M4 Spectrun Ref Level Att SGL Count	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m 1H5 240 Mode A	uto FFT	Ant1 Ho			dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m 1H5 240 Mode A	uto FFT	Ant1 Ho		6,69	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m 1H5 240 Mode A	uto FFT	Ant1 Ho		6,69	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	m 1H5 240 Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- 0 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm-	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2           M3           M4           Spectrum           Ref Level           Att           SGL Count           1Pk Max           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count O dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr GH
M2           M3           M4           Spectrum           Ref Level           Att           SGL Count           1Pk Max           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2           M3           M4           Spectrun           Ref Level           Att           SGL Count           10 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -50 dBm           -60 dBm	1 1 27.62 dBm 40 dB	2 2.34 ge(Hop offset 7	.39 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho		6,69 599600	dBr
M2 M3 M4 Spectrun Ref Level Att SGL Count O 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 GHz 408 GHz ping) N 7.62 dB	-45,70 dB -40.52 dB VNT 3-D	Mode A	uto FFT	Ant1 Ho	2.403	6,69 599600	dBr



Att SGL Count 1 1Pk Max	27.62 dBm 40 dB 1000/1000			RBW 100 kH: VBW 300 kH:		Auto FFT			
	1				M	1[1]			0.30
20 dBm					M	2[1]			595000 -45.22
10 dBm	-			-			(		000000
0 dBm	<b>b</b>				1.00				-
-20 dBm-	1 -13,313 0	dBm-							
-30 dBm									
-40 dBm			M4	and hundred and have been been been been been been been be				643	Ma
-50 dBm	non-second synamically	wanter period	when a company	and montantal	mederalisation	normandramini	Anthropomore	d way to de	monunal
-60 dBm			_	1					
-70 dBm	CH2			1001	nte			Stop	2.406 (
Marker	GIL			1001	pts	1		acup	2.400 0
Type Ref M1 M2 M3	1 1 1		1e 595 GHz 2.4 GHz 39 GHz	<u>Y-value</u> 0.30 dB -45.22 dB -44.07 dB	m	tion	Fun	ction Resul	It
M4 Spectrum Ref Level 2 Att	Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz /BW 300 kHz	30MHz /		o-Hoppi	ng Ref	ili i
Spectrum Ref Level 2	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	o-Hoppi	ng Ref	jan
Spectrum Ref Level 2 Att SGL Count 1	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A		o-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 • 1Pk Max	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	o-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 SGL Count 1 PIPK Max 20 dBm 10 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 9 IPk Max 20 dBm 10 dBm 0 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 SGL Count 1 PIPK Max 20 dBm 10 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 9 IPk Max 20 dBm 10 dBm 0 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		6.71
Spectrum Ref Level 2 Att SGL Count 1 O IPk Max 20 dBm 10 dBm 0 dBm -10 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 9 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	D-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 9 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT	p-Hoppi		
Spectrum Ref Level 2 Att SGL Count 1 9 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -60 dBm	1 Band E	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	30MHz / Mode A	uto FFT			
Spectrum Ref Level 2 Att SGL Count 1 • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 Band B 27.60 dBm 40 dB 00/100	2,3 Edge N Offset 7	423 GHZ IVNT 3- 7.60 db 👞 F	-39.96 dB -DH5 248 RBW 100 kHz	BOMHZ A	uto FFT	p-Hoppi	2.47	



• 1Pk Max	1	-	[· /	(	M	1[1]		-	4.36 dB
20 dBm									15000 G
10 d&m				-	IVI	2[1]	6		-45.03 dP 350000 G
0 d8m		/		-	-				
-10 cBm	D1 -13.292	dBroi			-			(	-
-20 dBm-	DI TAISSE	Gom	1		-		-		
-30 dBm	·	_							
-40 dem		M3		-			1		
-50 dBm-	whentern	Number and	Anne when an	whomanit	pungulguhan bar m	and Millimous And	humannulhunan	Anexan Martine Atani	May Lunger and
-60 dBm									
-70 dBm	-		1	·		1	1		h
Start 2.47	6 GHz			1001	pts			Stop	2.576 GH
Marker Type   Re	f   Trc	X-value	•	Y-value	Func	tion	Fund	tion Result	t
M1 M2	1		15 GHz 35 GHz	4.36 dB -45.03 dB	m				
			2.5 GHz	-45.72 dB	Im				
Spectrum Ref Level Att	n 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	.60 dB 🐞 RI	-42.85 dB /NT 3-D BW 100 kHz BW 300 kHz	0H5 248		Ant1 Ho	pping R	
M4 Spectrum Ref Level Att SGL Count	and Edg	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 kHz	0H5 248		Ant1 Ho	pping R	
M4 B Spectrum Ref Level Att	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 kHz	0H5 248 Mode A		Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 kHz	0H5 248 Mode A	uto FFT	Ant1 Ho		ef 6.74 dB
M4 Spectrun Ref Level Att SGL Count • 1Pk Max	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 kHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count IPk Max 20 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 kHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm- 10 dBm- -10 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	1[1]	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm- 10 dBm- -10 dBm- -20 dBm-	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	uto FFT	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	1[1]	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	1[1]	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.60 dBm 40 dB	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248 Mode A	1[1]	Ant1 Ho		6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -70 dBm	1 and Edg 27.60 dBm 40 dB 8000/8000	2.4 ge(Hopp offset 7.	Ding) N\		0H5 248	1[1]	Ant1 Ho	2,479	6.74 dB
M4 Spectrum Ref Level Att SGL Count 10 dBm 20 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -60 dBm	1 and Edg 27.60 dBm 40 dB 8000/8000	2.4 ge(Hopp offset 7.	Ding) N\	/NT 3-D BW 100 KHz BW 300 KHz	0H5 248	1[1]	Ant1 Ho	2,479	6.74 dB 999200 Gł



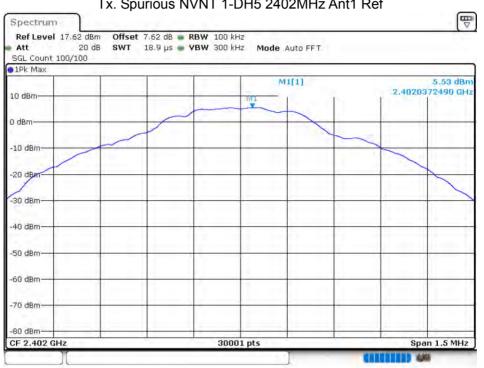
#### Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission Spectrum Ref Level 27.60 dBm Offset 7.60 dB . RBW 100 kHz 40 dB SWT 227.5 µs 💿 VBW 300 kHz Att Mode Auto FFT SGL Count 1000/1000 91Pk Max M1[1] 6.34 dBn 20 dBm-2.47905000 GHz -44.72 dBm 2.48350000 GHz M2[1] 10 dBm R.F.F 10 cBm D1 -13,264 dBm -20 c Bm -30 dBm -40 dBm2 M4 M when male the make Walking & MAL -50 dBm -60 dBm -70 dBm-Start 2.476 GHz 1001 pts Stop 2.576 GHz Marker Type | Ref | Trc 2.47905 GHz Y-value 6.34 dBm Function **Function Result** M1 1 M2 2.4835 GHz 44.72 dBm 1 MЗ 1 2.5 GHz -44.16 dBm 2.4936 GHz M4 1 -42.30 dBm



### NTEK北测

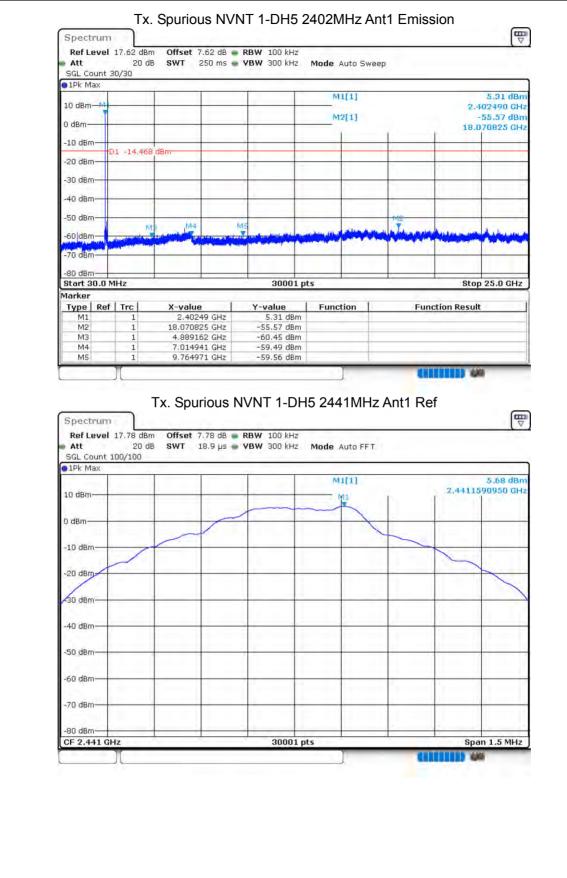
### 8.7 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant 1	-61.1	-20	Pass
NVNT	1-DH5	2441	Ant 1	-60.38	-20	Pass
NVNT	1-DH5	2480	Ant 1	-61.92	-20	Pass
NVNT	2-DH5	2402	Ant 1	-60.93	-20	Pass
NVNT	2-DH5	2441	Ant 1	-57.7	-20	Pass
NVNT	2-DH5	2480	Ant 1	-62.04	-20	Pass
NVNT	3-DH5	2402	Ant 1	-60.77	-20	Pass
NVNT	3-DH5	2441	Ant 1	-61.38	-20	Pass
NVNT	3-DH5	2480	Ant 1	-62.41	-20	Pass

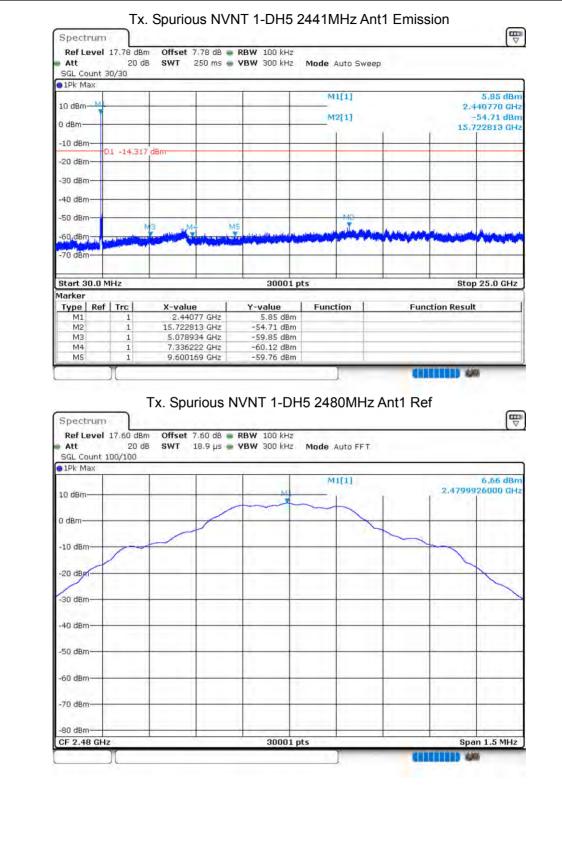


#### Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

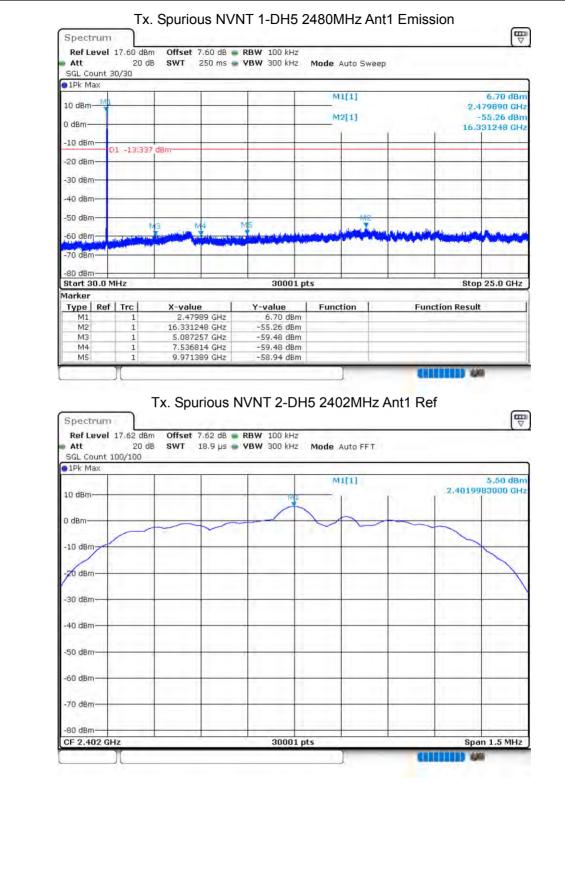




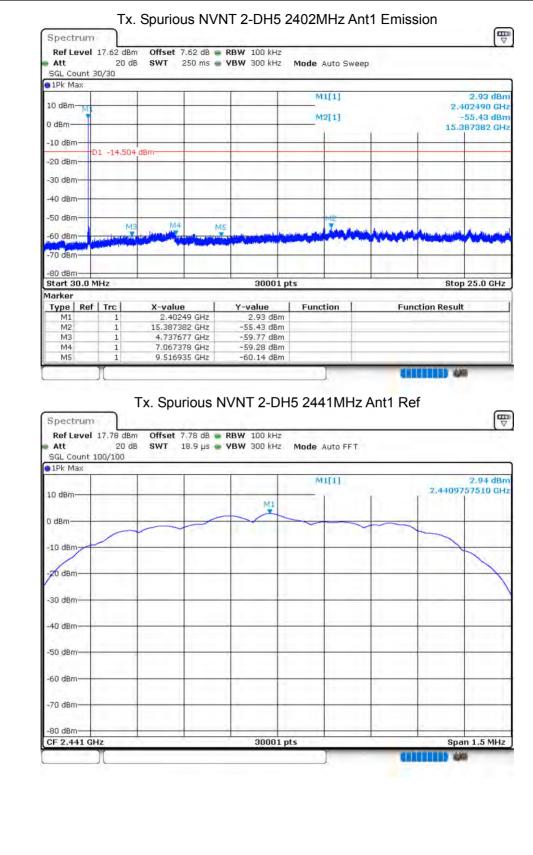




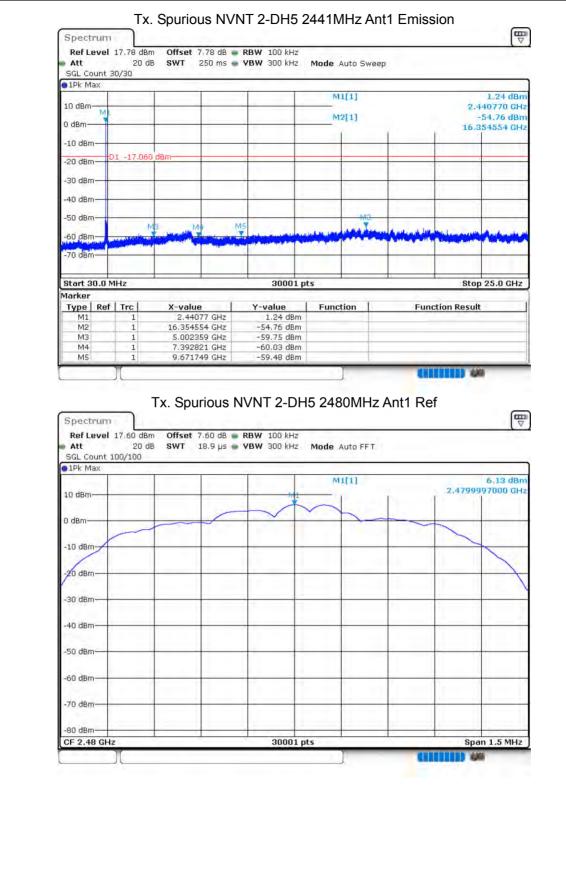




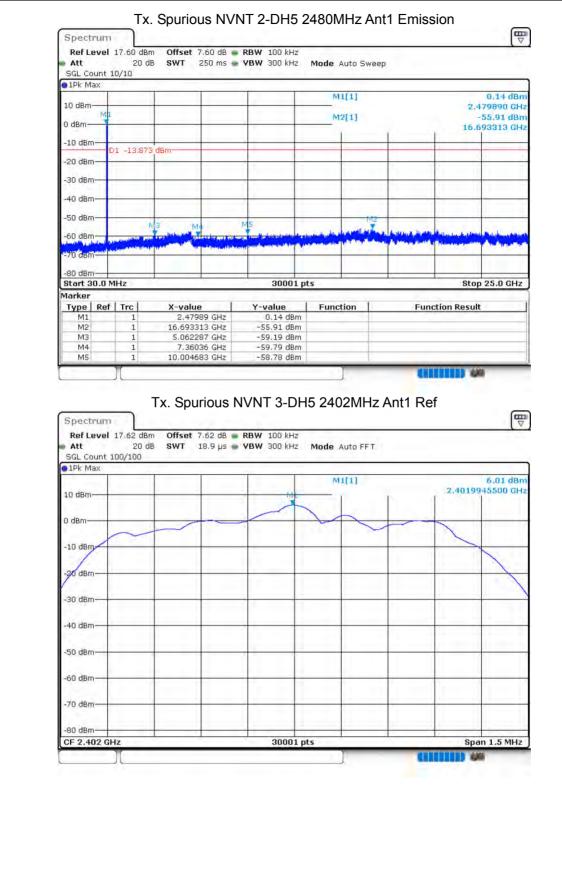




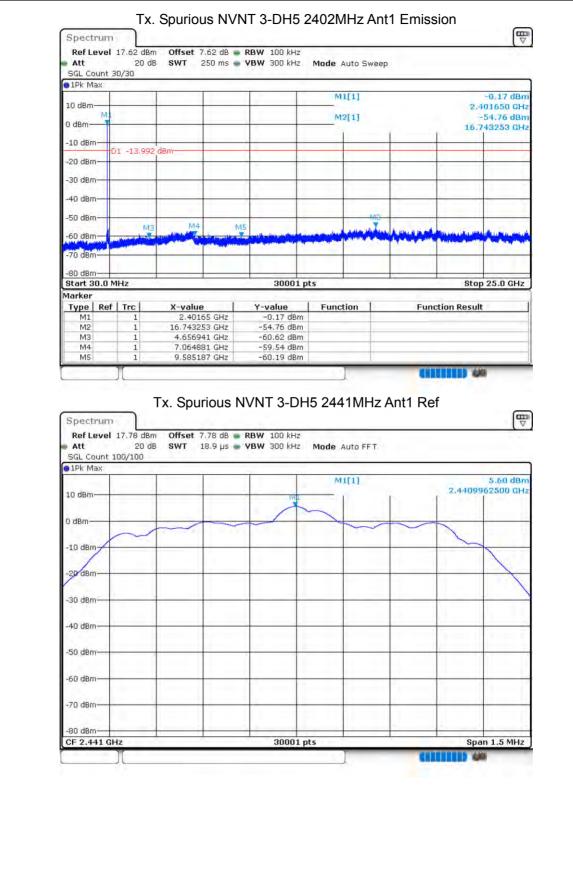




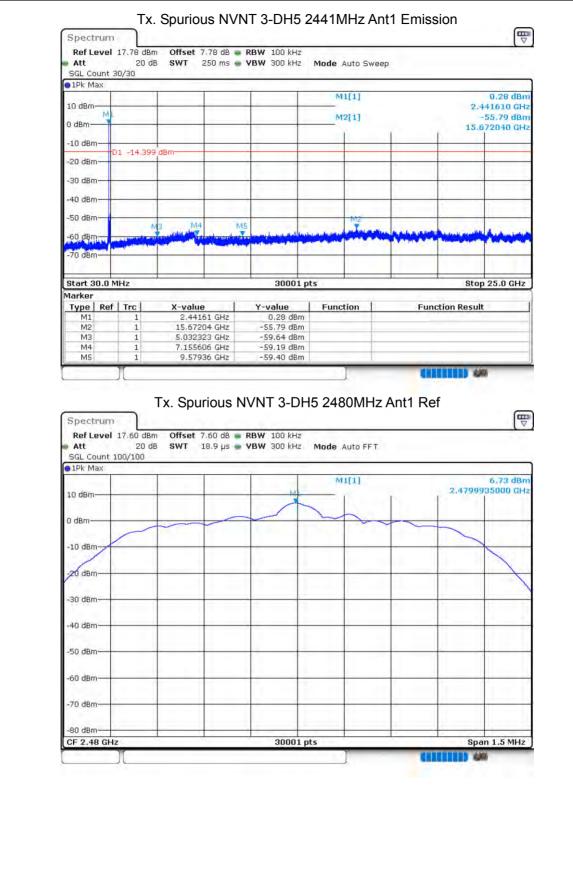




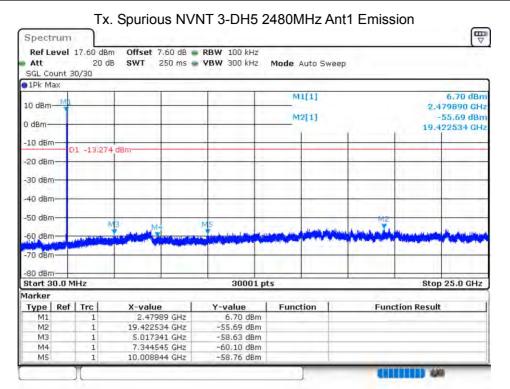












END OF REPORT