

RADIO TEST REPORT FCC ID: HBOWT2028

Product:	Rugged Speaker	
Trade Mark:	onn.	
Model No.:	AAAGRY100006896	
Family Model:	N/A	
Report No.:	S20122201702001	
Issue Date:	08 Jan. 2021	

Prepared for

SHENZHEN FENDA TECHNOLOGY CO., LTD.

Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China

Prepared by

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1 TEST RESULT CERTIFICATION

Applicant's name	SHENZHEN FENDA TECHNOLOGY CO., LTD.	
Address	Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China	
Manufacturer's Name	SHENZHEN FENDA TECHNOLOGY CO., LTD.	
Address	Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China	
Product description		
Product name:	Rugged Speaker	
Model and/or type reference:	AAAGRY100006896	
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	:	22 Dec. 2020 ~08 Jan, 2021
Testing Engineer	:	prany. Hu
		(Mary Hu)
Technical Manager	:	(Jason Chen)
		(Jason Chen)
		Here
Authorized Signatory	:	(Alex Li)
		× ,

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2 SUMMARY OF TEST RESULTS

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:

1. "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 Laboratory has been assessed and proved to be in compliance with
	CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)
	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
	This laboratory is accredited in accordance with the recognized
	International Standard ISO/IEC 17025:2005 General requirements for
	the competence of testing and calibration laboratories.
	This accreditation demonstrates technical competence for a defined
	scope and the operation of a laboratory quality management system
	(refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).
Name of Firm	: Shenzhen NTEK Testing Technology Co., Ltd.
Site Location	: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang
	Street, Bao'an District, Shenzhen 518126 P.R. China.

3.3 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Conducted Emission Test	±2.80dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(9KHz~30MHz)	±6dB
5	All emissions, radiated(30MHz~1GHz)	±2.64dB
6	All emissions, radiated(1GHz~6GHz)	±2.40dB
7	All emissions, radiated(>6GHz)	±2.52dB
8	Temperature	±0.5°C
9	Humidity	±2%

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4 GENERAL DESCRIPTION OF EUT

Product Feature and Specification		
Equipment	Rugged Speaker	
Trade Mark	onn.	
FCC ID	HBOWT2028	
Model No.	AAAGRY100006896	
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	PCB Antenna	
Antenna Gain	1.5 dBi	
Power supply	DC supply: DC 7.4V from battery or DC 5V from USB port	
	Adapter supply:	
HW Version	N/A	
Firmware version	N/A	
SW Version	N/A	

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Note: 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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Certificate #4298.01

Report No.	Version	Description	Issued Date
S20122201702001	Rev.01	Initial issue of report	08 Jan, 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 π /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 3Mbps 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 ELIT is programmed to	be in continuous transmission mode, the nower level is the software			

Note: The EUT is programmed to be in continuous transmission mode, the power level is the software default value.

6 SETUP OF EQUIPMENT		
6.1 BLOCK DIAGRAM CONFIGUR For AC Conducted Emission Mode	ATION OF TEST SYSTEM	
EUT	AC PLUG	
For Radiated Test Cases		
	AC PLUG	
EUT		
For Conducted Test Cases		
Measurement C-1	-	
Instrument EU		
Note: 1. The temporary antenna con	nector is soldered on the PCB boar	rd in order to perform conducted tests
and this temporary antenna connector 2.EUT built-in battery-powered, t	he battery is fully-charged.	



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	Mfr/Brand	Model/Type No.	Series No.	Note

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	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

		cor equipment					
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibrati on period
1	Spectrum Analyzer	Aglient	E4407B	MY45108040	2020.05.11	2021.05.10	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2020.07.13	2021.07.12	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2020.07.13	2021.07.12	1 year
4	Test Receiver	R&S	ESPI7	101318	2020.05.11	2021.05.10	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2020.04.11	2021.04.10	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
7	Horn Antenna	EM	EM-AH-1018 0	2011071402	2020.04.11	2021.04.10	1 year
8	Broadband Horn Antenna	SCHWARZBE CK	BBHA 9170	803	2020.11.19	2021.11.18	1 year
9	Amplifier	EMC	EMC051835 SE	980246	2020.07.13	2021.07.12	1 year
10	Active Loop Antenna	SCHWARZBE CK	FMZB 1519 B	055	2020.11.19	2021.11.18	1 year
11	Power Meter	DARE	RPR3006W	15I00041SN 084	2020.07.13	2021.07.12	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2019.08.6	2022.08.05	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2019.08.6	2022.08.05	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2019.06.28	2022.06.27	3 year
15	High Test Cable(1G-40G Hz)	N/A	R-04	N/A	2020.04.11	2021.04.10	1 year
16	Filter	TRILTHIC	2400MHz	29	2020.07.13	2021.07.12	1 year
17	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

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 Co	AC Conduction Test equipment							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period	
1	Test Receiver	R&S	ESCI	101160	2020.05.11	2021.05.10	1 year	
2	LISN	R&S	ENV216	101313	2020.04.11	2021.04.10	1 year	
3	LISN	SCHWARZBE CK	NNLK 8129	8129245	2020.05.11	2021.05.10	1 year	
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2020.05.11	2023.05.10	3 year	
5	Test Cable (9KHz-30MH z)	N/A	C01	N/A	2020.05.11	2023.05.10	3 year	
6	Test Cable (9KHz-30MH z)	N/A	C02	N/A	2020.05.11	2023.05.10	3 year	
7	Test Cable (9KHz-30MH z)	N/A	C03	N/A	2020.05.11	2021.05.10	3 year	

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.

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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

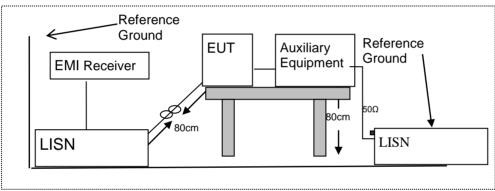
Frequency (MHz)	Conducted Emission Limit			
Frequency(MHz)	Quasi-peak	Average		
0.15-0.5	66-56*	56-46*		
0.5-5.0	56	46		
5.0-30.0	60	50		

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



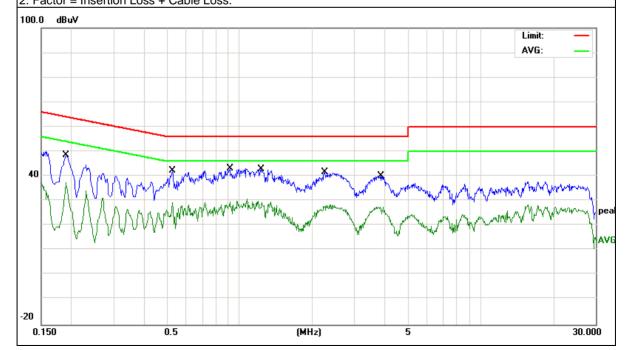
7.1.6 Test Results

EUT:	Rugged Speaker	Model Name :	AAAGRY100006896
Temperature:	21 ℃	Relative Humidity:	57%
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	Demente
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1900	39.11	9.55	48.66	64.03	-15.37	QP
0.1900	27.92	9.55	37.47	54.03	-16.56	AVG
0.5260	32.76	9.55	42.31	56.00	-13.69	QP
0.5260	19.40	9.55	28.95	46.00	-17.05	AVG
0.9100	33.64	9.56	43.20	56.00	-12.80	QP
0.9100	20.35	9.56	29.91	46.00	-16.09	AVG
1.2257	33.28	9.56	42.84	56.00	-13.16	QP
1.2257	20.48	9.56	30.04	46.00	-15.96	AVG
2.2580	32.07	9.58	41.65	56.00	-14.35	QP
2.2580	18.76	9.58	28.34	46.00	-17.66	AVG
3.8780	30.47	9.60	40.07	56.00	-15.93	QP
3.8780	18.03	9.60	27.63	46.00	-18.37	AVG

Remark:

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





EUT:	Rugged Speaker	Model Name :	AAAGRY100006 896
Temperature:	21 ℃	Relative Humidity:	57%
Pressure:	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC 120V/60Hz	Test Mode:	Mode 1

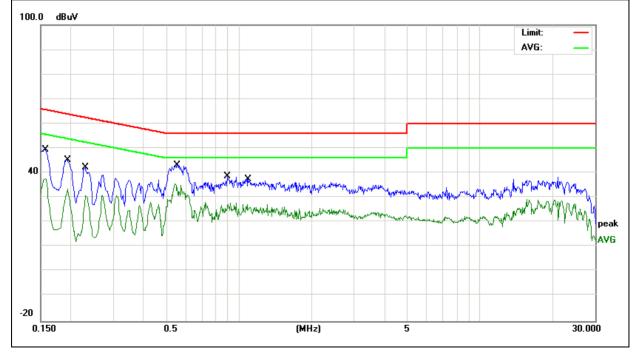
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Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
. ,				(ασμν)		
0.1580	39.91	9.55	49.46	65.56	-16.10	QP
0.1580	28.27	9.55	37.82	55.56	-17.74	AVG
0.1940	35.83	9.54	45.37	63.86	-18.49	QP
0.1940	24.01	9.54	33.55	53.86	-20.31	AVG
0.2300	32.74	9.54	42.28	62.45	-20.17	QP
0.2300	21.27	9.54	30.81	52.45	-21.64	AVG
0.5540	33.76	9.54	43.30	56.00	-12.70	QP
0.5540	26.21	9.54	35.75	46.00	-10.25	AVG
0.8900	29.09	9.54	38.63	56.00	-17.37	QP
0.8900	18.44	9.54	27.98	46.00	-18.02	AVG
1.0900	28.01	9.55	37.56	56.00	-18.44	QP
1.0900	17.63	9.55	27.18	46.00	-18.82	AVG

Remark:

All readings are Quasi-Peak and Average values.
 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

According to 1 CC 1 artis.200, restricted bands								
MHz	MHz	MHz	GHz					
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15					
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46					
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75					
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5					
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2					
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5					
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7					
6.26775-6.26825	123-138	2200-2300	14.47-14.5					
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2					
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4					
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12					
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0					
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8					
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5					
12.57675-12.57725	322-335.4	3600-4400	(2)					
13.36-13.41								

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

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

Limits of Radiated Emission Measurement(Above 1000MHz)

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

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

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

3. For Frequency 9kHz~30MHz:

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

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

For Frequency above 30MHz:

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

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



7.2.3 Measuring Instruments

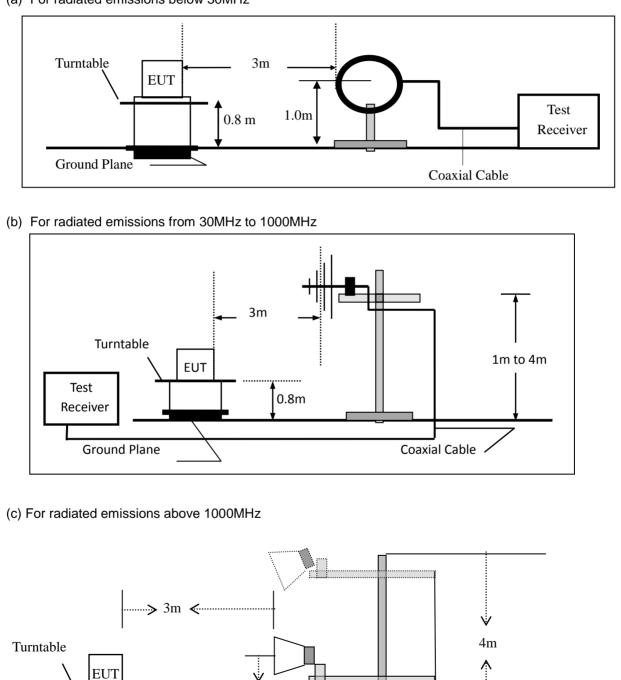
The Measuring equipment is listed in the section 6.3 of this test report.

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7.2.4 Test Configuration

(a) For radiated emissions below 30MHz



1.5m

A

1.5m

Test Receiver

<u>Amplifi</u>e



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:

<u></u>							
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 to	During the radiated emission test, the Spectrum Analyzer was set with the following configurations:									
Frequency Band (MHz)	Function Resolution bandwidth		Video Bandwidth							
30 to 1000	QP	120 kHz	300 kHz							
Above 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.

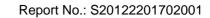
7.2.6 Test Results

■ Spurious Emission below 30MHz (9KHz to 30MHz)

EUT:	Rugged Speaker	Model No.:	AAAGRY100006896
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Mary Hu

Freq.	Ant.Pol.	Emission Level(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:	Rugged Speaker	Model Name :	AAAGRY100006896
Temperature:	25 ℃	Relative Humidity:	56%
Pressure:	1010hPa	Test Mode:	Mode 1
Test Voltage :	DC 7.4V from battery		

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	33.3278	12.30	17.48	29.78	40.00	-10.22	QP
V	154.2786	26.51	11.72	38.23	43.50	-5.27	QP
V	182.5592	19.57	9.86	29.43	43.50	-14.07	QP
V	260.1444	15.47	14.96	30.43	46.00	-15.57	QP
V	356.6758	18.84	16.16	35.00	46.00	-11.00	QP
V	490.7447	13.29	19.79	33.08	46.00	-12.92	QP

Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level - Limit







Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Н	155.3644	23.57	11.61	35.18	43.50	-8.32	QP
Н	357.9287	20.28	16.20	36.48	46.00	-9.52	QP
Н	431.0316	16.27	18.32	34.59	46.00	-11.41	QP
Н	607.7867	8.16	21.88	30.04	46.00	-15.96	QP
Н	742.2586	7.90	25.06	32.96	46.00	-13.04	QP
Н	863.0561	7.71	25.94	33.65	46.00	-12.35	QP
						Margin:	
32	Manager and a second se				And the second s	**************************************	6.4
-8							



EUT:		Rugged Sp	eaker	Mo	del No.:		AAA	GRY1000	06896	
Temperatur	emperature: 20 °C			Rel	Relative Humidity:					
Test Mode:	1	Mode2/Mod	de3/Mode4	Tes	t By:	Mary Hu				
All the modu	ulation m	nodes have	been teste	ed, and the	ne worst rest	ult was	repo	rt as belo	W:	
Frequency	Read Level	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limi	its	Margin	Remark	Comment
(MHz)	(dBµV)) (dB)	dB/m	(dB)	(dBµV/m)	(dBµ∖	//m)	(dB)		
		•	Low Chan	nel (2402	MHz)(8-DPS	SK)Ab	ove 1	G		
4804.15	63.12	5.21	35.59	44.30	59.62	74.0	00	-14.38	Pk	Vertical
4804.15	43.62	5.21	35.59	44.30	40.12	54.0	00	-13.88	AV	Vertical
7206.16	64.77	6.48	36.27	44.60	62.92	74.0	00	-11.08	Pk	Vertical
7206.16	42.86	6.48	36.27	44.60	41.01	54.0	00	-12.99	AV	Vertical
4804.94	63.35	5.21	35.55	44.30	59.81	74.0	00	-14.19	Pk	Horizontal
4804.94	41.59	5.21	35.55	44.30	38.05	54.0	00	-15.95	AV	Horizontal
7206.44	61.36	6.48	36.27	44.52	59.59	74.00		-14.41	Pk	Horizontal
7206.44	40.57	6.48	36.27	44.52	38.80	54.0	00	-15.20	AV	Horizontal
			Mid Chan	nel (2441	MHz)(8-DPS	K)Abo	ove 1	G		
4882.27	66.16	5.21	35.66	44.20	62.83	74.0	00	-11.17	Pk	Vertical
4882.27	43.07	5.21	35.66	44.20	39.74	54.0	00	-14.26	AV	Vertical
7323.36	62.58	7.10	36.50	44.43	61.75	74.0	00	-12.25	Pk	Vertical
7323.36	43.48	7.10	36.50	44.43	42.65	54.0	00	-11.35	AV	Vertical
4882.80	60.63	5.21	35.66	44.20	57.30	74.0	00	-16.70	Pk	Horizontal
4882.80	42.56	5.21	35.66	44.20	39.23	54.0	00	-14.77	AV	Horizontal
7324.59	59.09	7.10	36.50	44.43	58.26	74.0	00	-15.74	Pk	Horizontal
7324.59	41.26	7.10	36.50	44.43	40.43	54.0		-13.57	AV	Horizontal
		1	High Chan		MHz)(8-DPS	SK) Ab	ove 1		[
4959.29	64.09	5.21	35.52	44.21	60.61	74.0	00	-13.39	Pk	Vertical
4959.29	43.57	5.21	35.52	44.21	40.09	54.0	00	-13.91	AV	Vertical
7439.45	62.62	7.10	36.53	44.60	61.65	74.0	00	-12.35	Pk	Vertical
7439.45	42.24	7.10	36.53	44.60	41.27	54.0	00	-12.73	AV	Vertical
4960.41	64.89	5.21	35.52	44.21	61.41	74.0	00	-12.59	Pk	Horizontal
4960.41	43.02	5.21	35.52	44.21	39.54	54.0	00	-14.46	AV	Horizontal
7440.14	62.54	7.10	36.53	44.60	61.57	74.0	00	-12.43	Pk	Horizontal
7440.14	41.28	7.10	36.53	44.60	40.31	54.0	00	-13.69	AV	Horizontal

Note:

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



Report No.: S20122201702001

Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz										
EUT:	Rugged	Speake	r	Мо	del No.:		AAA	GRY100	006896	
Temperature	2 0 ℃				Relative Humidity: 4		48%			
Test Mode:					st By:	-	Mary	 v Hu		
	Il the modulation modes have been tested, a								elow:	
Frequency	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limit	s	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV/	/m)	(dB)	Туре	
			1	Mbps(8-D	PSK)-Non-h	opping				
2310.00	52.64	2.97	27.80	43.80	39.61	74		-34.39	Pk	Horizontal
2310.00	41.20	2.97	27.80	43.80	28.17	54		-25.83	AV	Horizontal
2310.00	51.68	2.97	27.80	43.80	38.65	74		-35.35	Pk	Vertical
2310.00	40.14	2.97	27.80	43.80	27.11	54		-26.89	AV	Vertical
2390.00	50.87	3.14	27.21	43.80	37.42	74		-36.58	Pk	Vertical
2390.00	42.46	3.14	27.21	43.80	29.01	54		-24.99	AV	Vertical
2390.00	53.34	3.14	27.21	43.80	39.89	74		-34.11	Pk	Horizontal
2390.00	44.88	3.14	27.21	43.80	31.43	54		-22.57	AV	Horizontal
2483.50	51.52	3.58	27.70	44.00	38.80	74		-35.20	Pk	Vertical
2483.50	40.78	3.58	27.70	44.00	28.06	54		-25.94	AV	Vertical
2483.50	51.38	3.58	27.70	44.00	38.66	74		-35.34	Pk	Horizontal
2483.50	42.52	3.58	27.70	44.00	29.80	54		-24.20	AV	Horizontal
				1Mbps(8	-DPSK)-hop	ping				
2310.00	50.28	2.97	27.80	43.80	37.25	74		-36.75	Pk	Vertical
2310.00	41.22	2.97	27.80	43.80	28.19	54		-25.81	AV	Vertical
2310.00	53.32	2.97	27.80	43.80	40.29	74		-33.71	Pk	Horizontal
2310.00	42.01	2.97	27.80	43.80	28.98	54		-25.02	AV	Horizontal
2390.00	53.92	3.14	27.21	43.80	40.47	74		-33.53	Pk	Vertical
2390.00	41.89	3.14	27.21	43.80	28.44	54		-25.56	AV	Vertical
2390.00	51.41	3.14	27.21	43.80	37.96	74		-36.04	Pk	Horizontal
2390.00	42.83	3.14	27.21	43.80	29.38	54		-24.62	AV	Horizontal
2483.50	50.72	3.58	27.70	44.00	38.00	74		-36.00	Pk	Vertical
2483.50	41.65	3.58	27.70	44.00	28.93	54		-25.07	AV	Vertical
2483.50	53.78	3.58	27.70	44.00	41.06	74		-32.94	Pk	Horizontal
2483.50	40.76	3.58	27.70	44.00	28.04	54		-25.96	AV	Horizontal

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Certificate #4298.01

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



Spurious Emission in Restricted Band 3260MHz-18000MHz										
EUT:	F	Rugged Speaker		Мо	Model No.:		AAAGRY100006896			
Temperature: 20 °C				Relative Humidity:		y: 48%	48%			
Test Mode:	Ν	lode2/ Mo	de4	Te	Test By:		Mary Hu			
All the mod	lulation n	nodes hav	e been tes	ted, and	the worst resu	ult was re	port as belo	W:		
Frequency	Reading Level			Preamp Factor		Limits	Margin	Detector	Comment	
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV/m	ı) (dB)	Туре		
3260	59.99	4.04	29.57	44.70	48.90	74	-25.10	Pk	Vertical	
3260	45.38	4.04	29.57	44.70	34.29	54	-19.71	AV	Vertical	
3260	53.24	4.04	29.57	44.70	42.15	74	-31.85	Pk	Horizontal	
3260	45.71	4.04	29.57	44.70	34.62	54	-19.38	AV	Horizontal	
3332	61.14	4.26	29.87	44.40	50.87	74	-23.13	Pk	Vertical	
3332	45.49	4.26	29.87	44.40	35.22	54	-18.78	AV	Vertical	
3332	61.01	4.26	29.87	44.40	50.74	74	-23.26	Pk	Horizontal	
3332	46.84	4.26	29.87	44.40	36.57	54	-17.43	AV	Horizontal	
17797	48.85	10.99	43.95	43.50	60.29	74	-13.71	Pk	Vertical	
17797	35.30	10.99	43.95	43.50	46.74	54	-7.26	AV	Vertical	
17788	53.72	11.81	43.69	44.60	64.62	74	-9.38	Pk	Horizontal	
17788	37.27	11.81	43.69	44.60	48.17	54	-5.83	AV	Horizontal	

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Certificate #4298.01

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:	Rugged Speaker	Model No.:	AAAGRY100006896
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode 5(1Mbps)	Test By:	Mary Hu



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:	Rugged Speaker	Model No.:	AAAGRY100006896
Temperature:	20 ℃	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:	EUT: Rugged Speaker		AAAGRY100006896
Temperature:	20 ℃	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 (0.4×79) (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:	Rugged Speaker	Model No.:	AAAGRY100006896
Temperature:	20 ℃	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

 $VBW \ge RBW$

Sweep = auto

Detector function = peak Trace = max hold

7.7.6 Test Results

EUT:	Rugged Speaker	Model No.:	AAAGRY100006896	
Temperature:	20 ℃	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:	Rugged Speaker	Model No.:	AAAGRY100006896
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

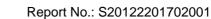
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

7.10.2 Result

The EUT antenna is permanent attached PCB antenna (Gain: 1.5dBi). 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.



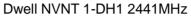
8 TEST RESULTS

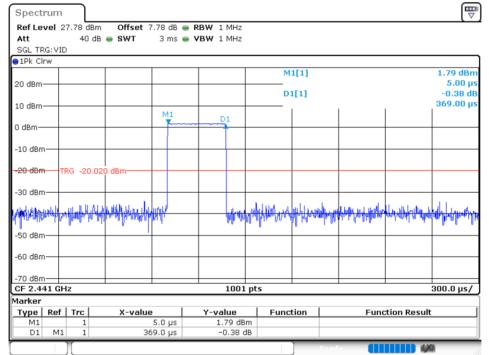
8.1 **DWELL TIME**

-									
	Condition	Mode	Frequency	Pulse	Total Dwell	Period	Limit	Verdict	
			(MHz)	Time (ms)	Time (ms)	Time (ms)	(ms)		
	NVNT	1-DH1	2441	0.369	118.08	31600	400	Pass	
	NVNT	1-DH3	2441	1.62	259.2	31600	400	Pass	
	NVNT	1-DH5	2441	2.872	306.347	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	1.62	259.2	31600	400	Pass	
	NVNT	3-DH5	2441	2.872	306.347	31600	400	Pass	

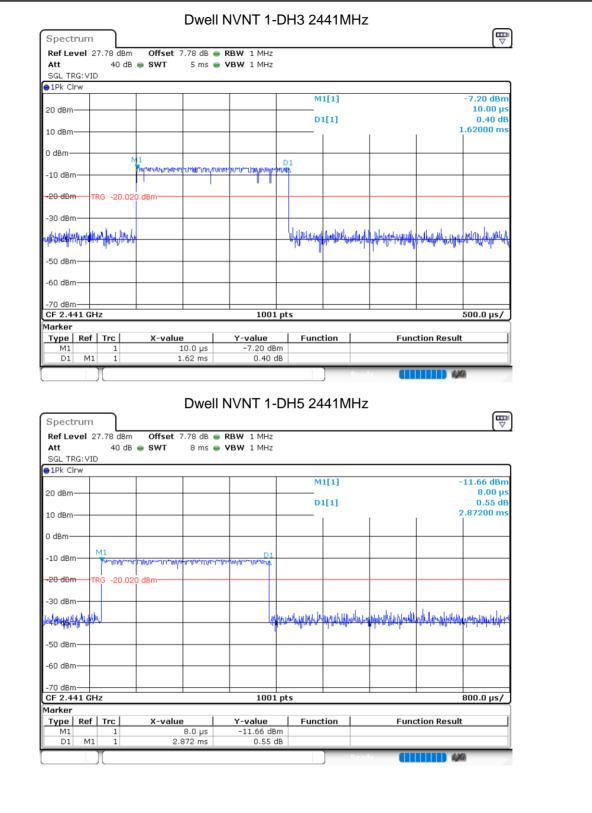
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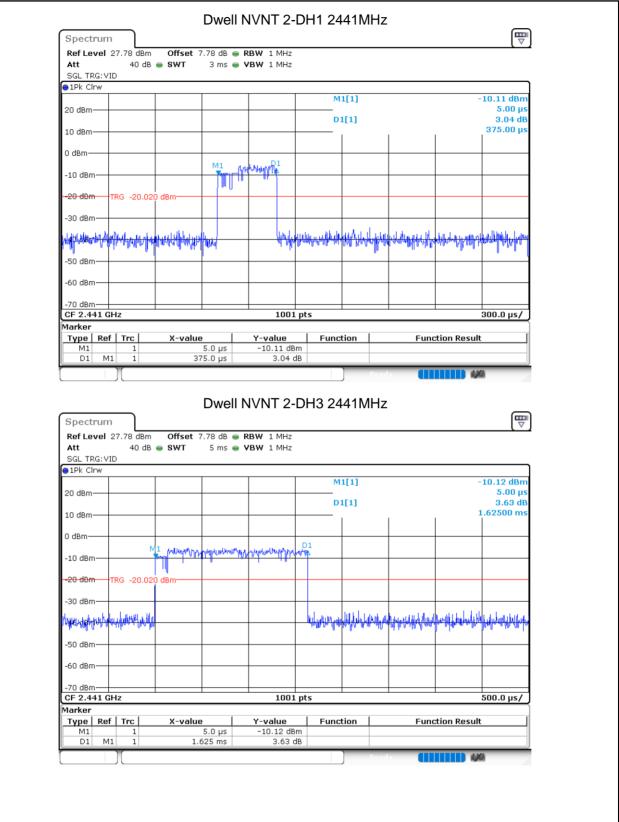




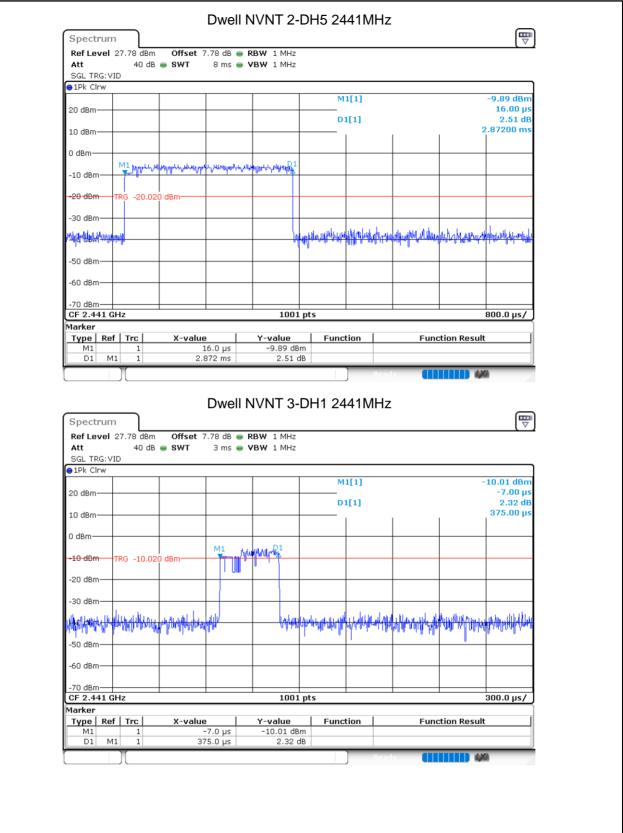




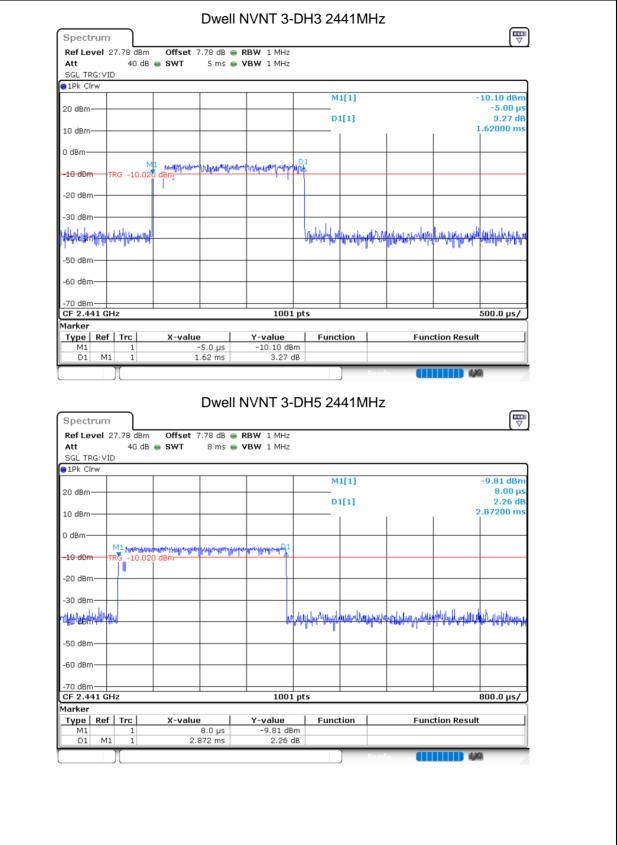














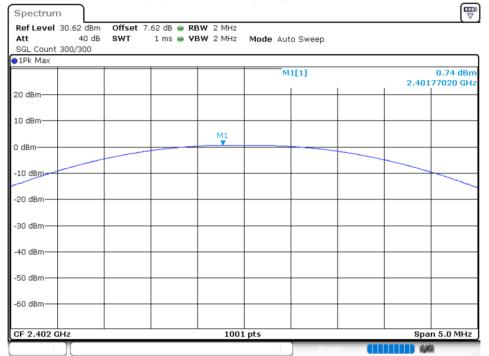
8.2 MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant 1	0.74	30	Pass
NVNT	1-DH5	2441	Ant 1	0.95	30	Pass
NVNT	1-DH5	2480	Ant 1	1.43	30	Pass
NVNT	2-DH5	2402	Ant 1	2.60	20.97	Pass
NVNT	2-DH5	2441	Ant 1	3.32	20.97	Pass
NVNT	2-DH5	2480	Ant 1	3.81	20.97	Pass
NVNT	3-DH5	2402	Ant 1	3.13	20.97	Pass
NVNT	3-DH5	2441	Ant 1	3.98	20.97	Pass
NVNT	3-DH5	2480	Ant 1	4.37	20.97	Pass

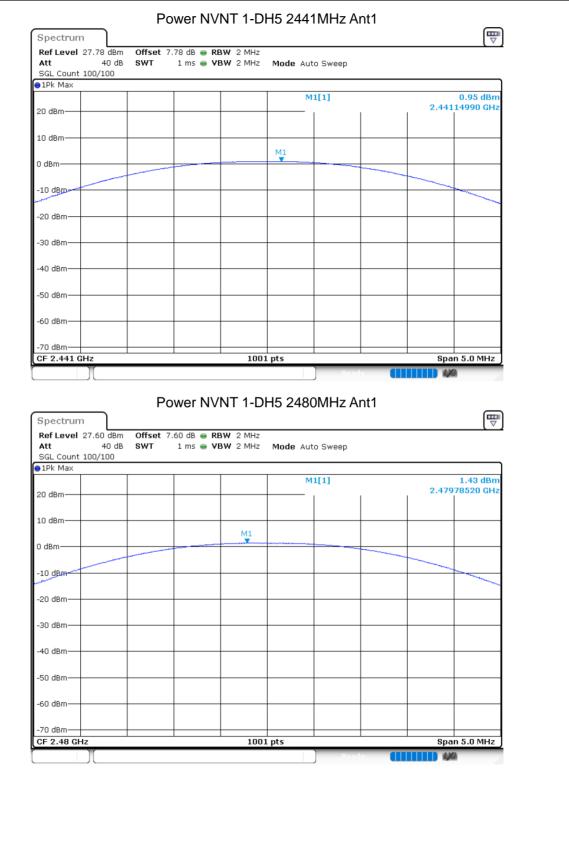
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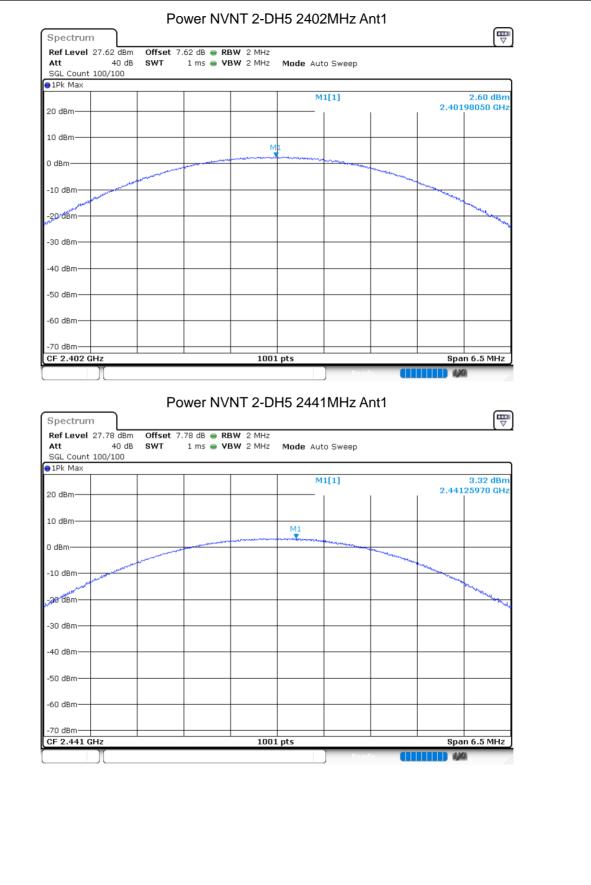
Power NVNT 1-DH5 2402MHz Ant1



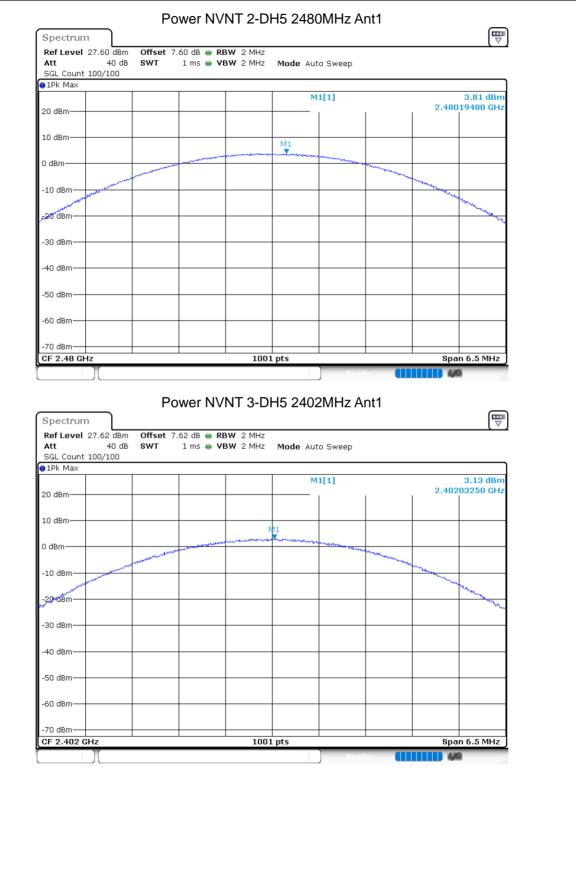




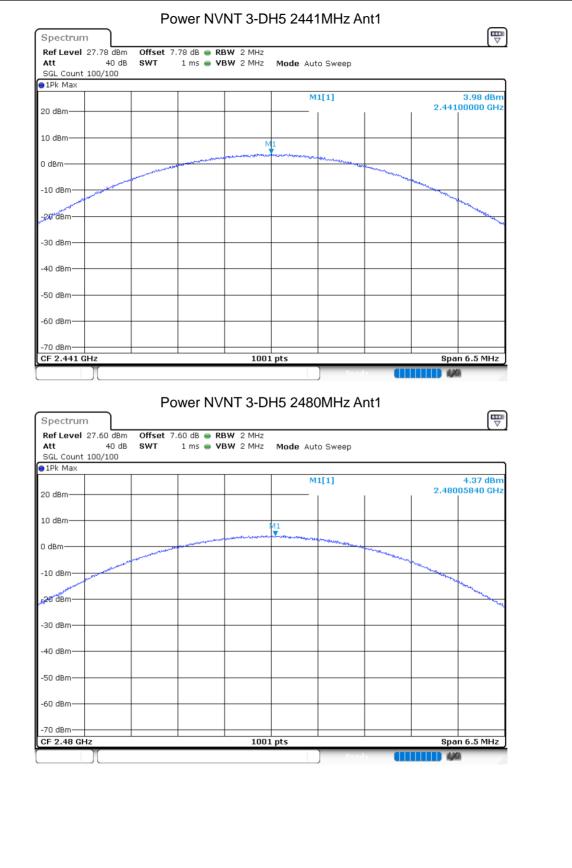














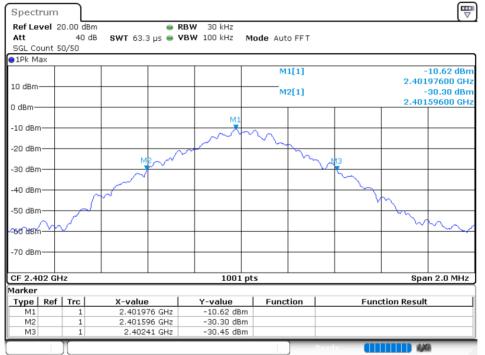
8.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant 1	0.814	Pass
NVNT	1-DH5	2441	Ant 1	0.862	Pass
NVNT	1-DH5	2480	Ant 1	0.862	Pass
NVNT	2-DH5	2402	Ant 1	1.318	Pass
NVNT	2-DH5	2441	Ant 1	1.316	Pass
NVNT	2-DH5	2480	Ant 1	1.314	Pass
NVNT	3-DH5	2402	Ant 1	1.3	Pass
NVNT	3-DH5	2441	Ant 1	1.3	Pass
NVNT	3-DH5	2480	Ant 1	1.296	Pass

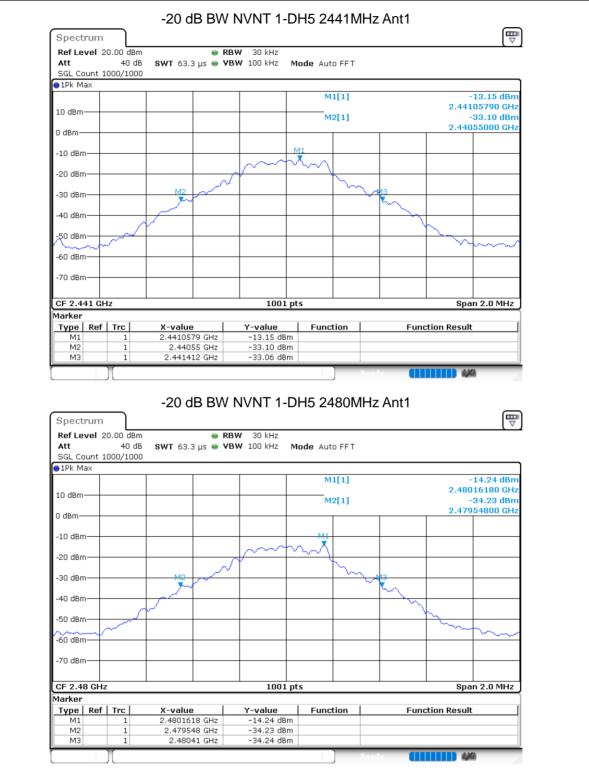
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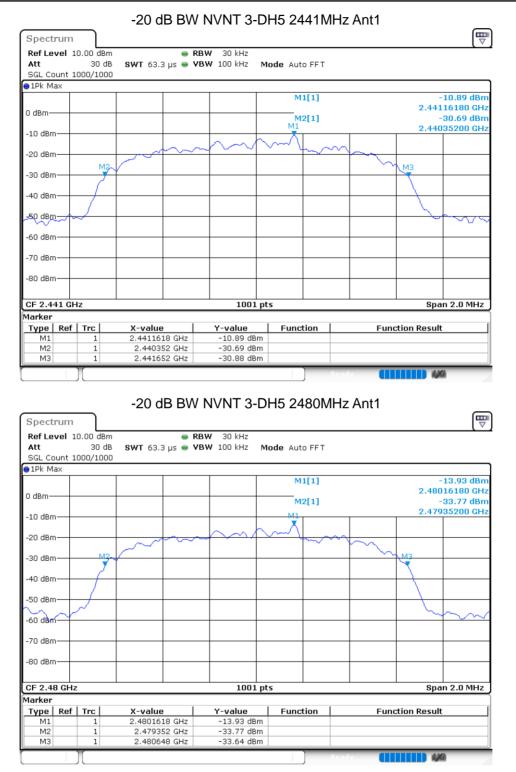














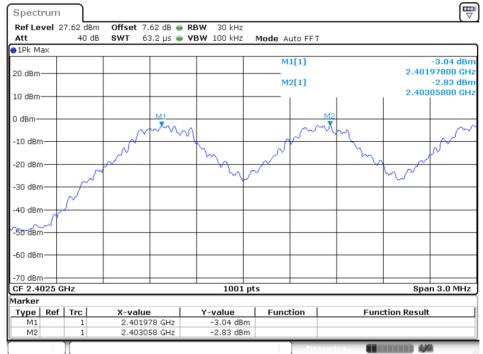
8.4 CARRIER FREQUENCIES SEPARATION

orr oracial	INEQUEI					
Condition	Mode	Hopping Freq1	Hopping Freq2	HFS	Limit	Verdict
		(MHz)	(MHz)	(MHz)	(MHz)	
NVNT	1-DH5	2401.978	2403.058	1.08	0.814	Pass
NVNT	1-DH5	2441.161	2442.163	1.002	0.862	Pass
NVNT	1-DH5	2479.056	2480.058	1.002	0.862	Pass
NVNT	2-DH5	2402.164	2403.163	0.999	0.879	Pass
NVNT	2-DH5	2441.164	2442.163	0.999	0.877	Pass
NVNT	2-DH5	2479.167	2480.163	0.996	0.876	Pass
NVNT	3-DH5	2402.164	2403.163	0.999	0.867	Pass
NVNT	3-DH5	2441.161	2442.163	1.002	0.867	Pass
NVNT	3-DH5	2479.161	2480.163	1.002	0.864	Pass

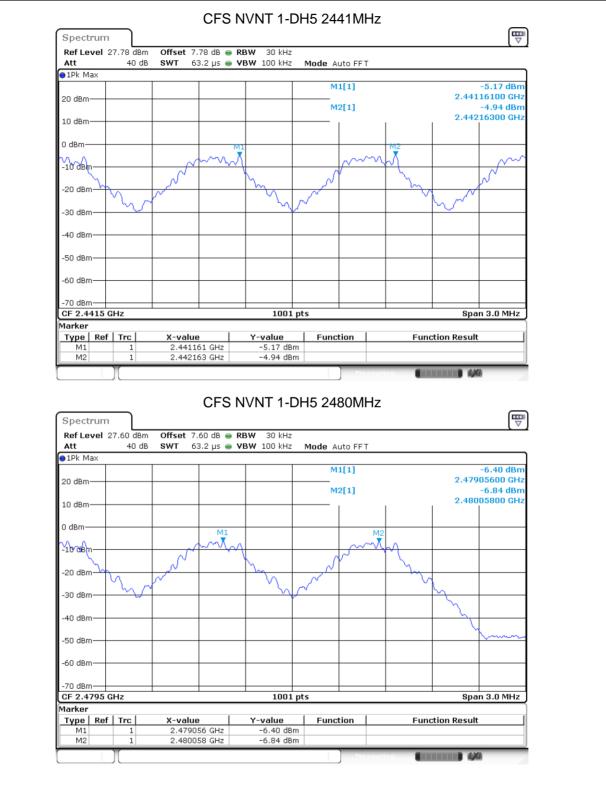
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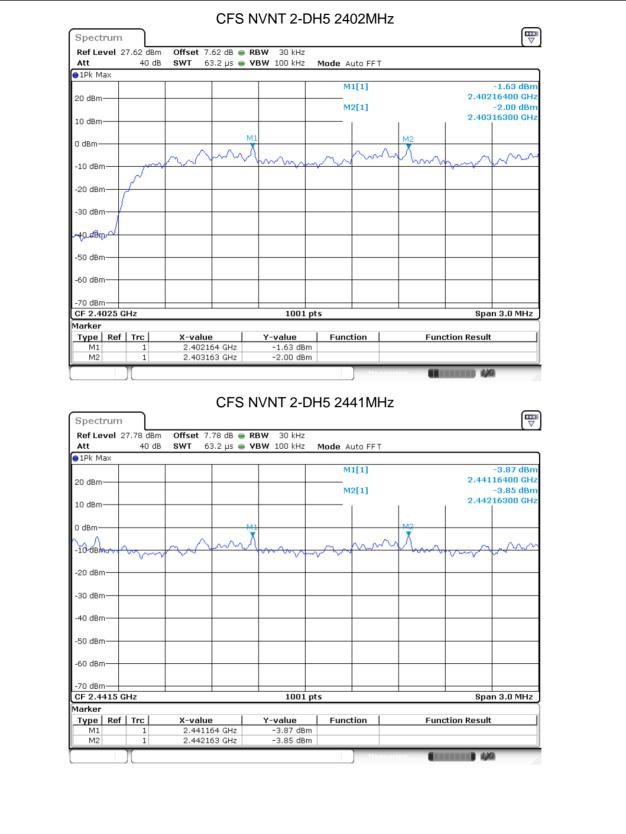
CFS NVNT 1-DH5 2402MHz







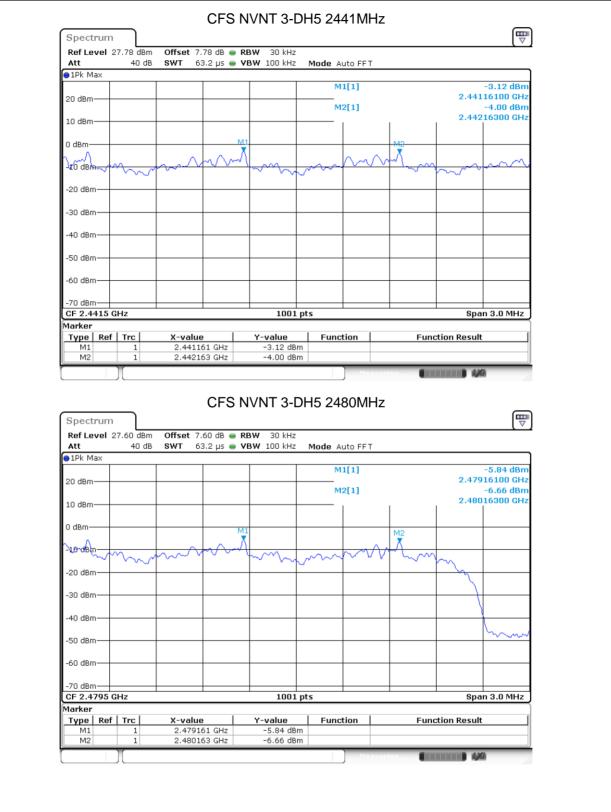














8.5 NUMBER OF HOPPING CHANNEL Condition Mode Hopping Number Limit Verdict NVNT 1-DH5 15 Pass 79 Hopping No. NVNT 1-DH5 2402MHz ₽ Spectrum Offset 7.62 dB 🔵 RBW 100 kHz Ref Level 27.62 dBm 1 ms 🖷 VBW 300 kHz Att 40 dB SWT Mode Auto Sweep SGL Count 5000/5000 ⊖1Pk Max M1[1] -0.54 dBn 20 dBm 2.4019205 GHz -5.00 dBm 2.4802435 GHz M2[1] 10 dBm м1 0 🖬 Br 0088080 0.0008.0 NAAAAAA 80808 11111 AABAAA 30 dBm 40 dBm -50 dBm--60 dBm -70 dBm 1001 pts Stop 2.4835 GHz Start 2.4 GHz Marker Type | Ref | Trc | Y-value Function Function Result X-value 2.4019205 GHz -0.54 dBm M1 1 M2 1 2.4802435 GHz -5.00 dBm 4,4

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8.6 BAND EDGE

0.0 DANDEL							
Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH5	2402	Ant 1	No-Hopping	-41.47	-20	Pass
NVNT	1-DH5	2402	Ant 1	Hopping	-40.46	-20	Pass
NVNT	1-DH5	2480	Ant 1	No-Hopping	-43.05	-20	Pass
NVNT	1-DH5	2480	Ant 1	Hopping	-38.34	-20	Pass
NVNT	2-DH5	2402	Ant 1	No-Hopping	-40.17	-20	Pass
NVNT	2-DH5	2402	Ant 1	Hopping	-41.23	-20	Pass
NVNT	2-DH5	2480	Ant 1	No-Hopping	-42.19	-20	Pass
NVNT	2-DH5	2480	Ant 1	Hopping	-38.66	-20	Pass
NVNT	3-DH5	2402	Ant 1	No-Hopping	-39.44	-20	Pass
NVNT	3-DH5	2402	Ant 1	Hopping	-41.21	-20	Pass
NVNT	3-DH5	2480	Ant 1	No-Hopping	-42.68	-20	Pass
NVNT	3-DH5	2480	Ant 1	Hopping	-39.12	-20	Pass

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

SWT 18.9 µs (● VBW 500 kHz	Mode A	uto FFT			
		M	1[1]		2.401	0.08 dBn 82420 GH
	M1					
		7				
		- <u></u>				
		$\sum_{i=1}^{n}$				
0.0.0.00	~		\sim			n
			~~~	www.w	-~~~~~	
			M1 M1 M1 M1 M1 M1 M1 M1 M1 M1 M1 M1 M1 M			



Att SGL Co	unt 1	7.62 dB 40 d 00/100			RBW 100 kHz VBW 500 kHz	Mode Auto F	FΤ		
20 dBm-						M1[1]		2.40	-0.46 dBm 0195000 GHz
						M2[1]			-45.32 dBm
10 dBm-								2.40	000000 GHz M1
0 dBm—									
-10 dBm									
-20 dBm	D	1 -19.9	l9 dBm						
-30 dBm	-			M4					
-40 dBm		data and de	marker would an		why when the man	white and harme	-vurlignameterius	1V13 hadeletede Theorem	Marin Will June
-50 dBm			- A & A MANAGE	Par I		one of a constrainty down on a	- Contraction of the Contraction of the Di-		
-60 dBm	-								+
-70 dBm Start 2		0112			1001 m			Etor	2.406 GHz
Marker	.300	GHZ			1001 p			3101	J 2.400 GH2
Туре	Ref		X-valu		Y-value	Function	Fu	nction Resu	lt
M1 M2		1		L95 GHz 2.4 GHz	-0.46 dBm -45.32 dBm				
M3		1		.39 GHz	-45.77 dBm				
		1	2.34	109 GHz	-41.40 dBm				
-	rum		dge(Hop			15 2402MI	Ready	opping F	Ref
Specti Ref Lev Att	rum vel 2	nd E 7.62 dB 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	RBW 100 kHz	15 2402MI		opping F	
Specti Ref Lev Att SGL Co	rum <b>vel</b> 2 unt 8	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF		opping F	
Spectr Ref Lev Att SGL Co 1Pk Ma	rum <b>vel</b> 2 unt 8	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz				
Spectr Ref Lev Att SGL Co 1Pk Ma	rum <b>vel</b> 2 unt 8	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF			-0.11 dBm
Specti Ref Lev Att SGL Co	rum <b>vel</b> 2 unt 8	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF			-0.11 dBm
Specti Ref Lev Att SGL Co 1Pk Ma 20 dBm-	rum <b>vel</b> 2 unt 8	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF			-0.11 dBm
Spectu Ref Lev Att SGL Co 1Pk Ma 20 dBm- 10 dBm-	rum vel 2 unt 8 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev Att SGL Co 1Pk Ma 20 dBm- 10 dBm-	rum vel 2 unt 8 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev Att SGL Co 1Pk Ma 20 dBm- 10 dBm-	rum vel 2' ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spects Ref Lev Att SGL Co 1Pk Ma 20 dBm- 10 dBm- 0 dBm- -10 dBm	rum 2 unt 8 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev Att SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm	rum 2 unt 8 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm		7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm -30 dBm		7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm -30 dBm -40 dBm -50 dBm	rum 8 vel 2 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm -30 dBm	rum 8 vel 2 ax	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm
Spectu Ref Lev SGL Co 1Pk Ma 20 dBm- 10 dBm- -10 dBm- -20 dBm -30 dBm -40 dBm -50 dBm	rum 80	7.62 dBi 40 d	dge(Hop m offset 7 B swr 1	.62 dB 👄 R	<b>RBW</b> 100 kHz	Mode Auto FF	т 		-0.11 dBm



SGL Count 1200/1200	Spectrun Ref Level					RBW 100 kH:					
9 JPK Max       0.21 dbn       0.21 dbn         20 dbn       0.405 39300 cH         10 dbn       0.21 dbn         2.40020000 CH      54.46 dbn         10 dbn       2.40020000 CH         20 dbn       0.2.111 dbn         20 dbn       0.2.0111 dbn         30 dbn       Mi         -0.0 dbn	Att SGL Count			<b>∦T</b> 22	7.5 µs 🧉	• <b>VBW</b> 300 kH:	z Mode /	Auto FFT			
20 dBm 22(1) 2.4000000 GH 10 dBm 22(1) 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.4000000 GH 2.400 GH 2.400 GH 2.400 GH 2.400 GH 2.400 GH 2.400 GH 30 dBm 44 40 dBm 44 41 2.4042 GH 44 79 dBm 44 41 2.387 GHz 44 79 dBm 44 41 2.3847 GHz 44 79 dBm 44 44 79 dBm 44 44 70 dBm	●1Pk Max	1200/1									
10 dbm     M2[1]     2.400000 cH       10 dbm     2.400000 cH     2.400000 cH       10 dbm     01 -20.111 dbm     0       -30 dbm     M4     0       -40 dbm     M4     0       -30 dbm     M4     0       -40 dbm     M4     0       -30 dbm     M4     0       -40 dbm     M4     0       -40 dbm     M4     0       -40 dbm     M4     0       -50 dbm     0     -0.21 dbm       -60 dbm     -0.21 dbm     Function Result       -70 dbm     -0.21 dbm     Function Result       -70 dbm     -0.21 dbm     Function Result       -70 dbm     1     2.40595 cH     -0.21 dbm       -70 dbm     1     2.40595 cH     -0.21 dbm       M1     1     2.40595 cH     -0.21 dbm       M3     1     2.387 cH2     -44.79 dbm       M4     1     2.3417 cH2     -40.57 dbm       M3     1     2.387 cH2     -44.79 dbm       M4     1     2.3417 cH2     -40.57 dbm       Spectrum     Stop 2.406 dbm     Stop 2.406 dH2       20 dbm     Offset 7.60 dbm     Offset 7.60 dbm     M1[1]       0 dbm     0     0	20 dBm—						М	1[1]		0.405	-0.21 dBm
10 dBm       2.4000000 CH         0 dBm       20 dBm         10 dBm       10 dBm         30 dBm       144         40 dBm       142         40 dBm       144         40 dBm       144         40 dBm       15         70 dBm       164         40 dBm       144         40 dBm       15         70 dBm       16         60 dBm       16         70 dBm       16         60 dBm       16         70 dBm       16         70 dBm       16         70 dBm       12         2.40595 GHz       1001 pts         Stort 2.306 GHz       1001 pts         Stort 2.306 GHz       -0.21 dBm         M2       1       2.4054 GHz         1       2.4054 GHz       -46.47 dBm         M3       1       2.387 GHz         M4       1.2.387 GHz       -46.47 dBm         M4       1.2.387 GHz       Mode Auto FFT         Spectrum       Stort 2.50 dBm       Offset 7.60 dB       RBW 100 kHz         Att       40 dB       9.9 BF       WBW 300 kHz       Mode Auto FFT         501 Gem							M	2[1]			
10 dm       01 -20.111 dbm       01 -20.111 dbm       01 -20.111 dbm         30 dbm       0 dbm       01 -20.111 dbm       01 -20.111 dbm         40 dbm       0 dbm       01 -20.111 dbm       01 -20.111 dbm         50 dbm       0 dbm       01 -20.111 dbm       01 -20.111 dbm         60 dbm       0 -20.201 dbm       01 -20.201 dbm       01 -20.201 dbm         50 dbm       1       2.40595 GHz       -0.21 dbm       Function Result         Mat       1       2.40595 GHz       -0.21 dbm       Function Result         Mat       1       2.40595 GHz       -0.21 dbm       Function Result         Mat       1       2.397 GHz       -44.79 dbm       Function Result         M4       1       2.397 GHz       -44.79 dbm       Function Result         Mat       1       2.397 GHz       -44.79 dbm       Function Result         Spectrum       C       C       C       C       C         Sol Count 100/100       SWT       18.9 µs       VBW 300 kHz       Mode Auto FFT       Sol Count 100/100         Sol Count 100/100       C       C       C       C       C         10 dbm       0 dbm       0 dbm       C       C       C <td>10 dBm</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>I</td> <td>I</td> <td>2.400</td> <td>00000 GHz</td>	10 dBm							I	I	2.400	00000 GHz
20 dBm       01 -20.111 dBm       M4       0       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       01       0	0 dBm										
30 dBm       M4	-10 dBm										
40 dBm       M4	-20 dBm	·D1 -20	.111 dBm								(M)
40 dBm       M4	-30 dBm										
So dBm         Stop 2.406 CHz           50 dBm         100 pts         Stop 2.406 CHz           70 dBm         1         2.40595 GHz         100 pts         Stop 2.406 CHz           70 dBm         1         2.40595 GHz         -0.21 dBm         Function Result         Function Result           M1         1         2.40595 GHz         -0.21 dBm         Function Result         Function Result           M2         1         2.40 GHz         -44.79 dBm         Function Result         Function Result           M3         1         2.347 GHz         -44.79 dBm         Function Result         Function Result           M4         1         2.3417 GHz         -44.79 dBm         Function Result         Function Result           M3         1         2.3417 GHz         -44.79 dBm         Function Result         Function Result           M4         1         2.3417 GHz         -40.57 dBm         Function Result         Function Result           Social Count Divide         M1         1         0.33 dBn         Function Result         Function Result           Social Count Divide         M11         0.33 dBn         Culture         Function Result         Function Result           20 dBm         10.9 gt SWT         18.9					M4						
50 dBm	-40 dBm	palications	Amount	muhun	man	munmunu	monomywhy	a befor work proces	men frame	H) They when the	M21
TO dBm       Stort 2.306 GHz       1001 pts       Stop 2.406 GHz         farker       Trc       X-value       Function       Function Result         M1       1       2.40595 GHz       -0.21 dBm       Function Result         M2       1       2.4 GHz       -45.46 dBm       Function Result         M3       1       2.387 GHz       -46.57 dBm       Function Result         M4       1       2.3417 GHz       -40.57 dBm       Function Result         M4       1       2.3417 GHz       -40.57 dBm       Function Result         M4       1       2.3417 GHz       -40.57 dBm       Function Result         M2       Offset 7.60 dB       RBW 100 kHz       Function Result       Function Result         SGL Count 100/100       Offset 7.60 dB       RBW 100 kHz       Mode Auto FFT       SGL Count 100/100         Pirk Max       0 dB       M1[1]       0.33 dBn       2.48014390 GHz         10 dBm       M1       M1       M1       M1       M1         0 dBm       M1       M1       M1       M1       M1         0 dBm       M1       M1       M1       M1       M1       M1         0 dBm       M1       M1       M	-50 dBm-			-				· ·			-
Stort 2.306 GHz         1001 pts         Stop 2.406 GHz           Type         Ref         Trc         X-value         Y-value         Function         Function Result           M2         1         2.40595 GHz         -0.21 dbm         Function         Function Result           M2         1         2.46 dbm         -0.21 dbm         Function         Function Result           M3         1         2.387 GHz         -44.79 dbm         Function         Function Result           M4         1         2.3817 GHz         -44.79 dbm         Function         Function Result           M4         1         2.3817 GHz         -40.57 dbm         Function Result         Function Result           M4         1         2.3817 GHz         -40.57 dbm         Function Result         Function Result           Spectrum         Function Result         Function Result         Function Result         Function Result         Function Result           Sol Count 100/100         SWT         18.9 µs         VBW 300 kHz         Mode Auto FFT         Sol Count 100/100           10 dbm         M1         M1         M1         M1         M1         M1           0 dbm         M1         M1         M1         M1         M1	-60 dBm										
Stort 2.306 GHz         1001 pts         Stop 2.406 GHz           Type         Ref         Trc         X-value         Y-value         Function         Function Result           M2         1         2.40595 GHz         -0.21 dbm         Function         Function Result           M2         1         2.46 dbm         -0.21 dbm         Function         Function Result           M3         1         2.387 GHz         -44.79 dbm         Function         Function Result           M4         1         2.3817 GHz         -44.79 dbm         Function         Function Result           M4         1         2.3817 GHz         -40.57 dbm         Function Result         Function Result           M4         1         2.3817 GHz         -40.57 dbm         Function Result         Function Result           Spectrum         Function Result         Function Result         Function Result         Function Result         Function Result           Sol Count 100/100         SWT         18.9 µs         VBW 300 kHz         Mode Auto FFT         Sol Count 100/100           10 dbm         M1         M1         M1         M1         M1         M1           0 dbm         M1         M1         M1         M1         M1	-70 dBm										
Type         Ref         Trc         X-value         Y-value         Function         Function         Function Result           M1         1         2.40959 Hz         -0.21 dBm         -0.45 dBm         -0.48 dBm         -0.48 dBm<		6 GHz				1001	pts	1		Stop 2	2.406 GHz
M1       1       2.40595 GHz      0.21 dBm         M2       1       2.4 GHz       -45.46 dBm         M3       1       2.367 GHz       -44.79 dBm         M4       1       2.3417 GHz       -40.57 dBm         M4       1       2.3417 GHz       -40.57 dBm         New With the second	Marker						1 -				
M2       1       2.4 GHz       -45.46 dBm         M3       1       2.387 GHz       -44.79 dBm         M4       1       2.3417 GHz       -40.57 dBm         Memory Colspan="2">New Weight State of the second s			>					tion	Fund	tion Result	
M4       1       2.3417 GHz       -40.57 dBm         Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref         Spectrum         Ref Level 27.60 dB       Offset 7.60 dB       RBW 100 kHz         Att 40 dB       SWT 18.9 µs       VBW 300 kHz         Multil       0.33 dBm         20 dBm         10 dBm         M1         30 dBm         -00000000000000000000000000000000000		1				-45.46 dB	m				
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref           Spectrum         Image: Control of the	M3	1									
20 dBm     M1[1]     0.33 dBm       20 dBm     2.48014390 GH:       10 dBm     M1       0 dBm     M1       -10 dBm	Spectrun Ref Level	Bar 27.60 0	lBm <b>Of</b>	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	m BOMHz /		-Hoppir	ng Ref	
20 dBm     2.48014390 GH;       10 dBm     M1       0 dBm     M1       -10 dBm	Spectrun Ref Level Att	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	m BOMHz /		-Hoppin	ng Ref	¶ (
10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -60 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -10 dB	Spectrun Ref Level Att SGL Count	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	-Hoppin	ng Ref	
0 dBm     M1       10 dBm     M1       -20 dBm     -       -30 dBm     -       -30 dBm     -       -50 dBm     -       -60 dBm     -	Spectrun Ref Level Att SGL Count 1Pk Max	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	-Hoppin		0.33 dBm
0 dBm	Spectrun Ref Level Att SGL Count 1Pk Max	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	-Hoppir		0.33 dBm
-10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm	Spectrun Ref Level Att SGL Count 1Pk Max	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	)-Hoppir		0.33 dBm
-20 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
-30 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppir		0.33 dBm
-40 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm-	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
-60 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
-60 dBm	Spectrum Ref Level Att SGL Count 1Pk Max 20 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppir		0.33 dBm
-50 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
-70 dBm	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
	Spectrun Ref Level Att SGL Count 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
	Spectrun Ref Level Att SGL Count IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm
	Spectrun Ref Level Att SGL Count IPk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	Bar 27.60 c 40	IBm Of dB SV	2.341 ge N	7 GHz	-40.57 dB 1-DH5 248 RBW 100 kHz	Mode A	uto FFT	p-Hoppin		0.33 dBm



Spectrum Ref Level 2				RBW 100 kHz					
Att SGL Count 10	40 dB 00/100	<b>SWT</b> 22	27.5 µs 👄	VBW 300 kHz	Mode A	uto FFT			
⊖1Pk Max									
20 dBm					M	1[1]		0.470	0.24 dBm
20 UDIII					M2	2[1]			95000 GHz 44.52 dBm
10 dBm				+ +				2.483	50000 GHz
0 d <mark>8</mark> m									
-10 dBm									
-20 cBm-D	1 -19.666	dBm							
-30 aBm									
-40 dBr		M3							
-50 dBm	your way the second	Mr. Bytter Marchade	what	wow.m.wew.like	myullindudy	numanymu	Uhowhat	warmharman	Manufalpar
-60 dBm				+					
-70 dBm									
Start 2.476 (	GHz			1001	pts			Stop 2	2.576 GHz
Marker _Type   Ref	Trc	X-value	e	Y-value	Funct	ion	Funr	tion Result	1
M1	1	2.479	95 GHz	0.24 dBm	n				
M2 M3	1		35 GHz 2.5 GHz	-44.52 dBn -45.64 dBn					
M4	1		36 GHz	-42.73 dBm	n	Read			1
Bai	1	2.48	36 GHz	-42.73 dBn		) 0MHz <i>A</i>	Ant1 Ho	pping R	
Bai Spectrum Ref Level 2 Att	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N				Ant1 Ho	pping R	ef
Bai Spectrum Ref Level 2 Att SGL Count 80	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248		Ant1 Ho	oping R	
Bai Spectrum Ref Level 2 Att	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248		Ant1 Ho	pping R	
Bai Spectrum Ref Level 2 Att SGL Count 80	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		
Bai Spectrum Ref Level 27 Att SGL Count 80 91Pk Max	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 91Pk Max	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 IPk Max 20 dBm 10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 IPk Max 20 dBm 10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 21 Att SGL Count 80 1Pk Max 20 dBm 10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 21 Att SGL Count 80 1Pk Max 20 dBm 10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 9 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 21 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 9 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT	Ant1 Ho		-3.99 dBm
Bai Spectrum Ref Level 21 Att SGL Count 80 • 1Pk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT			-3.99 dBm
Bai Spectrum Ref Level 2: Att SGL Count 8( • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT			-3.99 dBm
Bai Spectrum Ref Level 27 Att SGL Count 80 1Pk Max 20 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT			-3.99 dBm
Bai Spectrum Ref Level 2: Att SGL Count 80 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	1 nd Edg 7.60 dBm 40 dB	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT			-3.99 dBm
Bai Spectrum Ref Level 2: Att SGL Count 8( • 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	1 nd Edg 7.60 dBm 40 dB 200/8000	2.48: ge(Hopp offset 7.	36 GHZ Ding) N		H5 248	uto FFT		2.477	-3.99 dBm



Spectrum	1								[₩]
Ref Level 3				<b>RBW</b> 100 kHz					
Att	40 dB	SWT 22	27.5 µs 😑 🕻	<b>/BW</b> 300 kHz	Z Mode /	Auto FFT			
SGL Count : 1Pk Max	1200/1200								
TEK Max					м	1[1]			-4.18 dBm
20 dBm								2.479	905000 GHz
10 dBm					M	2[1]			-44.38 dBm 350000 GHz
Hudusm-									
-16 ØBm									
-₽₽ ⁱ dBm—		-							
-30 dBm	D1 -23.990	dBm							
-40 cBritt	s. Illetowe at the	M3	down human	Trend and a labele	an and a when the	Liddana Mala	moherthremited	milmin	the dealer had was
-50 dBm	in former	or an Andrew		***********			an sine i adaata - oda		Product of the second
-60 dBm									
-70 dBm									
Start 2.476	GHz			1001	pts			Stop	2.576 GHz
Marker	Tro	X-value	<b>N</b> 1	Y-value	Func	tion 1	<b>F</b>	tion Result	
Type Ref M1	1		9 OS GHz	-4.18 dBr			Func	aon kesur	·
M2	1		35 GHz	-44.38 dBr					
M3 M4	1	2	2.5 GHz	-42.82 dBr	m				
	1								
	Band	2.48	39 GHz	-42.34 dBr	m	) Read Ant1 No	-Hoppir	ng Ref	4
Spectrum	Band	2.48 Edge N	39 GHz VNT 2-	-42.34 dBr	m	) Poor Ant1 Nc	-Hoppir	ng Ref	<b>4</b> ₩
Spectrum Ref Level 3	Band 27.62 dBm	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz /		-Hoppir	ng Ref	
Spectrum Ref Level 3 Att	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz		-Hoppir	ng Ref	
Spectrum Ref Level 3	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz /		-Hoppir	ng Ref	
Spectrum Ref Level 3 Att SGL Count 3	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz / Mode A		D-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz / Mode A	uto FFT	-Hoppir		
Spectrum Ref Level 3 Att SGL Count 3 1Pk Max 20 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz / Mode A	uto FFT	o-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 1Pk Max	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz / Mode A	uto FFT	-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O IPk Max 20 dBm 10 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr DH5 240 BW 100 kHz	)2MHz / Mode A	uto FFT	o-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 1Pk Max 20 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	0-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O 1Pk Max 20 dBm 10 dBm 0 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	o-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O IPk Max 20 dBm 10 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O 1Pk Max 20 dBm 10 dBm 0 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 O 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level : Att SGL Count : IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level 3 Att SGL Count 3 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level : Att SGL Count : 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	Band 27.62 dBm 40 dB	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	)2MHz / Mode A	uto FFT	p-Hoppir		-1.26 dBm
Spectrum Ref Level : Att SGL Count : IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	Band 27.62 dBm 40 dB 100/100	2.48 Edge N Offset 7.	39 GHz VNT 2- .62 dB • R	-42.34 dBr	Mode A	uto FFT	p-Hoppir	2.401	-1.26 dBm



#### Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission Spectrum Ref Level 27.62 dBm Offset 7.62 dB 曼 RBW 100 kHz 40 dB SWT 227.5 µs 😑 VBW 300 kHz Mode Auto FFT Att SGL Count 100/100 ⊖1Pk Max M1[1] 2.83 dBn 20 dBm-2.40185000 GHz M2[1] -45.04 dBm 10 dBm 2.4000000 GHz 0 dBm -10 dBm -20 dBm— D1 -21.263 dBm -30 dBm· M4 40 dBm A Hold Ann whenwork weet My years and shall be and man Millian way of the house of the where the little marken room Trans Ash -50 dBm--60 dBm -70 dBm· Stop 2.406 GHz Start 2.306 GHz 1001 pts Marker Y-value -2.83 dBm Function **Function Result** Type | Ref | Trc X-value 2.40185 GHz M1 1 M2 -45.04 dBm 2.4 GHz 1 ΜЗ 2.39 GHz -45.87 dBm 1 M4 1 2.3487 GHz -41.44 dBm 4,0 Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref ₽ Spectrum Ref Level 27.62 dBm Offset 7.62 dB 👄 RBW 100 kHz 40 dB SWT 18.9 µs 😑 VBW 300 kHz Att Mode Auto FFT SGL Count 8000/8000 ●1Pk Max M1[1] 0.77 dBm 2.40315880 GHz 20 dBm· 10 dBm M1 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm· -70 dBm Span 8.0 MHz CF 2.402 GHz 1001 pts



#### Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission ₽ Spectrum Ref Level 27.62 dBm Offset 7.62 dB 👄 RBW 100 kHz 40 dB SWT 227.5 μs 😑 VBW 300 kHz Mode Auto FFT Att SGL Count 1200/1200 ⊖1Pk Max M1[1] 1.29 dBn 20 dBm· 2.40185000 GHz M2[1] -44.75 dBm 2.4000000 GHz 10 dBm м1 0 dBm w/W -10 dBm -20 dBm-D1 -19.234 dBr -30 dBm ма 40 dBm· ...... N.M. derthe week mahaa -50 dBm -60 dBm -70 dBm· Stop 2.406 GHz Start 2.306 GHz 1001 pts Marker **Y-value** -1.29 dBm -44.75 dBm Function **Function Result** Type | Ref | Trc X-value 2.40185 GHz M1 1 M2 2.4 GHz 1 ΜЗ 2.39 GHz -44.07 dBm 1 M4 1 2.3489 GHz -40.47 dBm 4,0 Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref ඐ Spectrum Ref Level 27.60 dBm Offset 7.60 dB 👄 RBW 100 kHz 40 dB SWT 18.9 µs 💿 VBW 300 kHz Att Mode Auto FFT SGL Count 100/100 ●1Pk Max M1[1] -0.88 dBm 2.47999200 GHz 20 dBm· 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm· -70 dBm Span 8.0 MHz CF 2.48 GHz 1001 pts



Ref Level 2 Att SGL Count 1	40 dB		7.60 dB 👄 R 27.5 µs 👄 V			Auto FFT			
●1Pk Max					м	1[1]			-1.93 dBm
20 dBm						1[1]		2.480	35000 GHz
10 dBm					M:	2[1] I			44.70 dBm 50000 GHz
0 dBm									
	1 -20.884	dBm							
-30 dBm									
-40 dBm <del>12</del>	wholeward	M45	wheelman	- Mariana - Japana	hadroninghe	manufacture	umante	www.wy.northetheads	and reading the
-60 dBm									
-70 dBm									
Start 2.476 ( Marker	GHz			1001	pts			Stop 2	2.576 GHz
Marker Type   Ref	Trc	X-value		Y-value	Fund	tion	Func	tion Result	
M1	1	2.4803	35 GHz	-1.93 dBr	m				
		2 483	35 GHz	-44.70 dBr	m				
M2 M3	1			-44,68 dBr	m	1			
M3 M4 Ba Spectrum Ref Level 2	nd Edg	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	W 100 kHz	m H5 248		Ant1 Hop	oping R	ef
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	91 GHZ 91 GHZ Ding) NV	-43.08 dBr /NT 2-D	m H5 248		Ant1 Hop	oping R	
M3 M4 Ba Spectrum Ref Level 2 Att	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop	oping R	
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At		Ant1 Hop		
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8 • 1Pk Max 20 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8 • 1Pk Max 20 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8 1Pk Max 20 dBm 10 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Spectrum Ref Level 2 Att SGL Count 8 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8 1Pk Max 20 dBm 10 dBm 0 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Spectrum Ref Level 2 Att SGL Count 8 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 80 IPk Max 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3 M4 Ba Spectrum Ref Level 2 Att SGL Count 8 9 IPk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	1 1 nd Edg 7.60 dBm 40 dB	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	m H5 248 Mode At	uto FFT	Ant1 Hop		-3.87 dBm
M3         M4           Ba         Spectrum           Ref Level 2         Att           SGL Count 8i         10           1Pk Max         20           0 dBm         -10           -10 dBm         -20           -30 dBm         -30           -40 dBm         -50 dBm	1 1 7.60 dBm 40 dB 000/8000	2 2.499 ge(Hopp Offset 7.	2.5 GHZ 91 GHZ Ding) NV 60 dB ● RB	-43.08 dBr /NT 2-D	Mode A	uto FFT	Ant1 Hop	2.479	-3.87 dBm



#### Band Edge(Hopping) NVNT 2-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 Mode Auto FFT Att SGL Count 1000/1000 ⊖1Pk Max M1[1] 4.37 dBn 20 dBm· 2.47615000 GHz M2[1] -44.23 dBm 2.48350000 GHz 10 dBm 🕽 dBm - Mond Brid -20 cBm· D1 -23.873 dBm--30 dBm M3 -40 d<mark>Bm12-</mark> Murnhun not the broken samle -50 dBm -60 dBm -70 dBm· Stop 2.576 GHz Start 2.476 GHz 1001 pts Marker Y-value -4.37 dBm Function Function Result Type Ref Trc X-value 2.47615 GHz M1 1 M2 -44.23 dBm 2.4835 GHz 1 ΜЗ 2.5 GHz -43.49 dBm 1 M4 1 2.4918 GHz -42.53 dBm 440 Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref ඐ Spectrum Ref Level 27.62 dBm Offset 7.62 dB 👄 RBW 100 kHz 40 dB SWT 18.9 µs 💿 VBW 300 kHz Att Mode Auto FFT SGL Count 300/300 ●1Pk Max M1[1] -1.38 dBm 2.40183220 GHz 20 dBm· 10 dBm м. 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm· -70 dBm Span 8.0 MHz CF 2.402 GHz 1001 pts



Att SGL Count : 1Pk Max	27.62 dBm 40 dB 100/100			RBW 100 kHz VBW 300 kHz	Mode Au	ito FFT			
20 dBm					M1[	[1]		2.40	-0.27 dBm L85000 GHz
10 dBm					M2[	1]			-45.56 dBm )00000 GHz
0 dBm									M1
-10 dBm									
-20. dBm	D1 -21.384	dBm							
-30 dBm									
-40 dBm			M4	and the second				. МЗ .	M2
<mark>Նաևերկայեր</mark> -50 dBm	Mundulahad	poladapor Marcelan	Marial whereas	man water har halfer	MANINA	how the second	hullyn Allyddiad	olyther and	alonnia
-60 dBm									
-70 dBm									
Start 2.306 Marker	GHz			1001 p	ots			Stop	2.406 GHz
Type   Ref		X-value		Y-value	Functio	on	Fund	tion Resul	t
M1 M2	1		35 GHz	-0.27 dBm -45.56 dBm					
M3	1		39 GHz	-46.95 dBm					
		2.3							
M4 Ba Spectrum		2.339 ge(Hopp	ping) N	-40.83 dBm		MHz A	unt1 Hoj	pping R	ef
M4 Ba Spectrum Ref Level 2 Att	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>		15 2402		.nt1 Ho	oping R	
M4 Ba Spectrum Ref Level 3	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	o FFT	unt1 Ho	oping R	
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 • 1Pk Max	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	15 2402	o FFT	unt1 Ho		
M4 Ba Spectrum Ref Level 2 Att SGL Count 8	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	o FFT	unt1 Ho		.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 1Pk Max	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	o FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 IPk Max 20 dBm 10 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	o FFT	.nt1 Hop		.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 IPk Max 20 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 O IPK Max 20 dBm 10 dBm -10 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 SGL Count 8 IPk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 O IPK Max 20 dBm 10 dBm -10 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	ріпд) N ¹ 62 dB ● R 3.9 μs ● V	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 SGL Count 8 IPk Max 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	97 GHz Ding) N ^v 62 db <b>e R</b>	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 SGL Count 8 O dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	ріпд) N ¹ 62 dB ● R 3.9 μs ● V	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 8 SGL Count 8 ID dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	ріпд) N ¹ 62 dB ● R 3.9 μs ● V	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm
M4 Ba Spectrum Ref Level 2 Att SGL Count 6 PR Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm	1 and Edg 27.62 dBm 40 dB	2.339 ge(Hopp Offset 7.4	ріпд) N ¹ 62 dB ● R 3.9 μs ● V	VNT 3-DF BW 100 kHz	H5 2402 Mode Aut	0 FFT			.86 dBm



#### Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission ₽ Spectrum Ref Level 27.62 dBm Offset 7.62 dB 👄 RBW 100 kHz 40 dB SWT 227.5 μs 😑 VBW 300 kHz Mode Auto FFT Att SGL Count 1000/1000 ⊖1Pk Max M1[1] -0.14 dBn 20 dBm· 2.40415000 GHz M2[1] -44.41 dBm 2.4000000 GHz 10 dBm 0 dBm h ( -10 dBm -20 dBm· D1 -19.139 dBr -30 dBm M4 40 dBm· u. mulla un باليه 1.13 when the sea whether pung education . ~...kA -50 dBm -60 dBm -70 dBm· Stop 2.406 GHz Start 2.306 GHz 1001 pts Marker Y-value -0.14 dBm Function Function Result Type | Ref | Trc X-value 2.40415 GHz M1 1 M2 -44.41 dBm 2.4 GHz 1 ΜЗ 2.39 GHz -44.22 dBm 1 M4 1 2.3498 GHz -40.35 dBm 4,0 Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref ඐ Spectrum Ref Level 27.60 dBm Offset 7.60 dB 👄 RBW 100 kHz 40 dB SWT 18.9 µs 💿 VBW 300 kHz Att Mode Auto FFT SGL Count 100/100 ●1Pk Max M1[1] 0.13 dBm 2.47983220 GHz 20 dBm· 10 dBm M1 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm .... ~ N -50 dBm -60 dBm· -70 dBm Span 8.0 MHz CF 2.48 GHz 1001 pts



Spectrum Ref Level 27.60 Att 4		7.60 dB 👄 R 27.5 µs 👄 V			Auto FFT			
SGL Count 100/10			BYY JUU KH.	- moue /	AULU FF I			
●1Pk Max				м	1[1]			0.96 dBm
20 dBm								85000 GHz
10 dBm				M	2[1]			45.83 dBm 50000 GHz
0 dgm								
-10 cBm								
-20 cBm D1 -19	9.873 dBm							
-30 dBm								
-40 dBm ₁₂ M4	MS MS	all and the second	المراجعة المراجع			المراجع	markable	No. No.
-50 dBm	Britener	ereften e. ur	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-references	ՠՠՠֈՠֈՠՠ	-Armeter Providence	ell'esall' su su su	and the market way
-60 dBm								
-70 dBm								
Start 2.476 GHz			1001	pts			Stop :	2.576 GHz
Marker _Type   Ref   Trc	X-value	a	Y-value	Func	tion 1	Fund	tion Result	. 1
M1 1	2.479	85 GHz	0.96 dB	m		T une	21011 Ne Suit	·
M2 1 M3 1		35 GHz 2.5 GHz	-45.83 dB -44.95 dB					
			-42.55 dB	m				
M4 1 Band Spectrum Ref Level 27.60	Edge(Hop)	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248		nt1 Ho	pping R	ef
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/1	Edge(Hop) dBm Offset 7 0 dB swt 1	ping) N∖	/NT 3-D	H5 248		unt1 Hoj	oping R	
M4 1 Band Spectrum Ref Level 27.60 Att 4	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A		ant1 Hoj		-3.48 dBm
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/1	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/f 1Pk Max 20 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/f 1Pk Max	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/f IPk Max 20 dBm 10 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level         27.60           Att         4           SGL Count         8000/f           1Pk Max         20           dBm         10           0 dBm         0	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4 1 Band Spectrum Ref Level 27.60 Att 4 SGL Count 8000/f 1Pk Max 20 dBm 10 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att           SGL Count 8000/f           1Pk Max           20 dBm           10 dBm           0 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att         4           SGL Count 8000/r           IPk Max           20 dBm           10 dBm           -10 dBm           -20 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att           SGL Count 8000/4           1Pk Max           20 dBm           10 dBm           0 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att         4           SGL Count 8000/r           IPk Max           20 dBm           10 dBm           -10 dBm           -20 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att         4           SGL Count 8000/4           IPK Max           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att         4           SGL Count 8000/4           IPK Max           20 dBm           10 dBm           -0 dBm           -20 dBm           -30 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att         4           SGL Count 8000/4           IPK Max           20 dBm           10 dBm           -0 dBm           -20 dBm           -30 dBm           -40 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT	Ant1 Ho		-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att 4           SGL Count 8000/r           IPk Max           20 dBm           10 dBm           0 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248 Mode A	uto FFT			-3.48 dBm
M4         1           Band           Spectrum           Ref Level 27.60           Att 4           SGL Count 8000/r           1Pk Max           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -50 dBm           -60 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248	uto FFT	Ant1 Ho	2.478	-3.48 dBm 115380 GHz
M4         1           Band           Spectrum           Ref Level 27.60           Att 4           SGL Count 8000/r           IPk Max           20 dBm           10 dBm           0 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm	Edge(Hop) dBm Offset 7 0 dB swt 1	Ding) N\ .60 dB ● RE	/NT 3-D	H5 248	uto FFT	Ant1 Ho	2.478	-3.48 dBm 115380 GHz



# Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

Spectrum							
Ref Level 2 Att	40 dB	<b>SWT</b> 227.5 μs	<ul> <li>RBW 100 kHz</li> <li>VBW 300 kHz</li> </ul>	Mode Auto	FFT		
SGL Count 1 1Pk Max	000/1000	)					
JIEK Man				M1[1]		-5.67 dBn	
20 dBm				2.47995000			
				M2[1]		-43.17 dBn	
10 dBm						2.48350000 GHz	
0 40							
Made Bro							
<b>W</b>							
-20 dBm	1 -23.47	7 dBm					
-30 cBm	1 -20,47						
MOM4							
-40 dBm	anad HAA sala	month month had the	mun burlingun pila	a section reasons	the manufation in	Margan Month Margaret My Margan Margan	
-50 dBm			V			0,000	
-60 dBm							
70 -10							
-70 dBm Start 2.476	CH2		1001 pt			Stop 2.576 GHz	
Marker			1001 pt	3		500p 2.570 GHz	
Type   Ref	Trc	X-value	Y-value	Function	L Eu	nction Result	
M1	1	2,47995 GHz	-5.67 dBm	7 unccion	1 14	inocion Robuic	
M2	1	2.4835 GHz	-43.17 dBm				
M3	1	2.5 GHz	-44.94 dBm				
M4	1	2.4857 GHz	-42.60 dBm				



## 8.7 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict						
NVNT	1-DH5	2402	Ant 1	-37.18	-20	Pass						
NVNT	1-DH5	2441	Ant 1	-40.84	-20	Pass						
NVNT	1-DH5	2480	Ant 1	-39.1	-20	Pass						
NVNT	2-DH5	2402	Ant 1	-37	-20	Pass						
NVNT	2-DH5	2441	Ant 1	-42.47	-20	Pass						
NVNT	2-DH5	2480	Ant 1	-39.81	-20	Pass						
NVNT	3-DH5	2402	Ant 1	-35.77	-20	Pass						
NVNT	3-DH5	2441	Ant 1	-38.95	-20	Pass						
NVNT	3-DH5	2480	Ant 1	-35.29	-20	Pass						

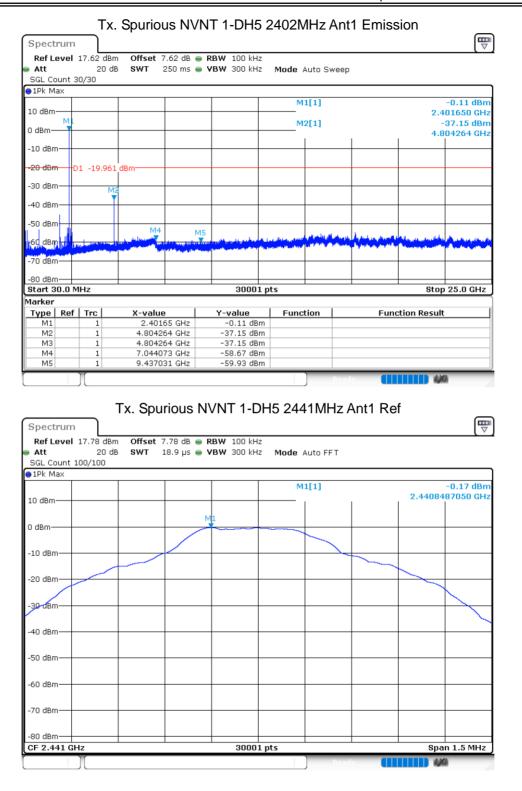
ACCREDITED

Certificate #4298.01

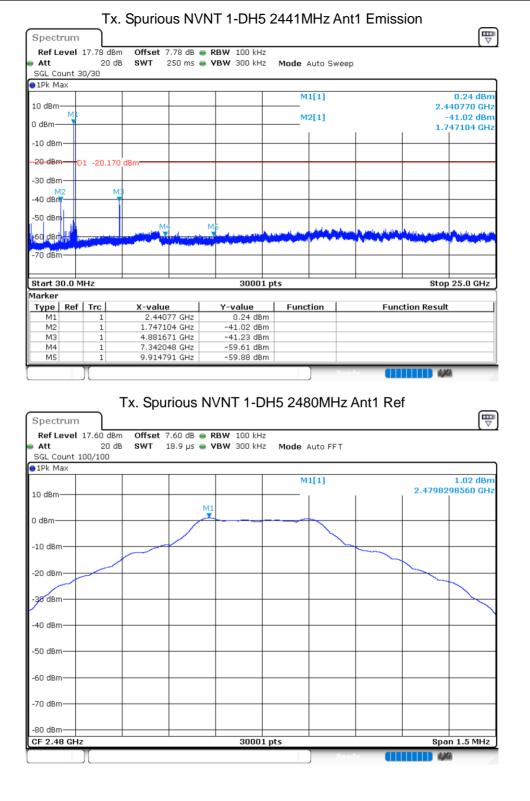


### Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

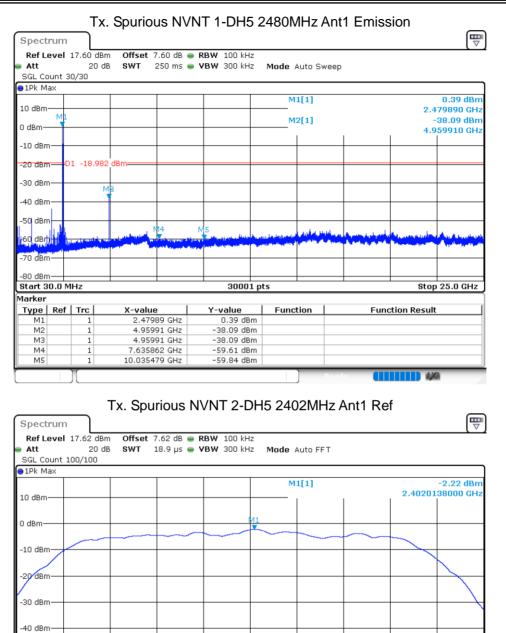












30001 pts

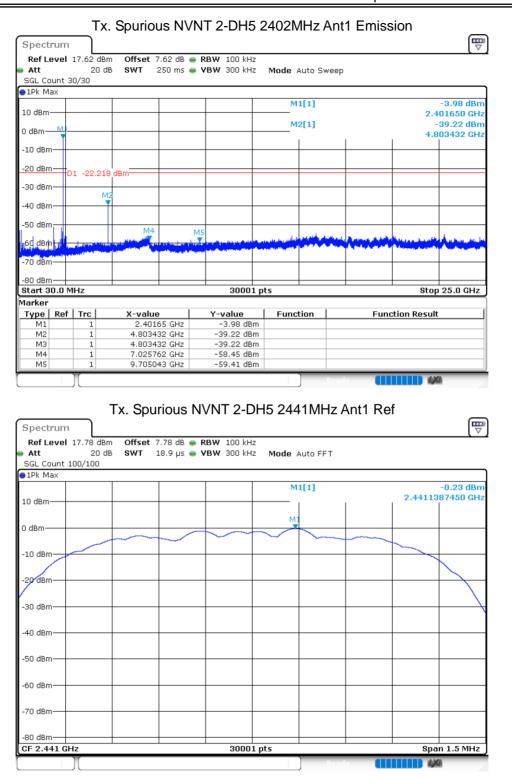
-50 dBm

-60 dBm· -70 dBm· -80 dBm·

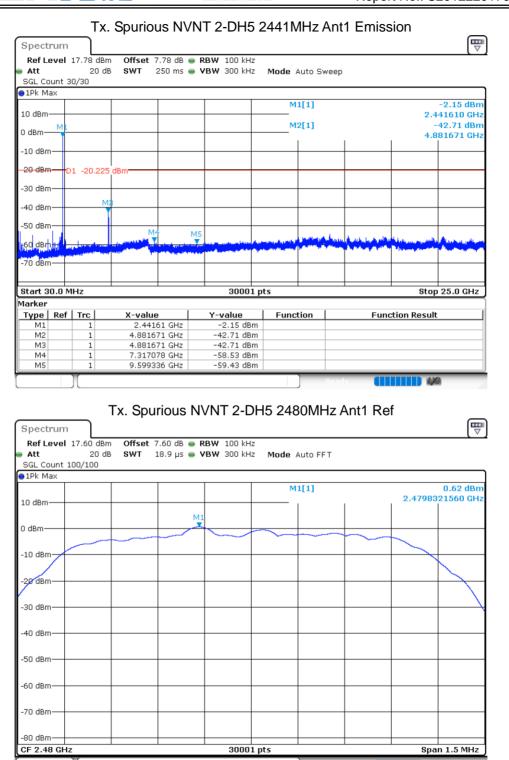
CF 2.402 GHz

Span 1.5 MHz

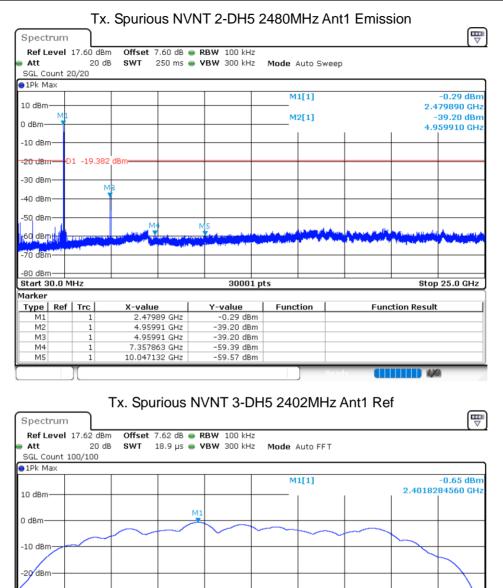












30001 pts

-30 dBm

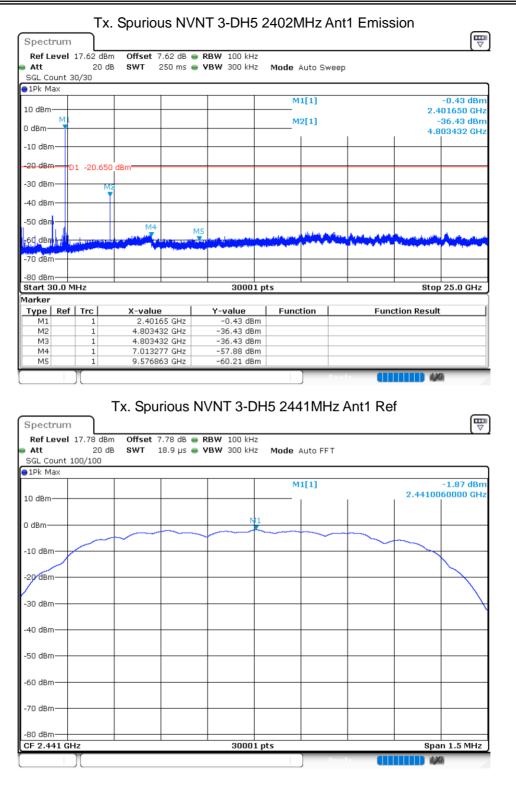
-40 dBm -50 dBm

-60 dBm· -70 dBm· -80 dBm·

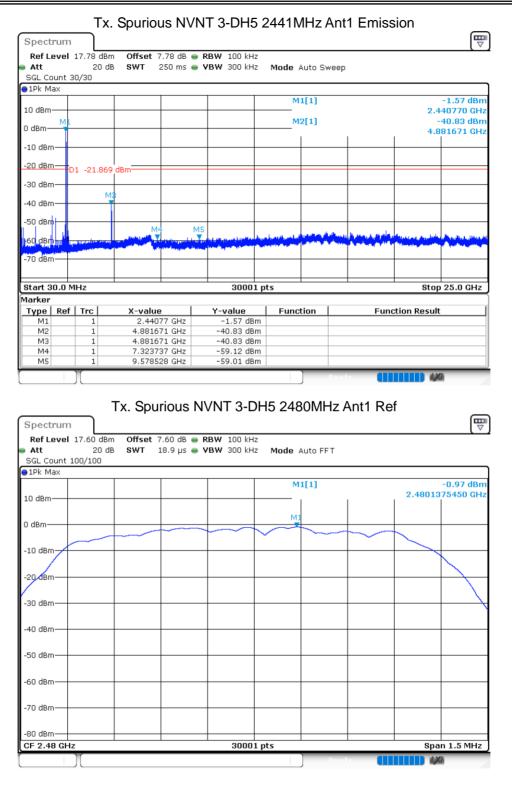
CF 2.402 GHz

Span 1.5 MHz

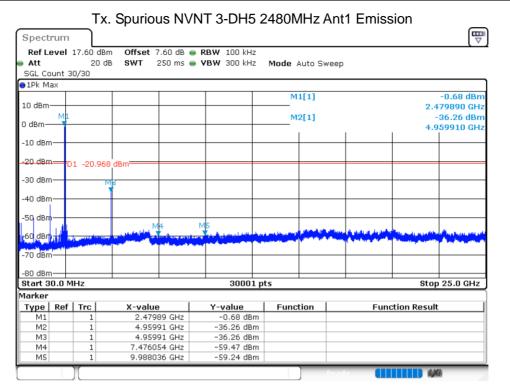












END OF REPORT