



RADIO TEST REPORT FCC ID:2AQRE-M90

Product: Smart POS Terminal Trade Mark: N/A Model No.: M90 Family Model: N/A Report No.: S24110606102001 Issue Date: Feb. 21, 2025

Prepared for

Fujian Morefun Electronic Technology Co., Ltd.

4F, 15BLD, Jinshan, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd. No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China

Tel. 0755-23200050 Website: http://www.ntek.org.cn





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1 TEST RESULT CERTIFICATION

Applicant's name:	Fujian Morefun Electronic Technology Co., Ltd.
Address:	4F, 15BLD, Jinshan, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China
Manufacturer's Name::	Fujian Morefun Electronic Technology Co., Ltd.
Address:	4F, 15BLD, Jinshan, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China
Product description	
Product name:	Smart POS Terminal
Model and/or type reference:	M90
Family Model:	N/A
Sample number	S241106061002
Date of Test	Nov. 06, 2024 ~ Feb. 21, 2025

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.

Reviewed By Aaron Cheng By By Joe. Yan Prepared By Joe Yan Alex Li (Project Engineer) (Supervisor) (Manager)





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	

Remark:

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





3 FACILITIES AND ACCREDITATIONS

3.1 FACILITIES

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

No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China.

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

3.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description	
CNAS-Lab.	: The Certificate Registration Number is L5516.
IC-Registration	The Certificate Registration Number is 9270A.
	CAB identifier:CN0074
FCC- Accredited	Test Firm Registration Number: 463705.
	Designation Number: CN1184
A2LA-Lab.	The Certificate Registration Number is 4298.01
	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	: No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan
	District, Shenzhen, Guangdong, People's Republic of China.

3.3 MEASUREMENT UNCERTAINTY

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

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





4 GENERAL DESCRIPTION OF EUT

Product Feature and Specification		
Equipment	Smart POS Terminal	
Trade Mark	N/A	
FCC ID	2AQRE-M90	
Model No.	M90	
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	FPCAntenna	
Antenna Gain	1.3 dBi	
Adapter	Model: DGL0502000LUS Input: 100-240V~50/60Hz 0.3A Output: 5.0V2.0A	
Battery	DC 7.6V, 2500mAh	
Power supply	DC 7.6V from battery or DC 5V from adapter	
HW Version	N/A	
SW Version	N/A	

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

Note 2: The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.





	Revision History			
Report No.	Version	Description	Issued Date	
S24110606102001	Rev.01	Initial issue of report	Feb. 21, 2025	
	·			





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	Final Test Mode Description		
Mode 1	normal link mode		

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

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

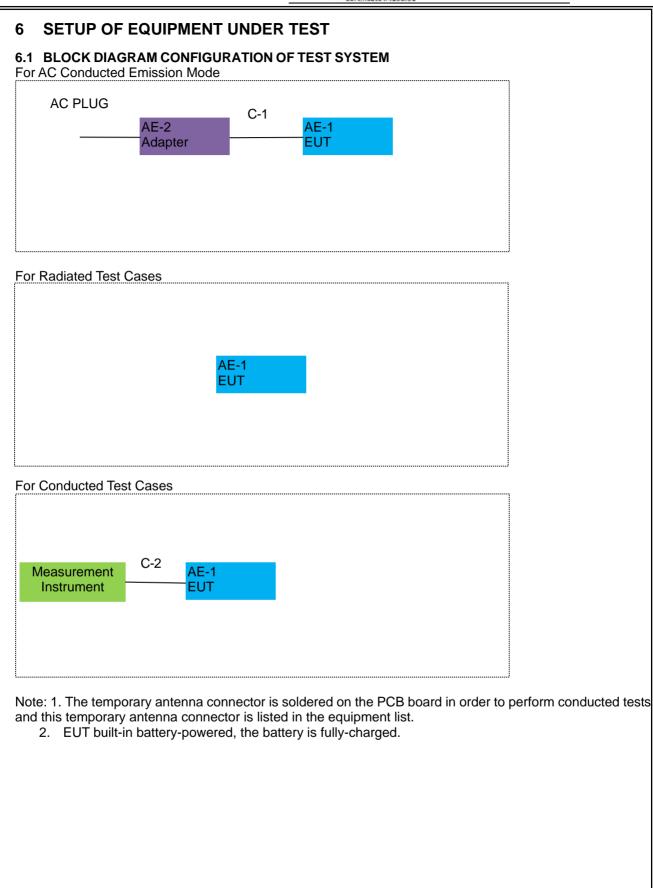
Note: For radiated test cases, the worst mode data rate 1Mbps was reported only, because this data rate has the highest RF output power at preliminary tests, and no other significantly frequencies found in conducted spurious emission.

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

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











6.2 SUPPORT EQUIPMENT

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

Item	Equipment	Model/Type No.	Series No.	Note
AE-1	Smart POS Terminal	M90	N/A	EUT
AE-2	Adapter	DGL0502000LUS	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	USB Cable	YES	NO	1.0m
C-2	RF Cable	YES	NO	0.1m

Notes:

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





6.3 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

uuluu		corequipment					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibrati on period
1	Spectrum Analyzer	Agilent	E4440A	MY41000130	2024.04.26	2025.04.25	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2024.04.25	2025.04.24	1 year
4	Test Receiver	R&S	ESPI7	101318	2024.04.26	2025.04.25	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
7	Horn Antenna	EM	EM-AH-1018 0	2011071402	2024.05.12	2027.05.11	3 year
8	Broadband Horn Antenna	SCHWARZBE CK	BBHA 9170	803	2024.05.12	2027.05.11	3 year
9	Amplifier	EMC	EMC051835 SE	980246	2024.04.25	2025.04.24	1 year
10	Active Loop Antenna	SCHWARZBE CK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
11	Power Meter	DARE	RPR3006W	15I00041SN 084	2024.04.25	2025.04.24	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2023.05.06	2026.05.05	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2023.05.06	2026.05.05	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
15	Filter	TRILTHIC	2400MHz	29	2024.04.26	2027.04.25	3 year
16	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	2024.04.26	2025.04.25	1 year
2	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
3	LISN	SCHWARZBE CK	NNLK 8129	8129245	2024.04.25	2025.04.24	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2024.04.26	2027.04.25	3 year
5	Test Cable (9KHz-30MH z)	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
6	Test Cable (9KHz-30MH z)	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
7	Test Cable (9KHz-30MH z)	N/A	C03	N/A	2023.05.06	2026.05.05	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.

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFtest	MTS 8310 2.4GHz/5GHz	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	Farad	EZ-EMC_CE	AIT-03A	AC Conducted Test





7 TEST REQUIREMENTS

7.1 CONDUCTED EMISSIONS TEST

7.1.1 Applicable Standard

According to FCC Part 15.207(a)

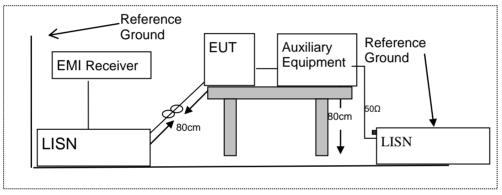
7.1.2 Conformance Limit

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

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

- 2. The lower limit shall apply at the transition frequencies
 - 3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

7.1.3 Test Configuration



7.1.4 Test Procedure

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

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
- 2. The EUT was placed on a table which is 0.8m above ground plane.
- 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.
- 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

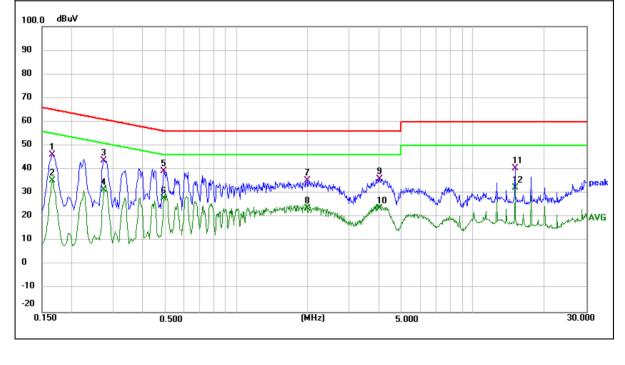
EUT:	Smart POS Terminal	Model Name :	M90
Temperature:	23.7℃	Relative Humidity:	57.4%
Pressure:	1010hPa	Phase :	L
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1660	36.05	10.04	46.09	65.16	-19.07	QP
0.1660	25.35	10.04	35.39	55.16	-19.77	AVG
0.2740	33.62	10.23	43.85	61.00	-17.15	QP
0.2740	21.30	10.23	31.53	51.00	-19.47	AVG
0.4940	28.46	10.66	39.12	56.10	-16.98	QP
0.4940	17.08	10.66	27.74	46.10	-18.36	AVG
1.9900	25.50	9.81	35.31	56.00	-20.69	QP
1.9900	13.84	9.81	23.65	46.00	-22.35	AVG
4.0220	26.10	9.99	36.09	56.00	-19.91	QP
4.0220	13.77	9.99	23.76	46.00	-22.24	AVG
15.0340	28.73	11.86	40.59	60.00	-19.41	QP
15.0340	20.42	11.86	32.28	50.00	-17.72	AVG

Remark:

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

2. Factor = Insertion Loss + Cable Loss.







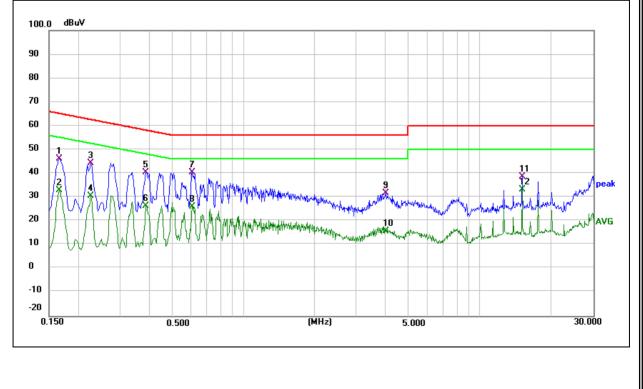
EUT:	Smart POS Terminal	Model Name :	M90
Temperature:	23.7 °C	Relative Humidity:	57.4%
Pressure:	1010hPa	Phase :	Ν
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.1660	36.78	9.47	46.25	65.16	-18.91	QP
0.1660	23.56	9.47	33.03	55.16	-22.13	AVG
0.2260	34.76	9.57	44.33	62.60	-18.27	QP
0.2260	20.94	9.57	30.51	52.60	-22.09	AVG
0.3860	30.74	9.85	40.59	58.15	-17.56	QP
0.3860	16.54	9.85	26.39	48.15	-21.76	AVG
0.6060	30.15	10.20	40.35	56.00	-15.65	QP
0.6060	15.93	10.20	26.13	46.00	-19.87	AVG
4.0020	22.42	9.24	31.66	56.00	-24.34	QP
4.0020	6.73	9.24	15.97	46.00	-30.03	AVG
15.0340	27.53	11.06	38.59	60.00	-21.41	QP
15.0340	22.07	11.06	33.13	50.00	-16.87	AVG

Remark:

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

2. Factor = Insertion Loss + Cable Loss.







7.2 RADIATED SPURIOUS EMISSION

7.2.1 Applicable Standard

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

7.2.2 Conformance Limit

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

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

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

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

Limits of Radiated Emission Measurement(Above 1000MHz)

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

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

Measurement was performed at an antenna to the closed point of EUT distance of meters.
 For Frequency 9kHz~30MHz:

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

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

For Frequency above 30MHz:

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

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



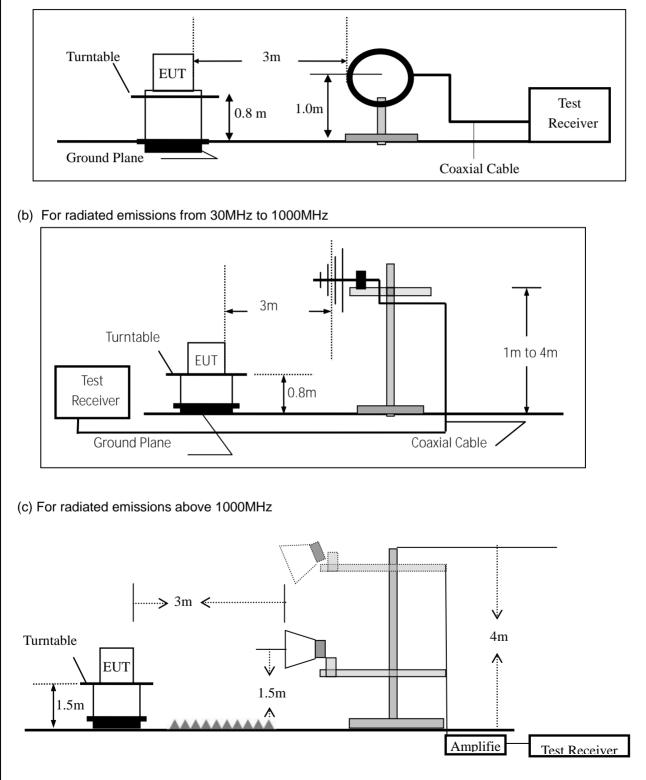


7.2.3 Measuring Instruments

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

7.2.4 Test Configuration

(a) For radiated emissions below 30MHz







7.2.5 Test Procedure

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

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

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

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

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

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





During the radiated emission test, the Spectrum Analyzer was set with the following configurations:										
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth							
30 to 1000	QP	120 kHz	300 kHz							
Ah awa 4000	Peak	1 MHz	1 MHz							
Above 1000	Average	1 MHz	1 MHz							

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

7.2.6 Test Results

EUT:	Smart POS Terminal	Model No.:	M90
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Joe Yan

Freq.	Ant.Pol.	Emission L	.evel(dBuV/m)	Limit 3	m(dBuV/m)	Ove	r(dB)
(MHz)	H/V	PK	AV	PK	AV	PK	r(dB) 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: Smart POS Terminal Model Name : M90 **25.4℃** Relative Humidity: 54% Temperature: Test Mode: Mode 3 GFSK Pressure: 1010hPa DC 7.6V Test Voltage :

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
V	43.6590	10.53	19.12	29.65	40.00	-10.35	QP	
V	56.7920	10.64	19.03	29.67	40.00	-10.33	QP	
V	64.6590	9.21	17.63	26.84	40.00	-13.16	QP	
V	102.7190	4.69	17.81	22.50	43.50	-21.00	QP	
V	197.2000	5.28	17.50	22.78	43.50	-20.72	QP	
V	383.9320	5.94	22.28	28.22	46.00	-17.78	QP	

Remark:

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



NTEK 北测[®]



Polar	Freque	Frequency		ter ding	Factor		ssion vel	Lim	its	Ма	argin	R	emar	
(H/V)	(MHz	:)	(dB	uV)	(dB)	(dBu	V/m)	(dBu\	//m)	(0	(dB)			
Н	45.85	50	5.	58	19.43	25	.01	40.0	00	-14	-14.99		QP	
Н	104.53	60	5.4	44	17.85	23	.29	43.	50	-2	0.21		QP	
Н	201.39	30	4.3	35	17.60	21	.95	43.	50	-2	1.55		QP	
Н	309.99	80	6.	79	20.41	27	.20	46.0	00	-18	8.80		QP	
Н	515.43	70	5.	56	24.39	29	.95	46.0	00	-10	6.05		QP	
Н	737.07	10	5.	54	28.17	33	.71	46.0	00	-12	2.29		QP	
<u>=missi</u> 80.0	on Level= N dBu¥/m	<u>/leter</u>	Readin	ig+ ⊦a	ictor, iviarg		ssion L	Levei - Lii	mit				7	
70 -													_	
60													_	
50 -														
40 -											6		adar-	
30	1				ç	3		ger Husbrahus	Warnand	5 Jahoren 44	WANNA	"	_	
20 🎋	window despetition	water and the second	mymente	and the ground the first	2 Marting particular point	hadring	When the walk with	1					_	
10													_	
0.0	100					(MHz)						10		





■ Spurio	Spurious Emission Above 1GHz (1GHz to 25GHz)										
EUT:		Sma	rt POS T	erminal	Мо	del No.:		M9	0		
Temperatu	re:	20 °C	2		Re	ative Humid	ity:	48%	6		
Test Mode	:	Mod	e2/Mode	3/Mode4	Tes	st By:		Joe	e Yan		
All the mod	ulation i	mode	s have b	een testeo		ne worst res	ult was	s rep	ort as be	low:	
Frequence	<u>~\/</u>	ead vel	Cable loss	Antenna Factor	Pream Factor		Limi	ts	Margin	Deved	0
(MHz)		μV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV	//m)	(dB)	Remark	Comment
	(ub	μν)	(UD)		())2 MHz)(GFSK	· ·	,	(ub)		
4804.58	8 67	.58	5.21	35.59	44.30		74.0		-9.92	Pk	Vertical
4804.58		.30	5.21	35.59	44.30		54.0		-6.04	AV	Vertical
7206.1		.77	6.48	36.27	44.60		74.0		-7.08	Pk	Vertical
7206.1		.69	6.48	36.27	44.60		54.0		-5.16	AV	Vertical
4804.3		.21	5.21	35.55	44.30		74.0		-13.33	Pk	Horizontal
4804.3		.72	5.21	35.55	44.30		54.0		-5.82	AV	Horizontal
7206.04	4 65	.85	5.21	35.55	44.52	62.09	74.0	00	-11.91	Pk	Horizontal
7206.04	4 50	.37	6.48	36.27	44.52	48.60	54.0	00	-5.40	AV	Horizontal
			1	Mid Cha	nnel (244	1 MHz)(GFSK)	Above	1G			
4882.1	9 65	.29	5.21	35.66	44.20	61.96	74.0	00	-12.04	Pk	Vertical
4882.1	9 52	.23	5.21	35.66	44.20	48.90	54.0	00	-5.10	AV	Vertical
7323.5	6 66	.41	7.10	36.50	44.43	65.58	74.0	00	-8.42	Pk	Vertical
7323.5	6 50	.39	7.10	36.50	44.43	49.56	54.0	00	-4.44	AV	Vertical
4882.73	3 65	.91	5.21	35.66	44.20	62.58	74.0	00	-11.42	Pk	Horizontal
4882.73	3 50	.75	5.21	35.66	44.20	47.42	54.0	00	-6.58	AV	Horizontal
7324.68	8 67	.87	7.10	36.50	44.43	67.04	74.0	00	-6.96	Pk	Horizontal
7324.68	8 50	.75	7.10	36.50	44.43	49.92	54.0	00	-4.08	AV	Horizontal
			1	High Cha	nnel (24	80 MHz)(GFSK) Abov	e 1G			
4959.42		.62	5.21	35.52	44.21		74.0	00	-9.86	Pk	Vertical
4959.42		.73	5.21	35.52	44.21	49.25	54.0		-4.75	AV	Vertical
7439.7	0 64	.06	7.10	36.53	44.60		74.0	00	-10.91	Pk	Vertical
7439.70		.78	7.10	36.53	44.60		54.0		-4.19	AV	Vertical
4960.78		.04	5.21	35.52	44.21	64.56	74.0	00	-9.44	Pk	Horizontal
4960.78		.54	5.21	35.52	44.21	47.06	54.0		-6.94	AV	Horizontal
7440.28		.64	7.10	36.53	44.60		74.0		-6.33	Pk	Horizontal
7440.28	8 52	.81	7.10	36.53	44.60	51.84	54.0	00	-2.16	AV	Horizontal

Note:

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





■ 3	Spurious En	nission in	Restrict	ted Band	2310-239	00MHz and	2483	.5-25	00MHz		
EUT	: Si	mart POS	Termir	nal	Mode	el No.:		M90)		
Tem	perature: 20) °C			Relat	ive Humidi	ty:	48%	, D		
		ode2/ Mo	de4		Test	By:		Joe	Yan		
All t	he modulati	on modes	s have b	been teste		-	sult wa	as rep	oort as b	elow:	
	Frequency	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limi	its	Margin	Detector	Comment
	(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµ∖	//m)	(dB)	Туре	
					1Mbps(GFS	SK)-Non-hopp	oing				
	2310	67.47	2.97	27.80	43.80	54.44	74	÷	-19.56	Pk	Vertical
	2310	46.99	2.97	27.80	43.80	33.96	54	Ļ	-20.04	AV	Vertical
	2310	67.12	2.97	27.80	43.80	54.09	74	ŀ	-19.91	Pk	Horizontal
	2310	44.67	2.97	27.80	43.80	31.64	54	ŀ	-22.36	AV	Horizontal
	2390	66.35	3.14	27.21	43.80	52.90	74	÷	-21.10	Pk	Vertical
	2390	44.65	3.14	27.21	43.80	31.20	54	ŀ	-22.80	AV	Vertical
	2390	66.68	3.14	27.21	43.80	53.23	74	Ļ	-20.77	Pk	Horizontal
	2390	46.50	3.14	27.21	43.80	33.05	54	Ļ	-20.95	AV	Horizontal
	2483.5	67.38	3.58	27.70	44.00	54.66	74	ŀ	-19.34	Pk	Vertical
	2483.5	46.89	3.58	27.70	44.00	34.17	54	Ļ	-19.83	AV	Vertical
	2483.5	65.98	3.58	27.70	44.00	53.26	74	ŀ	-20.74	Pk	Horizontal
	2483.5	44.36	3.58	27.70	44.00	31.64	54	ļ	-22.36	AV	Horizontal
					1Mbps(G	FSK)-hopping	q				
	2310	66.57	2.97	27.80	43.80	53.54	74	Ļ	-20.46	Pk	Vertical
	2310	44.95	2.97	27.80	43.80	31.92	54	ļ	-22.08	AV	Vertical
	2310	64.11	2.97	27.80	43.80	51.08	74	Ļ	-22.92	Pk	Horizontal
	2310	44.50	2.97	27.80	43.80	31.47	54	ļ	-22.53	AV	Horizontal
	2390	68.64	3.14	27.21	43.80	55.19	74	Ļ	-18.81	Pk	Vertical
	2390	45.48	3.14	27.21	43.80	32.03	54	ŀ	-21.97	AV	Vertical
	2390	67.52	3.14	27.21	43.80	54.07	74	ŀ	-19.93	Pk	Horizontal
	2390	45.26	3.14	27.21	43.80	31.81	54	L .	-22.19	AV	Horizontal
	2483.5	66.39	3.58	27.70	44.00	53.67	74	ļ	-20.33	Pk	Vertical
	2483.5	46.84	3.58	27.70	44.00	34.12	54	ŀ	-19.88	AV	Vertical
	2483.5	68.79	3.58	27.70	44.00	56.07	74	ļ	-17.93	Pk	Horizontal
	2483.5	46.89	3.58	27.70	44.00	34.17	54	ŀ	-19.83	AV	Horizontal
			•	•	•						

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





■ 3	Spurious En	nission in	Restrict	ed Band	3260MI	Hz-18000MH	łz					
EUT	:	Smart	POS Te	erminal	Mo	del No.:		M90)			
Tem	perature:	20 ℃			Rel	Relative Humidity:			48%			
Test	Mode:	Mode2	2/ Mode	4	Tes	t By:		Joe	Yan			
All t	All the modulation modes have been tested,					the worst res	sult wa	as re	port as b	elow:		
	Frequency	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limite		Margin	Detector	Comment	
	(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµ∖	//m)	(dB)	Туре		
					1Mbps(G	SK)-Non-hopp	oing					
	3260	69.00	4.04	29.57	44.70	57.91	74	ŀ	-16.09	Pk	Vertical	
	3260	45.23	4.04	29.57	44.70	34.14	54	ŀ	-19.86	AV	Vertical	
	3260	64.39	4.04	29.57	44.70	53.30	74	ł	-20.70	Pk	Horizontal	
	3260	44.85	4.04	29.57	44.70	33.76	54	ļ	-20.24	AV	Horizontal	
	3332	64.61	4.26	29.87	44.40	54.34	74	ŀ	-19.66	Pk	Vertical	
	3332	46.06	4.26	29.87	44.40	35.79	54	ŀ	-18.21	AV	Vertical	
	3332	64.46	4.26	29.87	44.40	54.19	74	ŀ	-19.81	Pk	Horizontal	
	3332	45.62	4.26	29.87	44.40	35.35	54	ŀ	-18.65	AV	Horizontal	
	17789	57.06	10.99	43.95	43.50	68.50	74	ŀ	-5.50	Pk	Vertical	
	17789	36.71	10.99	43.95	43.50	48.15	54	ŀ	-5.85	AV	Vertical	
	17957	56.15	11.81	43.69	44.60	67.05	74	ŀ	-6.95	Pk	Horizontal	
	17957	36.51	11.81	43.69	44.60	47.41	54	ŀ	-6.59	AV	Horizontal	
					1Mbps	GFSK)-hopping	g					
	3260	66.32	4.04	29.57	44.70	55.23	74	ļ	-18.77	Pk	Vertical	
	3260	46.51	4.04	29.57	44.70	35.42	54	ŀ	-18.58	AV	Vertical	
	3260	67.25	4.04	29.57	44.70	56.16	74	ŀ	-17.84	Pk	Horizontal	
	3260	44.57	4.04	29.57	44.70	33.48	54	ŀ	-20.52	AV	Horizontal	
	3332	68.70	4.26	29.87	44.40	58.43	74	ŀ	-15.57	Pk	Vertical	
	3332	46.14	4.26	29.87	44.40	35.87	54	ŀ	-18.13	AV	Vertical	
	3332	66.80	4.26	29.87	44.40	56.53	74	ŀ	-17.47	Pk	Horizontal	
	3332	44.38	4.26	29.87	44.40	34.11	54	ŀ	-19.89	AV	Horizontal	
	17781	56.36	10.99	43.95	43.50	67.80	74	•	-6.20	Pk	Vertical	
	17781	37.71	10.99	43.95	43.50	49.15	54	•	-4.85	AV	Vertical	
	17955	56.76	11.81	43.69	44.60	67.66	74	•	-6.34	Pk	Horizontal	
	17955	37.97	11.81	43.69	44.60	48.87	54	ļ	-5.13	AV	Horizontal	
			-									

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





7.3 NUMBER OF HOPPING CHANNEL

7.3.1 Applicable Standard

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

7.3.2 Conformance Limit

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

7.3.3 Measuring Instruments

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

7.3.4 Test Setup

Please refer to Section 6.1 of this test report.

7.3.5 Test Procedure

The testing follows ANSI C63.10-2013 clause 7.8.3 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT must have its hopping function enabled. Use the following spectrum analyzer settings: Span = the frequency band of operation RBW : To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller. VBW \geq RBW Sweep = auto Detector function = peak Trace = max hold

7.3.6 Test Results

EUT:	Smart POS Terminal Model No.:		M90
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode 5(1Mbps)	Test By:	Joe Yan





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 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.

VBW ≥ RBW Sweep = auto

Detector function = peak Trace = max hold

7.4.6 Test Results

EUT:	Smart POS Terminal	Model No.:	M90
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Joe Yan





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:	Smart POS Terminal	Model No.:	M90
Temperature:	20 ℃	Relative Humidity:	M90 48% Joe Yan
Test Mode:	Mode2/Mode3/Mode4	Test By:	Joe Yan

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 x 79) (s), Hops Over Occupancy Time comes to $(1600 / 6 / 79) \times (0.4 \times 79) = 106.67$ hops.
- 2. 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 $(800 / 6 / 20) \times (0.4 \times 20) = 53.33$ 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:	Smart POS Terminal	Model No.:	M90
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Joe Yan





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

 $RBW \ge the 20 dB$ bandwidth of the emission being measured

 $VBW \ge RBW$

Sweep = auto

Detector function = peak Trace = max hold

7.7.6 Test Results

EUT:	Smart POS Terminal Model No.:		M90	
Temperature:	20 ℃	Relative Humidity:	48%	
Test Mode:	Mode2/Mode3/Mode4	Test By:	Joe Yan	





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:	Smart POS Terminal	Model No.:	M90
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	Mode2 /Mode4/ Mode 5	Test By:	Joe Yan





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 FPC antenna (Gain: 1.3dBi). It comply with the standard requirement.





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 transmitter be presented with a continuous data (or information) stream. In addition, a system employing short 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.

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.





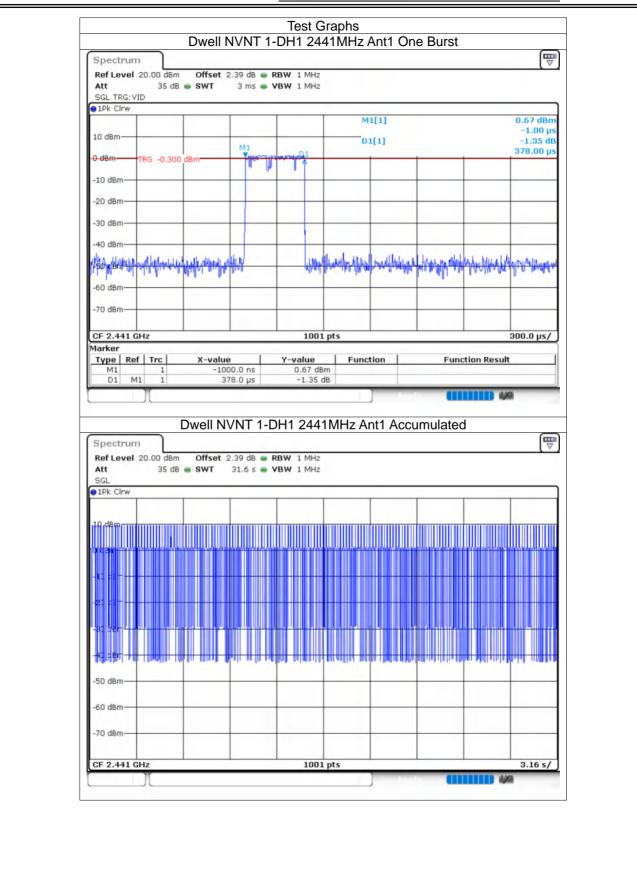
8 TEST RESULTS

8.1 DWELL TIME

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.378	77.112	204	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.63	200.49	123	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	256.32	89	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.384	79.488	207	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.635	207.645	127	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.888	248.368	86	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.387	80.496	208	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.635	206.01	126	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.896	251.952	87	31600	400	Pass











Spectrum	I NVNT 1-DH3 24	4 HVII IZ AHL			E
Ref Level 20.00 dBm Offse Att 35 dB = SWT	t 2.39 dB RBW 1 MHz 5 ms VBW 1 MHz				
SGL TRG: VID 1Pk Clrw					
M1		M1[1]			9.54 dBm 0000000 s
10 dBm		D1 D1[1]			-0.61 dB
- 0 dBm TRG -0.400 dBm 					.03000 ms
-10 dBm					
-20 dBm-					
-30 dBm					
-40 dBm					
assords with a the program of a grant of the second s		appenditions ball the	esternal particulations of the	para-Mana	harshanlad
-60 dBm					
-70 dBm					
CF 2.441 GHz	100	1 pts			500.0 µs/
Marker					,00.0 µ37
Type Ref Trc X-va	0.0 s 9.54 d	Bm	Fu	nction Result	
D1 M1 1	1.63 ms -0.61	ab	Reader 1		
					110
	NVNT 1-DH3 244	1MHz Ant1	Accumulate	d	
Spectrum					
Ref Level 20.00 dBm Offse	t 2.39 dB 🖷 RBW 1 MHz	1			
RefLevel 20.00 dBm Offse Att 35 dB = SWT SGL	t 2.39 dB 👄 RBW 1 MHz 31.6 s 👄 VBW 1 MHz				
Att 35 dB 🖷 SWT					
Att 35 dB SWT SGL 1Pk Clrw					
Att 35 dB 👄 SWT SGL					
Att 35 dB SWT SGL 1Pk Clrw					
Att 35 dB SWT SGL 1Pk Clrw					
Att 35 dB SWT SGL 1Pk Clrw					
Att 35 dB SWT SGL 1Pk Clrw 1D,dBm -10,dBm -10 2Bm -20 2Bm					
Att 35 dB SWT SGL 1Pk Clrw 10,dBm -10,dBm -10, 2Pm -20, 2Pm -20, 2Pm -20, 2Pm -20, 2Pm					
Att 35 dB SWT SGL 1Pk Clrw 1D,dBm -10,dBm -10 2Bm -20 2Bm	31.6 s • VBW 1 MHz				
Att 35 dB SWT SGL 1Pk Clrw 10,dBm 10,dBm 40 dBm 40 dBm	31.6 s • VBW 1 MHz				
Att 35 dB SWT SGL ■ ID ● 1Pk Clrw ■ ■ ■ ■ 1D, dBm ■ ■ ■ ■ ■ 10, dBm ■ ■ ■ ■ ■ ■ 10, dBm ■<	31.6 s • VBW 1 MHz				
Att 35 dB SWT SGL 1Pk Clrw 10,dBm 40 dBm 40 dBm 40 dBm -20 2Bm -20 2Bm -20 4Bm -50 dBm -60 dBm	31.6 s • VBW 1 MHz				
Att 35 dB SWT SGL 1Pk Clrw 10,dBm 10,dBm 40 dBm -10 28m -20 28m -50 dBm	31.6 s • VBW 1 MHz				
Att 35 dB SWT SGL 1Pk Clrw 10,dBm 40 dBm 40 dBm 40 dBm -20 2Bm -20 2Bm -20 4Bm -50 dBm -60 dBm	31.6 s • VBW 1 MHz				3.16 s/)
Att 35 dB SWT SGL • 1Pk Clrw • • 1D,dBm • • • • 0'dem • • • • • 1D,dBm • • • • • • • • • • • • • • • •	31.6 s • VBW 1 MHz				3.16 s/)
Att 35 dB SWT SGL • 1Pk Clrw • • 1D,dBm • • • • 0'dem • • • • • 1D,dBm • • • • • • • • • • • • • • • •	31.6 s • VBW 1 MHz				3.16 s/)

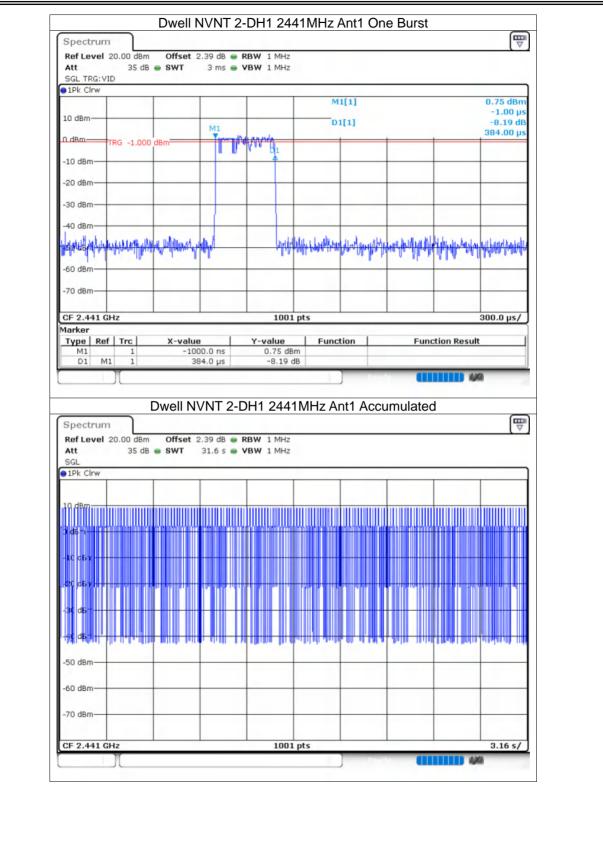




SGL TRG:VID 1Pk Clrw						
MI		D1	M1[1]			9.76 dBm 000000 s
10 dBm	· · · · · · · · · · · · · · · · · · ·	****	D1[1]			-0.23 dB 38000 ms
0 dBm TRG -0.20	0 dBm				2.0	50000 ms
-10 dBm						
-20 dBm						
-30 dBm						
-40 dBm			alelestration attraction and an and a	and and and all	and a training	al Carbos -
Mark Alin		- 4	vhdessowetseveloweterstandeler	unter la constatatata	าแนะที่เอาแทนหน่าน	JA NAMARA ANA
-60 dBm						
-70 dBm		_				
CF 2.441 GHz Marker		1001	pts		8	00.0 µs/
Type Ref Trc	X-value	Y-value	Function	Funct	tion Result	
M1 1 D1 M1 1	0.0 s 2.88 ms	9.76 dB -0.23 d				
			R.e.		4,40	
						- (715
	Dwell NVNT 1	1-DH5 2441	MHz Ant1 Acc	umulated		
Spectrum	Dwell NVNT 1	1-DH5 2441	MHz Ant1 Acc	cumulated		Ē
Spectrum			IMHz Ant1 Acc	cumulated		
Ref Level 20.00 dBr Att 35 d	n Offset 2.39 dB		MHz Ant1 Acc	cumulated		
Ref Level 20.00 dBr Att 35 d SGL	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc	cumulated		
Ref Level 20.00 dBr Att 35 d	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc	cumulated		
Ref Level 20.00 dBr Att 35 d SGL	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 dBr Att 35 di SGL 1Pk Cirw	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 dBr Att 35 di SGL 1Pk Clrw	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 dBr Att 35 di SGL 1Pk Clrw 10 dBm	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 dBr Att 35 dl SGL ● 1Pk Clrw 10 dBm 0 dBM	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 dBr Att 35 dl SGL 10/dBm 10/dBm 10/dBm	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 der Att 35 di SGL 120 dBm 10 dBm 10 dBm	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 der Att 35 di SGL 120 dBm 10 dBm 10 dBm	n Offset 2.39 dB	RBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 der Att 35 di SGL • 1Pk Clrw 10,dBm • 10,dBm 10,dBm • 10,dBm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz	IMHz Ant1 Acc			
Ref Level 20.00 der Att 35 di SGL ● 1Pk Clrw 10,dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 16Bm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 di SGL 1Pk Cirw 10,dBm 35 di 10,dBm 10,dBm -10 dBm 10,dBm -20 dBm 10,dBm -30 16Bm 10,dBm -50 dBm -50 dBm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 di SGL • ● 1Pk Cirw • 10,dBm • 10,dBm • -10 dBm • -20 dBm • -30 108m • -10 dBm •	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 dl SGL 1Pk Clrw 10,dBm 35 dl 10,dBm 10 db m -10 dBm 10 db m -20 dBm 10 dBm -31 dBm 10 dBm -50 dBm 50 dBm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 dl SGL 1Pk Clrw 10,dBm 10 10 dBm 10 -10 dBm 10 -20 dBm 10 -32 dBm 10 -50 dBm -60 dBm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 dl SGL 1Pk Clrw 10,dBm 10 10 dBm 10 -10 dBm 10 -20 dBm 10 -32 dBm 10 -50 dBm -60 dBm	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				
Ref Level 20.00 der Att 35 di SGL ● ● 1Pk Cirw 10,dBm ● 20,dBm ● -50,dBm ● -60,dBm ● -70,dBm ●	n Offset 2.39 dB B • SWT 31.6 s	RBW 1 MHz VBW 1 MHz				

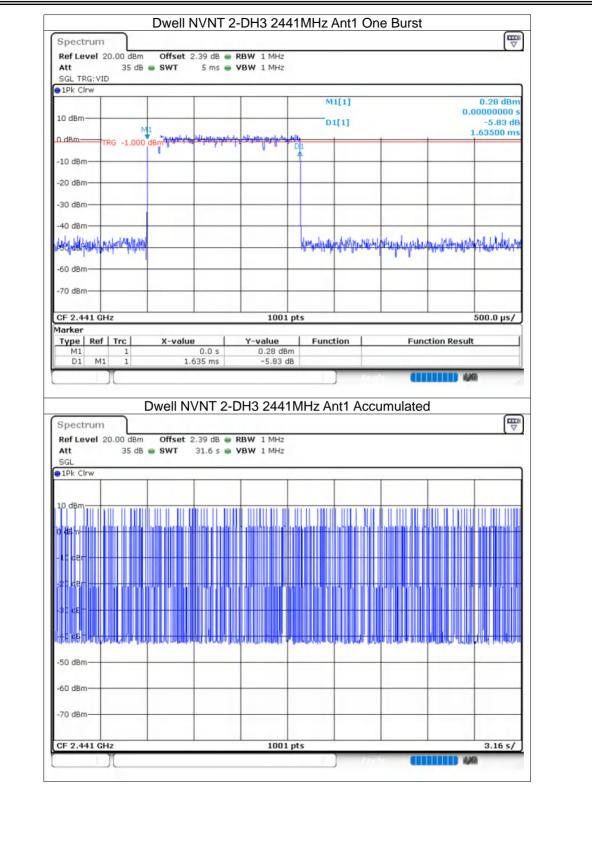












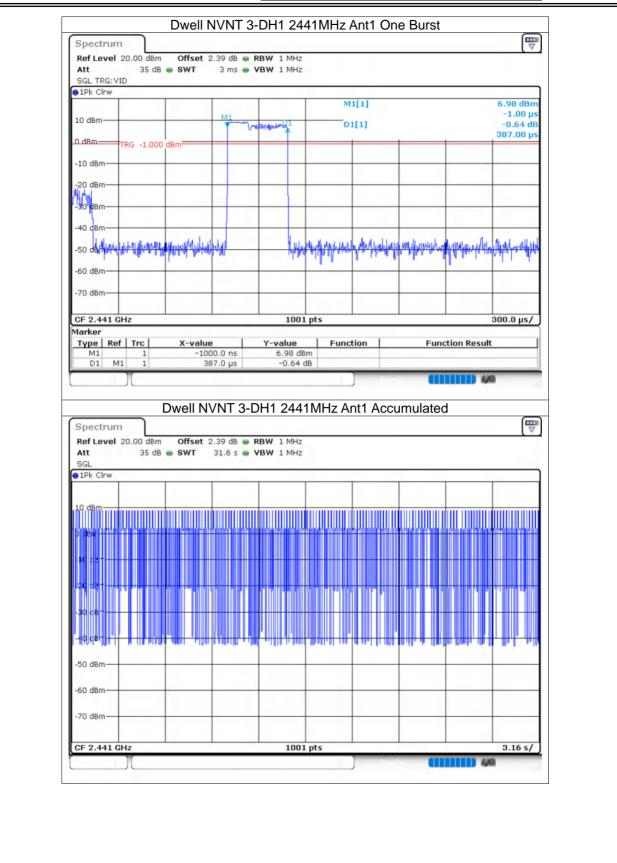




SGL TRG:VID 1Pk Clrw				
M1		M1[1]		8.79 dBm .00000000 s
10 dBm		D1[1]		-2.55 dB 2.88800 ms
n dBm TRG -1.200 dBm			<u> </u>	2.00000 ms
-10 dBm				
-20 dBm				
-30 dBm				
-40 dBm				
uter and a start we		www. Alyngamillidetranited	na na addittaitataalt kashatabbilih	J. Hickory and the state
		14 the th Manufactor of Annound	1 2 4 2 L W W M M W W L W Y Y Y	
-60 dBm				
-70 dBm				
CF 2.441 GHz	1	.001 pts		800.0 µs/
Marker Type Ref Trc X	(-value Y-valu		Function Resu	
M1 1	0.0 s 8.7	9 dBm	Function Resu	n
D1 M1 1	2.888 ms -2.	.55 dB		M3
)		-100
Dwe	ell NVNT 2-DH5 24	441MHz Ant1 Acc	umulated	
				⊴∎
Spectrum				
Ref Level 20.00 dBm O	ffset 2.39 dB 🖷 RBW 1 M			(~)
				(~)
RefLevel 20.00 dBm O Att 35 dB = S				
Ref Level 20.00 dBm O Att 35 dB S SGL 1Pk Clrw 1 1				
Ref Level 20.00 dBm O Att 35 dB S SGL				
Ref Level 20.00 dBm O Att 35 dB S SGL 1Pk Clrw 1 1				
Ref Level 20.00 dBm O Att 35 dB S SGL Image: Signal state st				
Ref Level 20.00 dBm O Att 35 dB S SGL 1Pk Clrw 10 dBm 10 dBm				
Ref Level 20.00 dBm O Att 35 dB S SGL Image: Signal and signal				
Ref Level 20.00 dBm O Att 35 dB S SGL Image: Signal and signal				
Ref Level 20.00 dBm O Att 35 dB S SGL	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL				
Ref Level 20.00 dBm O Att 35 dB S SGL	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL • • • 1Pk CIrw • 10 dBm • • 10 dBm • • -20 dBm • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • <t< td=""><td>WT 31.6 5 • VBW 1 M</td><td></td><td></td><td></td></t<>	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL - - 10 dBm - - 10 dBm - - 10 dBm - - -20 dBm - - -20 dBm - - -20 dBm - - -50 dBm - - -60 dBm - -	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL ID ID 10 dBm ID ID -20 dBm ID ID -20 dBm ID ID -50 dBm ID ID	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL ID ID 10 dBm ID ID -10 dBm ID ID -20 dBm ID ID -50 dBm ID ID	WT 31.6 5 • VBW 1 M			
Ref Level 20.00 dBm O Att 35 dB S SGL IPk Clrw III 10 dBm IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	WT 31.6 5 • VBW 1 M			3.16 s/

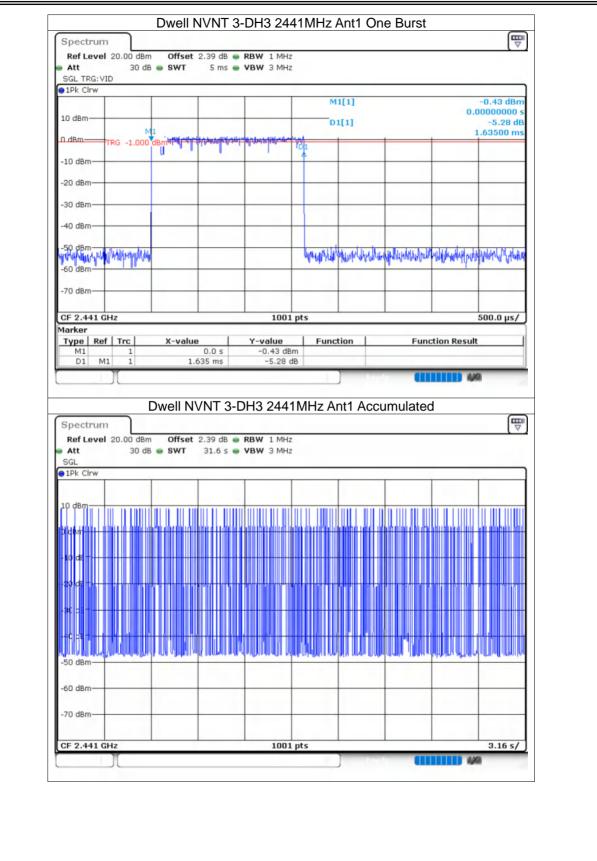






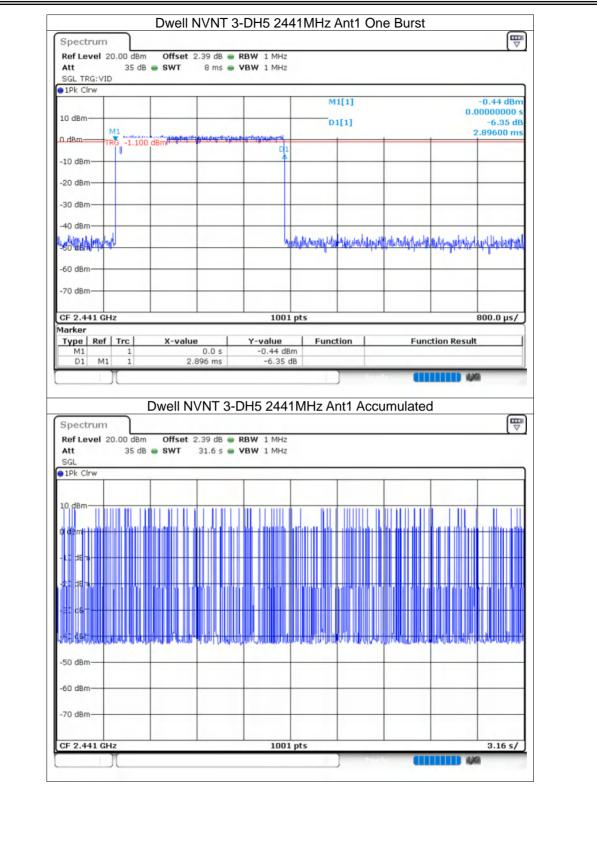
















8.2 MAXIMUM CONDUCTED OUTPUT POWER

	Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
	NVNT	1-DH5	2402	Ant1	7.93	21	Pass
	NVNT	1-DH5	2441	Ant1	7.21	21	Pass
Ī	NVNT	1-DH5	2480	Ant1	6.43	21	Pass
	NVNT	2-DH5	2402	Ant1	7.23	21	Pass
Ī	NVNT	2-DH5	2441	Ant1	6.27	21	Pass
Ī	NVNT	2-DH5	2480	Ant1	6.01	21	Pass
	NVNT	3-DH5	2402	Ant1	7.19	21	Pass
Ī	NVNT	3-DH5	2441	Ant1	6.23	21	Pass
	NVNT	3-DH5	2480	Ant1	6.05	21	Pass

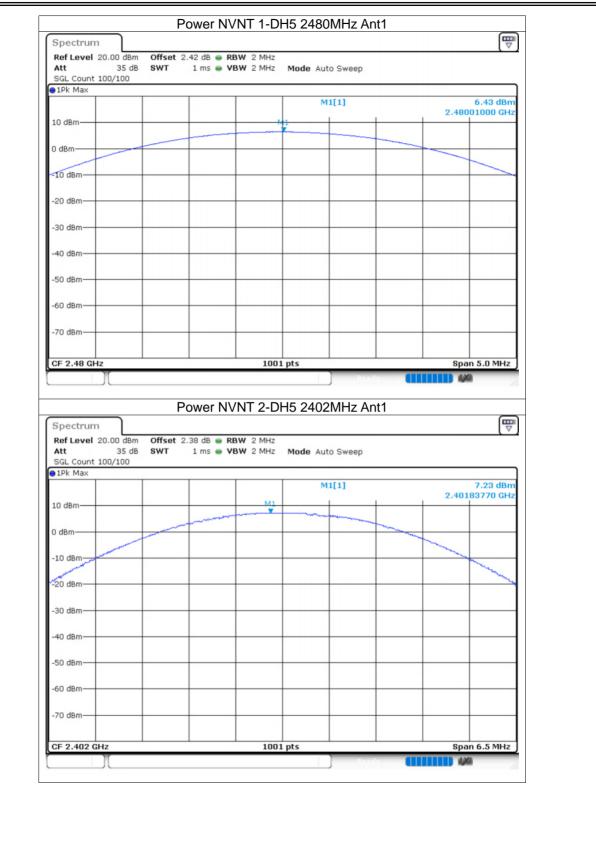




Spectrum Ref Level 20.00 dBm			raphs 15 2402MHz A			
Att 35 dE SGL Count 100/100			Mode Auto Sweep			
			M1[1]			7.93 dBm
10 dBm		N	1	+ +	2.402	02000 GHz
0 dBm						
-10 dBm						
-20 dBm						
20 0011						
-30 dBm						
-40 dBm		_				
-50 dBm						
-60 dBm						
-70 dBm						
-/o dbiii						
					- Cna	n 5.0 MHz
Spectrum			H5 2441MHz A	nt1		
Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100	n Offset 2.39 dB 👄	NVNT 1-DF	Re.	nt1		10
Spectrum Ref Level 20.00 dBr Att 35 dE	n Offset 2.39 dB 👄	NVNT 1-DF	15 2441MHz A	nt1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep	atv ())		
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 PIPk Max 10 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 PIPk Max 10 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm -10 dBm -20 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 PIPk Max 10 dBm 0 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm -10 dBm -20 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 P1Pk Max 10 dBm -10 dBm -20 dBm -30 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 ID dBm 0 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	xdv ()		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	xnt1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 ID dBm 0 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 ● 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -60 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep M1[1]	Int1		₩ 7.21 dBm
Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -60 dBm	n Offset 2.39 dB 👄	NVNT 1-DF	H5 2441MHz A Mode Auto Sweep		2.441	7.21 dBm 07990 GHz







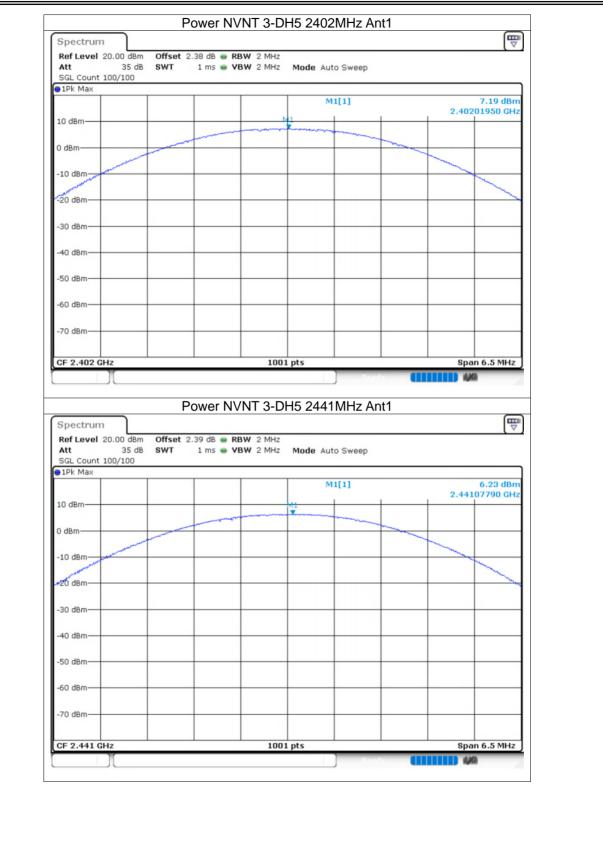






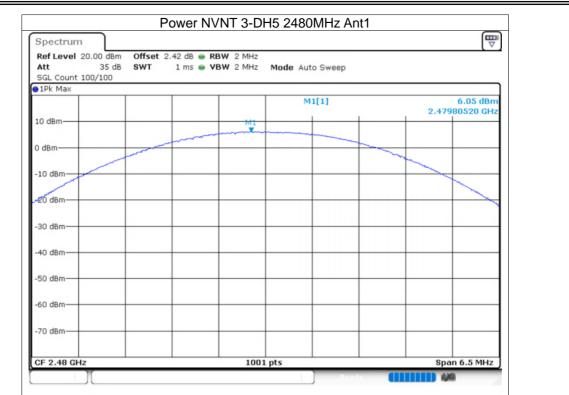
















8.3 -20DB BANDWIDTH

0.3 -2000 0						
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.838	0	Pass
NVNT	1-DH5	2441	Ant1	0.864	0	Pass
NVNT	1-DH5	2480	Ant1	0.862	0	Pass
NVNT	2-DH5	2402	Ant1	1.312	0	Pass
NVNT	2-DH5	2441	Ant1	1.248	0	Pass
NVNT	2-DH5	2480	Ant1	1.254	0	Pass
NVNT	3-DH5	2402	Ant1	1.292	0	Pass
NVNT	3-DH5	2441	Ant1	1.286	0	Pass
NVNT	3-DH5	2480	Ant1	1.3	0	Pass



















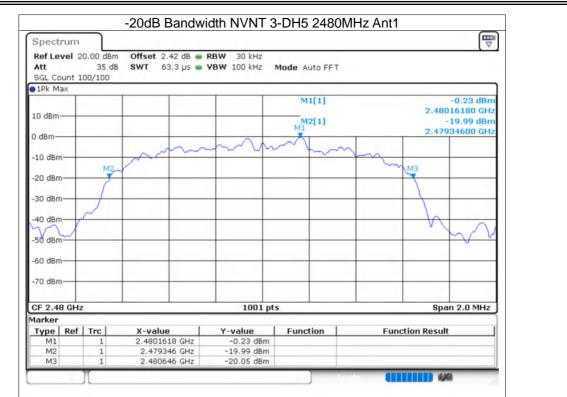














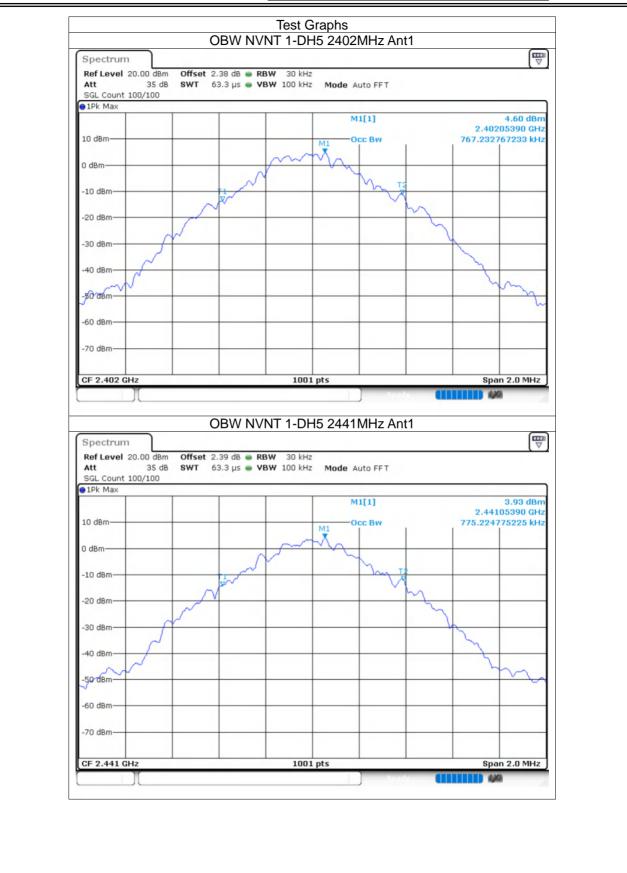


8.4 OCCUPIED CHANNEL BANDWIDTH

U .										
	Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)					
	NVNT	1-DH5	2402	Ant1	0.767					
	NVNT	1-DH5	2441	Ant1	0.775					
	NVNT	1-DH5	2480	Ant1	0.743					
	NVNT	2-DH5	2402	Ant1	1.153					
	NVNT	2-DH5	2441	Ant1	1.173					
	NVNT	2-DH5	2480	Ant1	1.145					
	NVNT	3-DH5	2402	Ant1	1.175					
	NVNT	3-DH5	2441	Ant1	1.149					
	NVNT	3-DH5	2480	Ant1	1.155					

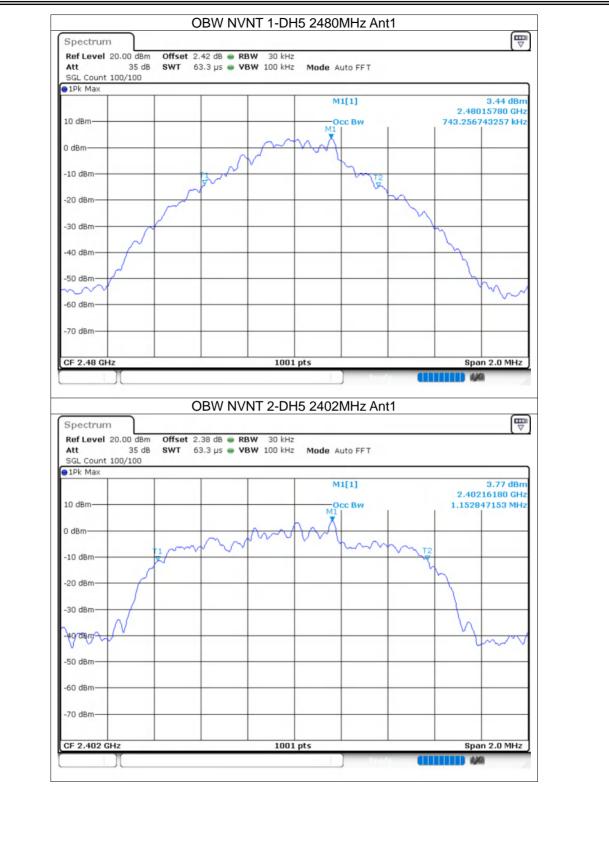






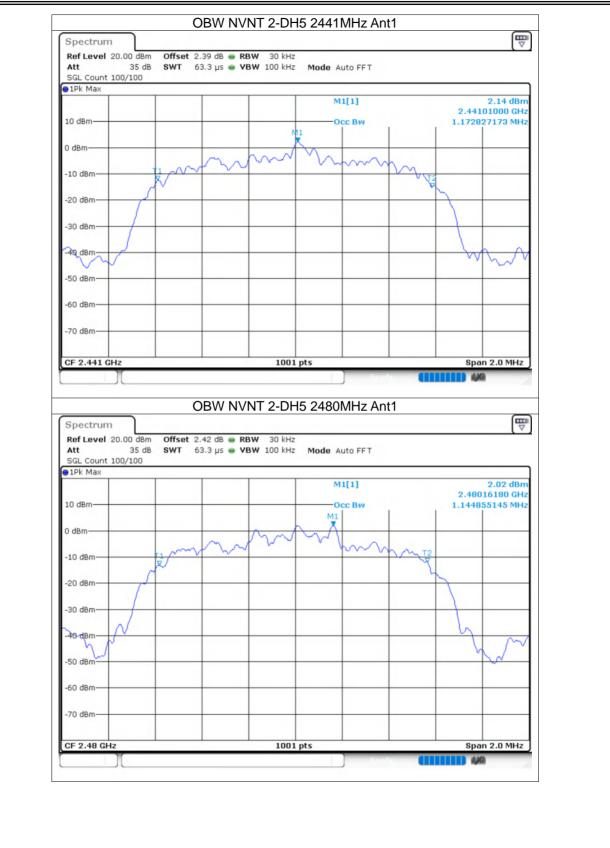












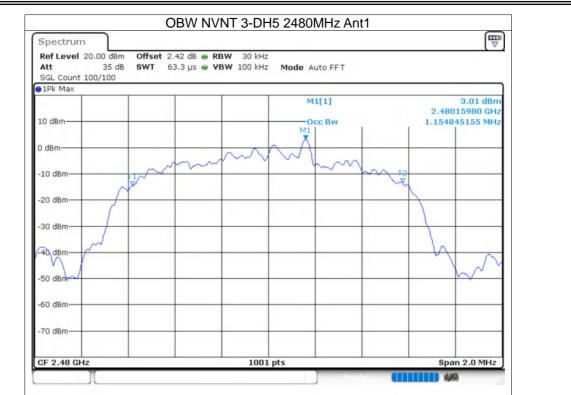
















8.5 CARRIER FREQUENCIES SEPARATION

U .,											
	Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict			
	NVNT	1-DH5	Ant1	2402.158	2403.16	1.002	0.559	Pass			
	NVNT	1-DH5	Ant1	2440.972	2441.974	1.002	0.576	Pass			
	NVNT	1-DH5	Ant1	2479.054	2480.054	1	0.575	Pass			
	NVNT	2-DH5	Ant1	2402.01	2403.01	1	0.875	Pass			
	NVNT	2-DH5	Ant1	2441.073	2442.064	0.991	0.832	Pass			
	NVNT	2-DH5	Ant1	2479.001	2480.009	1.008	0.836	Pass			
	NVNT	3-DH5	Ant1	2402.16	2403.16	1	0.861	Pass			
	NVNT	3-DH5	Ant1	2441.009	2442.011	1.002	0.857	Pass			
	NVNT	3-DH5	Ant1	2479.158	2480.16	1.002	0.867	Pass			



















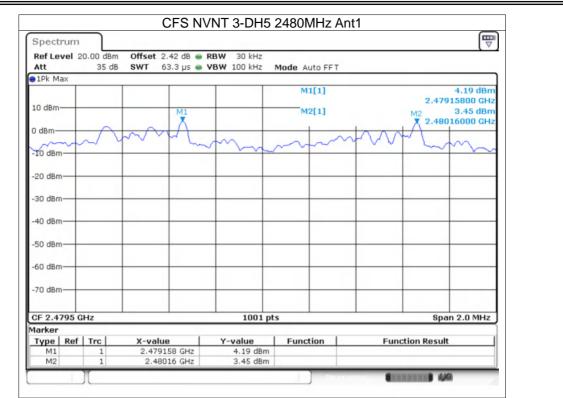














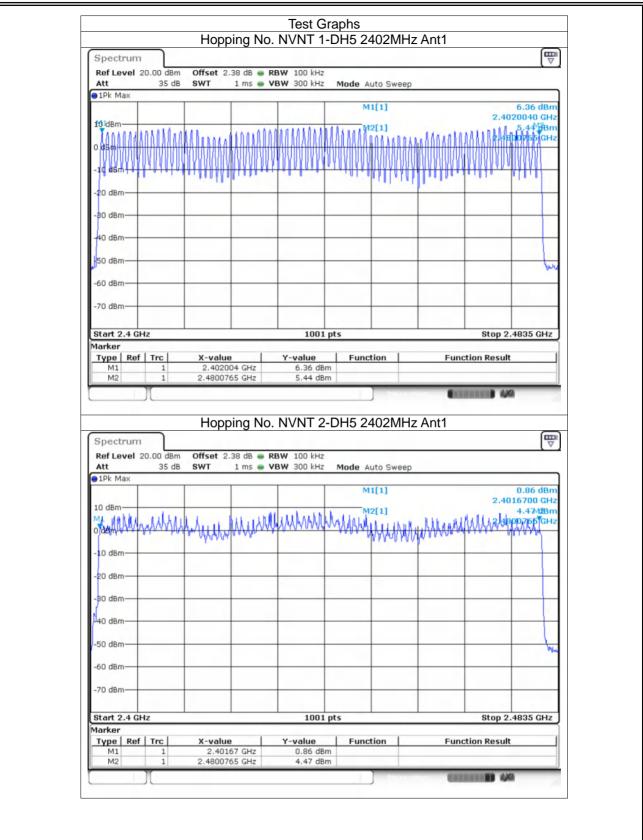


8.6 NUMBER OF HOPPING CHANNEL

	Condition	Mode	Antenna	Hopping Number	Limit	Verdict				
ſ	NVNT	1-DH5	Ant1	79	15	Pass				
	NVNT	2-DH5	Ant1	79	15	Pass				
ſ	NVNT	3-DH5	Ant1	79	15	Pass				











Spectrun Ref Level	20.00 dBn	n Offset 2.39 da	RBW 100 kHz	,				
Att	35 di		VBW 300 kHz		Auto Sweep			
1Pk Max				induo	nate enteep			
					M1[1]		2.4	4.32 dBm 019205 GHz
0 dBm				1.7	M2[1]		2.4	-0.58 dBm
N. J. d	AH. ALLA	M	And MARANA	AhA have	A Lord I	dalakaan	All the	BDH940/QHz
19944-000	A Area A M IV	ᡥᡟᡃᡃᡰᢂ᠕᠕ᡀᢔᢂᢧᡐᡐ		- Martha	MAAAA	WARVAN	Mr. I. Maria	al flyward
		1.0 1.0						
10 dBm								
20 dBm								
30 dBm								
40 dBm					-			
50 dBm		+ + +						have
60 dBm								
70 dBm								
o ubin								
							01	
tart 2.4 (arker	aHZ		100	1 pts			stop	2.4835 GHz
	f Trc	X-value	Y-value	1 Eur	ction	Euro	tion Resu	lt 1
M1	1	2.4019205 GHz				Fun	Alon Kesu	
M2	1	2.480494 GHz	-0.58 dB	Bm				





8.7 BAND EDGE

0.7 DAND LD										
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict			
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.43	-20	Pass			
NVNT	1-DH5	2480	Ant1	No-Hopping	-58.29	-20	Pass			
NVNT	2-DH5	2402	Ant1	No-Hopping	-54.89	-20	Pass			
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.65	-20	Pass			
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.69	-20	Pass			
NVNT	3-DH5	2480	Ant1	No-Hopping	-57.88	-20	Pass			





Spectrum Ref Level 20.00 dBm						₽
Att 35 de SGL Count 100/100	8 SWT 18.9 µs 🖷	VBW 300 kHz	Mode Auto FFT			
1Pk Max	1		M1[1]		7	.04 dBm
10 dBm-		MI			2.40202	
10 dbm			7			
0 dBm						
-10 dBm				_		
-20 dBm						
-30 dBm						
-40 dBm						
			۳)			
-50 dBm	hours			hand	m	har
-60 dBm	v			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		-
-70 dBm						
-yo dom						
05.0.100.011-		1001 p			Span 8	
	Edge NVNT 1-I		Re	Hopping Em	130	10
Band E Spectrum Ref Level 20.00 dBr Att 35 dB		DH5 2402M	Hz Ant1 No-H		130	
Band E Spectrum Ref Level 20.00 dBr	Offset 2.38 dB	DH5 2402M	Hz Ant1 No-H		130	10
Band E Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 PIPK Max	Offset 2.38 dB	DH5 2402M	Hz Ant1 No-H		nission	.76 dBm
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 P1Pk Max 10 dBm	Offset 2.38 dB	DH5 2402M	IHz Ant1 No-H Mode Auto FFT		nission 6 2.40205 -54	.76 dBm 008/⊊Hz .99 ∎Bm
Band E Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 1Pk Max 10 dBm 0 dBm	Offset 2.38 dB	DH5 2402M	IHz Ant1 No-H Mode Auto FFT		nission 6 2,40205	.76 dBm 008/⊊Hz .99 ∎Bm
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 PIPk Max 10 dBm -10 dBm D1 -12.95	0 Offset 2.38 dB 3 SWT 227.5 µs 1	DH5 2402M	IHz Ant1 No-H Mode Auto FFT		nission 6 2.40205 -54	.76 dBm 008/⊊Hz .99 ∎Bm
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm D1 -12.95 -20 dBm	0 Offset 2.38 dB 3 SWT 227.5 µs 1	DH5 2402M	IHz Ant1 No-H Mode Auto FFT		nission 6 2.40205 -54	.76 dBm 008/⊊Hz .99 ∎Bm
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 INF Max 10 dBm 0 dBm -10 dBm -30 dBm	0 Offset 2.38 dB 3 SWT 227.5 µs 1	DH5 2402M	IHz Ant1 No-H Mode Auto FFT		nission 6 2.40205 -54	.76 dBm 008/⊊Hz .99 ∎Bm
Band E Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 ID dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	6 dBm	DH5 2402M RBW 100 kHz VBW 300 kHz	IHz Ant1 No-F Mode Auto FFT		6 2.40205 -54 2.40000	.76 dBm 000/GHz .99 Bm 000 GHz
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm -30 dBm -30 dBm -50 dBm	6 dBm	DH5 2402M RBW 100 kHz VBW 300 kHz	IHz Ant1 No-H Mode Auto FFT		nission 6 2.40205 -54	.76 dBm 000/GHz .99 Bm 000 GHz
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPK Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	6 dBm	DH5 2402M RBW 100 kHz VBW 300 kHz	IHz Ant1 No-F Mode Auto FFT		6 2.40205 -54 2.40000	.76 dBm 000/GHz .99 Bm 000 GHz
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm -30 dBm -30 dBm -50 dBm	6 dBm	DH5 2402M RBW 100 kHz VBW 300 kHz	IHz Ant1 No-F Mode Auto FFT		6 2.40205 -54 2.40000	.76 dBm 000/GHz .99 Bm 000 GHz
Band E Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 ● 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.306 GHz	6 dBm	DH5 2402M RBW 100 kHz VBW 300 kHz	IHz Ant1 No-F Mode Auto FFT 		6 2.40205 -54 2.40000	.76 dBm 0001⊊H2 .99 βBm 000 GH2
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 In dBm In dBm In dBm In dBm In dBm In dBm Ref Level 20.00 dBm In	Offset 2.38 dB SWT 227.5 µs SWT 227.5 µs 6 dBm 6 dBm 4 4	DH5 2402M	IHz Ant1 No-F	ulagaratheratheratheratheratheratheratherath	6 2.40205 -54 2.40000	.76 dBm 0001⊊H2 .99 βBm 000 GH2
Band E Spectrum Ref Level 20.00 dBm Att 35 dE SGL Count 100/100 IPk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.306 GHz Marker	6 dBm	DH5 2402M	IHz Ant1 No-F	ulagaratheratheratheratheratheratheratherath	6 2.40205 -54 2.40000	.76 dBm 0001⊊H2 .99 βBm 000 GH2
Band E Spectrum Ref Level 20.00 dBn Att 35 dE SGL Count 100/100 IN Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -50 dBm -70 dBm Start 2.306 GHz Marker Type Ref M1 1	Offset 2.38 dB SWT 227.5 µs	DH5 2402M	Mode Auto FFT Mode Auto FFT M1[1] M2[1] M2[1]	ulagaratheratheratheratheratheratheratherath	6 2.40205 -54 2.40000	.76 dBm 0001⊊H2 .99 βBm 000 GH2





Spectrum Ref Level 20.00 de	3m Offset 2.42 dB 🕳 I	RBW 100 kHz			
Att 35 0 SGL Count 100/100	dB SWT 18.9 µs 🕳 '	VBW 300 kHz	Mode Auto FFT		
●1Pk Max	1 1				
			M1[1]		5.61 dBm 2.48000000 GHz
10 dBm-		M			
0 dBm			7		
-10 dBm					
-20 dBm					
-30 dBm					
-40 dBm					
		1			
-50 dBm	a a mont	Y	m	hant	0 00 0 00
-60 dBm	V WWWWW				w w www
-70 dBm					
CF 2.48 GHz		1001	nte		Span 8.0 MHz
CF 2.40 GH2		1001	pes		
Spectrum Ref Level 20.00 de	8m Offset 2.42 dB 🖷	RBW 100 kHz			sion (\P
Ref Level 20.00 de	dB SWT 227.5 µs 🖷				
Ref Level 20.00 dB Att 35	dB SWT 227.5 µs 🖷		Mode Auto FFT		₹
Ref Level 20.00 de Att 35 SGL Count 100/100	dB SWT 227.5 µs 🖷		Mode Auto FFT		5.60 dBm 2.47995000 GHz
Ref Level 20.00 de Att 35 d SGL Count 100/100 1Pk Max	dB SWT 227.5 µs 🖷		Mode Auto FFT		5.60 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 IPk Max 10/dBm 0 dBm	dB SWT 227.5 µs 🖷		Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 IN Max 10/dBm 0 dBm -10 dBm D1 -14.3	dB SWT 227.5 µs ●		Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 of 35	dB SWT 227.5 µs ●		Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10/dBm 0 dBm -10 dBm -20 cBm -30 cBm	dB SWT 227.5 µs ●		Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 • 1Pk Max 10'dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	dB SWT 227.5 µs ●		Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10/dBm 0 dBm -10 dBm -20 cBm -30 cBm	dB SWT 227.5 µs ●	VBW 300 kHz	Mode Auto FFT		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10/dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1]		5.60 dBm 2.47995000 GHz -55.11 dBm
Ref Level 20.00 dB Att 35 SGL Count 100/100 ● 1Pk Max 10/dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -40 dBm -50 dBm -50 dBm	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1]		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10/dBm 0 dBm -10 dBm -20 cBm -30 cBm -40 dBm -50 dBm -70 dBm -70 dBm	dB SWT 227.5 µs •	VBW 300 kHz	: Mode Auto FFT 		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 ● 1Pk Max 10/dBm 0 dBm -10 dBm -20 cBm -30 cBm -30 cBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GHz Marker	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1] M2		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 • 1Pk Max 10'dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm Start 2.476 GHz Marker Type Ref M1 1	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1] M2[1] pts Function n		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10/dBm 0 0 dBm 0 -10 dBm 0 -20 dBm 0 -30 dBm 0 -40 dBm 0 -50 dBm 0 -70 dBm 0 -70 dBm 0 Start 2.476 GHz Marker Type Ref Trc M1 1 1 M2 1 1	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1] M2[1] NM/A, Ju/A(,, N, N		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz
Ref Level 20.00 dB Att 35 SGL Count 100/100 1Pk Max 10'dBm 0 dBm -10 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm Start 2.476 GHz Marker Type Ref M1 1	dB SWT 227.5 µs •	VBW 300 kHz	Mode Auto FFT M1[1] M2[1] M2[1] ph//bu/M_payAnyanya pts In n n n		5.60 dBm 2.47995000 GHz -55.11 dBm 2.48350000 GHz





Att	20.00 dBm 35 dB t 100/100				Mode A	uto FFT			
IPk Max	100/100								
					м	1[1]			5.71 dBn
10 dBm-					MI			2.402	15180 GH
					X				
0 dBm				Man	1 g				
10.10									
-10 dBm—									
-20 dBm—									
-30 dBm—									
-40 dBm—		1	m	1		Mon			
To abin									
-50 dBm—		hm					Lam		0
m	\sim						W. 5 V	m	m
-60 dBm—									
-70 dBm—									
CF 2.402	GHz			1001	pts			Sna	n 8.0 MHz
Spectru Ref Leve	m	dge NVN				<u>1 No-Ho</u>	opping E	mission	
Ref Leve Att SGL Coun	m I 20.00 dBm 35 dB		8 dB 👄 F	RBW 100 kHz	z		opping E	mission	
Ref Leve Att	m I 20.00 dBm 35 dB	Offset 2.3	8 dB 👄 F	RBW 100 kHz	z Mode	Auto FFT	opping E	mission	
Ref Leve Att SGL Coun	m I 20.00 dBm 35 dB	Offset 2.3	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBr 215000,GH
Ref Leve Att SGL Coun 1Pk Max	m I 20.00 dBm 35 dB	Offset 2.3	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn
Ref Leve Att SGL Coun 1Pk Max 10 dBm- 0 dBm-	m I 20.00 dBm 35 dB	Offset 2.3	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Coun PIPK Max 10 dBm- 0 dBm- -10 dBm-	m I 20.00 dBm 35 dB	Offset 2.3 SWT 227	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Coun 1Pk Max 10 dBm- 0 dBm-	m 1 20.00 dBm 35 dB t 100/100	Offset 2.3 SWT 227	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Coun PIPK Max 10 dBm- 0 dBm- -10 dBm-	m 1 20.00 dBm 35 dB t 100/100	Offset 2.3 SWT 227	8 dB 👄 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Coun 1Pk Max 10 dBm- -10 dBm- -20 dBm-	m 1 20.00 dBm 35 dB t 100/100	Offset 2.3 SWT 227	8 dB 🕳 F	RBW 100 kHz	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Coun 1Pk Max 10 dBm- 0 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-	m 1 20.00 dBm 35 dB t 100/100	Offset 2.3 SWT 227	8 dB • к	28 100 kH; 78 300 kH;	z Mode . Mode	Auto FFT	opping E	2.402	5.28 dBn 215000 gH 52.30 ∎Bn
Ref Leve Att SGL Count 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	m 1 20.00 dBm 35 dB t 100/100	Offset 2.3 SWT 227	8 dB • к	RBW 100 kHz	z Mode . Mode	Auto FFT		2.402	5.28 dBn 15000, gH 52.30 JBn 00000 GH
Ref Leve Att SGL Coun 1Pk Max 10 dBm	m 35 dB t 100/100	Offset 2.3 SWT 227	8 dB • к	28 100 kH; 78 300 kH;	2 Mode M	Auto FFT 1[1] 2[1]		2.402	5.28 dBn 15000, gH 52.30 JBn 00000 GH
Ref Leve Att SGL Count 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	m 35 dB t 100/100	Offset 2.3 SWT 227	8 dB • к	28 100 kH; 78 300 kH;	2 Mode M	Auto FFT 1[1] 2[1]		2.402	5.28 dBn 15000, gH 52.30 JBn 00000 GH
Ref Leve Att SGL Coun ID dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm	D1 -14.290	Offset 2.3 SWT 227	8 dB • к	88W 100 kH2 78W 300 kH2	2 Mode M	Auto FFT 1[1] 2[1]		2.400 2.400 	5.28 dBn 15000, GH 52.30 yBn 000000 GH
Ref Leve Att SGL Coun 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	D1 -14.290	Offset 2.3 SWT 227	8 dB • к	28 100 kH; 78 300 kH;	2 Mode M	Auto FFT 1[1] 2[1]		2.400 2.400 	5.28 dBn 15000, gH 52.30 JBn 00000 GH
Ref Leve Att SGL Count 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -70 dBm Start 2.30 Marker Type	m 1 20.00 dBm 35 dB 1 100/100 D1 -14.290 D1 -14.290 06 GHz ef [Trc]	Offset 2.3 SWT 227	M4	2BW 100 kH; /BW 300 kH; ////////////////////////////////////	2 Mode M M M M pts Func	Auto FFT 1[1] 2[1]	ella (Cr. yoshelve)	2.400 2.400 	5.28 dBn 215000 GH
Ref Leve Att SGL Coun 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -70 dBm -70 dBm Marker	m 1 20.00 dBm 35 dB t 100/100 D1 -14.290 01 -14.290 06 GHz	Offset 2.3 SWT 227	M4	28W 100 kH2 28W 300 kH2	2 Mode M	Auto FFT 1[1] 2[1]	ella (Cr. yoshelve)	2.402 2.400	5.28 dBn 215000 GH
Ref Leve Att SGL Coun 9 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -70 dBm Start 2.30 Marker Type M1 M2 M3	m 1 20.00 dBm 35 dB 1 100/100 D1 -14.290 D1 -14.290 D6 GHz B6 GHz B6 GHz 1 1 1	Offset 2.3 SWT 227.	M4 GHz GHz GHz GHz GHz	28 W 100 kH; 28 W 300 kH; 29 W 300 kH; 20	2 Mode M M m pts Func m m m	Auto FFT 1[1] 2[1]	ella (Cr. yoshelve)	2.402 2.400	5.28 dBn 215000 GH
Ref Leve Att SGL Coun IDK Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm Start 2.30 Marker Type R M1 M2	m 1 20.00 dBm 35 dB 1 100/100 D1 -14.290 D1 -14.290 06 GHz 06 GHz 06 GHz 1 1	Offset 2.3 SWT 227	M4 GHz GHz GHz GHz GHz	200 kH2 200 kH	2 Mode M M m pts Func m m m	Auto FFT 1[1] 2[1]	ella (Cr. yoshelve)	2.402 2.400	5.28 dBn 215000 GH





Ref Level 20.00 Att SGL Count 100/2	35 dB SWT 1		BW 100 kHz BW 300 kHz		uto FFT			
● 1Pk Max	100							
				м	1[1]		0.400	4.47 dBn
10 dBm				1			2,480	02400 GH
				<u>k</u>				
0 dBm			~	N.				
-10 dBm								
-10 0811								
-20 dBm								
-30 dBm								
-40 dBm			V		1			
		1			1 ha			
-50 dBm		~~			14		0.00	
m	m					w. m	white	m
-60 dBm								
-70 dBm								
CF 2.48 GHz			1001	pts			Spa	n 8.0 MHz
Spectrum Ref Level 20.00		2.42 dB 👄 I	RBW 100 kH	z		opping E	mission	
Spectrum Ref Level 20.00 Att SGL Count 100/1	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z		opping E	mission	
Spectrum Ref Level 20.00 Att	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z Iz Mode /	Auto FFT	opping E	mission	
Spectrum Ref Level 20.00 Att SGL Count 100/1	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH:
Spectrum Ref Level 20.00/ Att SGL Count 100/: P1Pk Max 10;dBm	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/1 • 1Pk Max 10rdBm 0 dBm	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPk Max • IPk Max • 0 dBm -10 dBm • 01 -1	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/3 1Pk Max 10kgm 0 dgm -10 dgm	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPk Max • IPk Max • 0 dBm -10 dBm • 01 -1	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/3 ● 1Pk Max 10;dBm 0 dBm -10 dBm -20 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH	z Z Mode /	Auto FFT	opping E	2.479	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/1 ● 1Pk Max 10;dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT	opping E	2.479 - 2.483	4.25 dBn 995000 GH: 54.49 dBn 550000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max 10rd@m • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.479 - 2.483	4.25 dBn 95000 GH 54.49 dBn
Spectrum Ref Level 20.00 Att SGL Count 100/1 ● 1Pk Max 10;dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.479 - 2.483	4.25 dBn 995000 GH: 54.49 dBn 550000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max 10rd@m • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.479 - 2.483	4.25 dBn 995000 GH: 54.49 dBn 550000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max • IPK Max • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm	14 Ma	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.479 2.483	4.25 dBn 95000 GH: 54.49 dBn 50000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPk Max • IPk Max • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	14 Ma	2.42 dB 🕳 I 27.5 µs 🖷 '	RBW 100 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.479 2.483	4.25 dBn 995000 GH: 54.49 dBn 550000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPk Max • IPk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GHz Marker Type Ref	0 dBm Offset 2 35 dB SWT 22 100 15.531 dBm 14 M3 الم المعالية 14 M3 الم المعالية 14 M3	2.42 dB 27.5 μs 27.5	RBW 100 kH	z Mode / M M ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا	Auto FFT 1[1] 2[1]) 	2.479 2.483	4.25 dBn 995000 GH: 54.49 dBn 50000 GH: 50000 GH: 2.576 GHz
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max • IPK Max 10,dBm • 0 dBm -10 cBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GHz Marker Type Ref Tr Ma	C X-value 1 2.479 1 2.48	2.42 dB 27.5 μs 27.5	RBW 100 kH VBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]) 	2.479 2.483	4.25 dBn 995000 GH: 54.49 dBn 50000 GH: 50000 GH: 2.576 GHz
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max 10rd@m • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GHz Marker Type M1 M3	OdBm Offset 2 35 dB SWT 22 100 1 24 1 2.479 1 1 2.479 1	2.42 dB 27.5 μs 27.5	RBW 100 kH VBW 300 kH 	Z Mode /	Auto FFT 1[1] 2[1]) 	2.479 2.483	4.25 dBn 995000 GH: 54.49 dBn 50000 GH: 50000 GH: 2.576 GHz
Spectrum Ref Level 20.00 Att SGL Count 100/1 • IPK Max 10rd@m • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GHz Marker Type M1 M3	OdBm Offset 2 35 dB SWT 22 100 1 24 1 2.479 1 1 2.479 1	2.42 dB 27.5 μs 27.5	RBW 100 kH VBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]) 	2.479 2.483	4.25 dBn 995000 GH: 54.49 dBn 50000 GH: 50000 GH: 2.576 GHz





	dB SWT 18.9 µs 👄		lode Auto FFT		
SGL Count 100/100 1Pk Max					
TEK Man			M1[1]		6.62 dBm
				2	.40184020 GHz
10 dBm		- M1			
0 dBm		and a			
o dom			\mathbf{X}		
-10 dBm					
-20 dBm-					
-30 dBm					
-40 dBm-	m	~	mas		_
				V I	
-50 dBm	m	+		mat	•
mon	m · · · ·			mon	m
-60 dBm		+ +			
70 d0m					
-70 dBm-					
CF 2.402 GHz		1001 pts			Span 8.0 MHz
Spectrum Ref Level 20.00 dt		RBW 100 kHz		lopping Emiss	ion (\Pw
Spectrum Ref Level 20.00 dt Att 35 SGL Count 100/100	3m Offset 2.38 dB 🖷 dB SWT 227.5 µs 🖷	RBW 100 kHz		lopping Emiss	
Spectrum Ref Level 20.00 da Att 35	3m Offset 2.38 dB 🖷 dB SWT 227.5 µs 🖷	RBW 100 kHz			6.85 dBm
Spectrum Ref Level 20.00 dt Att 35 SGL Count 100/100	3m Offset 2.38 dB 🖷 dB SWT 227.5 µs 🖷	RBW 100 kHz	Mode Auto FFT		6.85 dBm .4021500@/⊈H2
Spectrum Ref Level 20.00 di Att 35 SGL Count 100/100 P1Pk Max 10 dBm	3m Offset 2.38 dB 🖷 dB SWT 227.5 µs 🖷	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm
Spectrum Ref Level 20.00 dk Att 35 SGL Count 100/100 ●1Pk Max 10 dBm 0 dBm	3m Offset 2.38 dB 🖷 dB SWT 227.5 µs 🖷	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm .4021500¢/€Hz -52.93 ₿Bm
Spectrum Ref Level 20.00 dá Att 35 SGL Count 100/100 P1Pk Max 10 dBm	3m Offset 2.38 dB dB SWT 227.5 μs	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm .4021500¢/€Hz -52.93 ₿Bm
Spectrum Ref Level 20.00 dt Att 35 SGL Count 100/100 • 1Pk Max 10 dBm • 0 dBm -10 dBm	3m Offset 2.38 dB dB SWT 227.5 μs	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm .4021500¢/€Hz -52.93 ₿Bm
Spectrum Ref Level 20.00 dd Att 35 SGL Count 100/100 ● 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm	3m Offset 2.38 dB dB SWT 227.5 μs	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm .4021500¢/€Hz -52.93 ₿Bm
Spectrum Ref Level 20.00 df Att 35 SGL Count 100/100 • 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	3m Offset 2.38 dB dB SWT 227.5 μs	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm .4021500¢/€Hz -52.93 ₿Bm
Spectrum Ref Level 20.00 dk Att 35 SGL Count 100/100 ●1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm	Bm Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz	Mode Auto FFT	2	6.85 dBm ,40215000/gHz -52.93 ₫Bm ,40000000 GHz
Spectrum Ref Level 20.00 df Att 35 SGL Count 100/100 • 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2	6.85 dBm .40215000/gHz -52.93 ∦Bm .40000000 GHz
Spectrum Ref Level 20.00 dd Att 35 SGL Count 100/100 ● 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2	6.85 dBm .40215000/gHz -52.93 ∦Bm .40000000 GHz
Spectrum Ref Level 20.00 dt Att 35 SGL Count 100/100 • 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2	6.85 dBm .40215000/gHz -52.93 ∦Bm .40000000 GHz
Spectrum Ref Level 20.00 dk Att 35 SGL Count 100/100 • 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2	6.85 dBm .40215000/gHz -52.93 ∦Bm .40000000 GHz
Spectrum Ref Level 20.00 dt Att 35 SGL Count 100/100 • IPK Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2	6.85 dBm .40215000/gHz -52.93 ∦Bm .40000000 GHz
Spectrum Ref Level 20.00 df Att 35 SGL Count 100/100 I PK Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.306 GHz	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2	6.85 dBm .40215000/GH2 -52.93 iBm .40000000 GH2
Spectrum Ref Level 20.00 dk Att 35 SGL Count 100/100 ● 1Pk Max 10 dBm 0 0 ● 1Pk Max 10 dBm D1 -13.3 -20 dBm -30 dBm -40 dBm -30 dBm -50 dBm -60 dBm -70 dBm -70 dBm -70 dBm Start 2.306 GHz Marker Type	Bm Offset 2.38 dB dB SWT 227.5 μs 376 dBm Min Manual M	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2	6.85 dBm .40215000/gHz -52.93 βBm .40000000 GHz
Spectrum Ref Level 20.00 df Att 35 SGL Count 100/100 ● 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -50 dBm -70 dBm -70 dBm Start 2.306 GHz Marker Type Ref Trc M1	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6.85 dBm .40215000/gHz -52.93 βBm .40000000 GHz
Spectrum Ref Level 20.00 dk Att 35 SGL Count 100/100 ● 1Pk Max I I 10 dBm D1 -13.3 -20 dBm D1 -13.3 -30 dBm -30 dBm -30 dBm -40 dBm -50 dBm -70 dBm Start 2.306 GHz Marker Type Ref Trc M1 1 M3 1	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm 376 dBm 44 Mbm 4/m/μμμμ, 44/m/m/4 2.40215 GHz 2.40215 GHz 2.4 GHz 2.39 GHz	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6.85 dBm .40215000/gHz -52.93 βBm .40000000 GHz
Spectrum Ref Level 20.00 df Att 35 SGL Count 100/100 •17k Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.306 GHz Marker Type Ref Trc M1 M2	3m Offset 2.38 dB dB SWT 227.5 μs 376 dBm 376 dBm 44 Mun μ/Φύλμμινα μαμ X-value 2.40215 GHz 2.4 GHz	RBW 100 kHz VBW 300 kHz	Mode Auto FFT	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6.85 dBm .40215000/gHz -52.93 βBm .40000000 GHz





Spectrum Ref Level 20.00 Att) dBm Offset 2. 35 dB SWT 18		BW 100 kHz BW 300 kHz		uto FFT			
SGL Count 100/	100							
●1Pk Max	_			м	1[1]			5.70 dBn
							2.479	84020 GH
10 dBm-			MI					
0 dBm			M	2				
				m				
-10 dBm								
00.40-								
-20 dBm-								
-30 dBm								
-40 dBm		\cap	4		\sim			
50.10		~			m			
-50 dBm	onno				2		n.m	Am.
-60 dBm	~~~~~~		-			~~~~	vw n	Y
-70 dBm						-		
CF 2.48 GHz			1001	pts			Spa	n 8.0 MHz
Spectrum Ref Level 20.0		2.42 dB 👄 I	RBW 100 kH:	z		opping E	mission	
Spectrum Ref Level 20.00 Att SGL Count 100/	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z		opping E	mission	
Spectrum Ref Level 20.00 Att	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z z Mode /	Auto FFT	opping E	mission	
Spectrum Ref Level 20.00 Att SGL Count 100/	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ ● 1Pk Max	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GHz -55.36 dBm
Spectrum Ref Level 20.00 Att SGL Count 100/ 1Pk Max 10rdBm 0 dBm	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ • 1Pk Max 10idBm 0 dBm -10 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GHz -55.36 dBm
Spectrum Ref Level 20.00 Att SGL Count 100/ • 1Pk Max 10idBm 0 dBm -10 dBm	dBm Offset 2 35 dB SWT 22	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GHz -55.36 dBm
Spectrum Ref Level 20.00 Att SGL Count 100/ ● 1Pk Max 10/d8m 0 d8m -10 d8m D1 -	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT	opping E	2.480	4.99 dBm 015000 GHz -55.36 dBm
Spectrum Ref Level 20.00 Att SGL Count 100/ PIPK Max 10rdBm 0 dBm -10 dBm -20 dBm -30 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH:	z Mode /	Auto FFT		2.480	4.99 dBm 015000 GH2 55.36 dBm
Spectrum Ref Level 20.01 Att SGL Count 100/ • 1Pk Max 10 rdBm -10 rdBm -10 rdBm -20 rdBm -30 rdBm -40 rdBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB ● 1 27.5 µs ● 1	RBW 100 kH YBW 300 kH	z Mode /	Auto FFT 1[1] 2[1]		2.480	4.99 dBn 015000 GH: 55.36 dBn 850000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ PIPK Max 10rdBm 0 dBm -10 dBm -20 dBm -30 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB 👄 I	RBW 100 kH VBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.480	4.99 dBn 015000 GH: 55.36 dBn 850000 GH:
Spectrum Ref Level 20.01 Att SGL Count 100/ • 1Pk Max 10 rdBm -10 rdBm -10 rdBm -20 rdBm -30 rdBm -40 rdBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB ● 1 27.5 µs ● 1	RBW 100 kH YBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.480	4.99 dBn 015000 GH: 55.36 dBn 850000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ • IPK Max 10rdBm • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0 dBm Offset 2 35 dB SWT 22 100	2.42 dB ● 1 27.5 µs ● 1	RBW 100 kH VBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.480	4.99 dBn 015000 GH: 55.36 dBn 850000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ 9 IPk Max 101/d8m 101/d8m 10 d8m 0 0 -10 d8m 0 101 - -20 d8m	OdBm Offset 2 35 dB SWT 22 100	2.42 dB ● 1 27.5 µs ● 1	RBW 100 kH VBW 300 kH 	Z Mode /	Auto FFT 1[1] 2[1]		2.480 2.480	4.99 dBn 115000 GH: 55.36 dBn 50000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ • IPK Max • 10kBm • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.476 GH:	OdBm Offset 2 35 dB SWT 22 100	2.42 dB ● 1 27.5 µs ● 1	RBW 100 kH VBW 300 kH	Z Mode /	Auto FFT 1[1] 2[1]		2.480 2.480	4.99 dBn 015000 GH: 55.36 dBn 850000 GH:
Spectrum Ref Level 20.00 Att SGL Count 100/ 9 IPk Max 101/d8m 101/d8m 10 d8m 0 0 -10 d8m 0 101 - -20 d8m	OdBm Offset 2 35 dB SWT 22 100	2.42 dB 27.5 μs 1	RBW 100 kH VBW 300 kH 	Z Mode /	Auto FFT 1[1] 2[1] بریاندار۳۰۰۰زیالدیم	ا ا ا ا ا	2.480 2.480	4.99 dBn 015000 GH: 55.36 dBn 350000 GH: 44
Spectrum Ref Level 20.00 Att SGL Count 100/ PIPK Max 10/d8m -10/d8m -10/d8m -10/d8m -30/d8m -30/d8m -40/d8m -40/d8m -50/d8m -70/d8m	C X-value 1 2.480	2.42 dB 27.5 μs 15 GHz	RBW 100 kH VBW 300 kH 300 kH 3	2 2 Mode / M M M M M M M M M M M M M M M M M M M	Auto FFT 1[1] 2[1] بریاندار۳۰۰۰زیالدیم	ا ا ا ا ا	2.480 2.485	4.99 dBn 015000 GH: 55.36 dBn 350000 GH: 44
Spectrum Ref Level 20.00 Att SGL Count 100/ • 1Pk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm Start 2.476 GH: Marker Type Ref Tr	OdBm Offset 2 35 dB SWT 22 100 1 2.480	2.42 dB 27.5 μs 1	RBW 100 kH; VBW 300 kH;	2 Mode / M M M M M M M M M M M M M M M M M M M	Auto FFT 1[1] 2[1] بریاندار۳۰۰۰زیالدیم	ا ا ا ا ا	2.480 2.485	4.99 dBn 015000 GH: 55.36 dBn 350000 GH: 44
Spectrum Ref Level 20.00 Att SGL Count 100/ • IPK Max • IPK Max • O dBm -10 cBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm Start 2.476 GH: Marker Type Ref Tr M1	C X-value 1 2.480 2 35 dB SWT 22 35 dB SWT 22 35 dB SWT 22 35 dB SWT 22 36 dBm 44.297 dBm 45.297 dBm 45.2	2.42 dB 27.5 μs 27.5	RBW 100 kH VBW 300 kH	2 2 Mode / M M M M M M M M M M M M M M M M M M M	Auto FFT 1[1] 2[1] بریاندار۳۰۰۰زیالدیم	ا ا ا ا ا	2.480 2.485	4.99 dBn 015000 GH: 55.36 dBn 350000 GH: 44
Spectrum Ref Level 20.00 Att SGL Count 100/ • IPK Max 10rdBm • 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm Start 2.476 GHz Marker Type Ref Tr M1 M3	C X-value 1 2.480 2 35 dB SWT 22 35 dB SWT 22 35 dB SWT 22 35 dB SWT 22 36 dBm 44.297 dBm 45.297 dBm 45.2	2.42 dB 2.7.5 μs 2.7.5 μs 3.5 μs 3.5 GHz 3.5	RBW 100 kH; VBW 300 kH;	2 2 Mode / M M M M M M M M M M M M M M M M M M M	Auto FFT 1[1] 2[1] بریاندار۳۰۰۰زیالدین	ا ا ا ا ا	2.480 2.485	4.99 dBn 015000 GH: 55.36 dBn 350000 GH: 44





8.8 BAND EDGE(HOPPING)

0.0 DAND LL		inoj					
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-57.08	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-59.91	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.24	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-58.78	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.4	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-58.26	-20	Pass

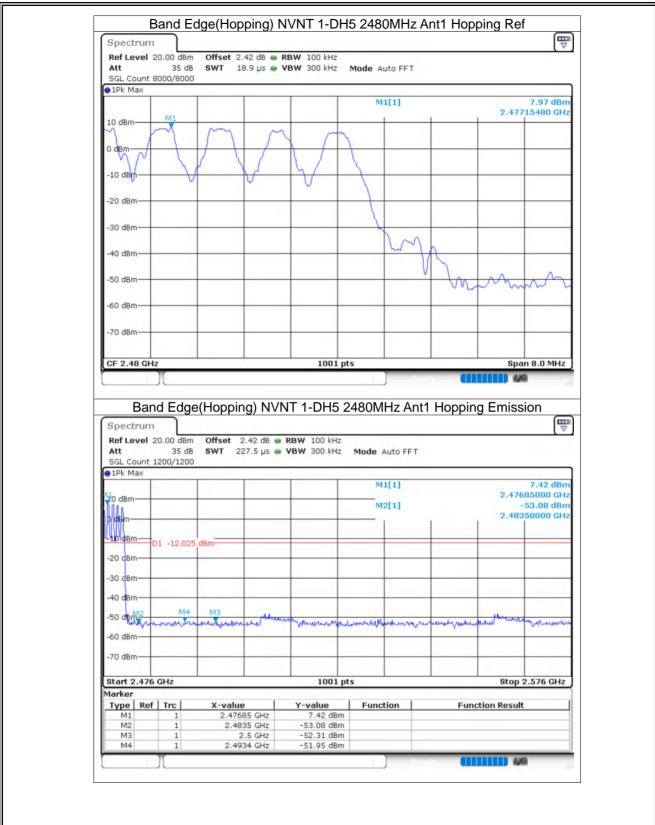




Spectrum Ref Level	20.00 dBm	Offset 2.38	3 dB 👄 RI	BW 100 kHz					
Att		SWT 18.9		BW 300 kHz	Mode Auto	0 FFT			
 1Pk Max 									
					M1[1]		2.402	7.33 dBm 200000 GHz
10 dBm				MI		m	m	~	~
0 dBm							/		
					$\backslash / $			1	
-10 dBm						V		\vee	V
-20 dBm									
-30 dBm									
-30 ubm									
-40 dBm			ſ						
-50 dBm			m						
~~~~	have	m							
-60 dBm									
-70 dBm									
		I I							
Spectrum	nd Edge	e(Hopping		1001 p IT 1-DH5 2		Pradu Iz Ant1	Hopping		sion
Ba Spectrum Ref Level Att SGL Count	nd Edge	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH		Hoppin		sion
Ba Spectrum Ref Level Att	nd Edge n 20.00 dBm 35 dB	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH	to FFT	Hoppin	g Emiss	sion ₩ 7.18 dBm
Ba Spectrum Ref Level Att SGL Count	nd Edge n 20.00 dBm 35 dB	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH Mode Au	to FFT	Hopping	g Emiss 2.402	7.18 dBm 7.18 dBm 25000(GH2
Ba Spectrum Ref Level Att SGL Count @1Pk Max	nd Edge n 20.00 dBm 35 dB	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH Mode Au	to FFT	Hopping	g Emiss 2.402	5ion (₩ 7.18 dBm 205006/GHz
Ba Spectrum Ref Level Att SGL Count • 1Pk Max 10 dBm-	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH Mode Au	to FFT	Hoppin	g Emiss 2.402	7.18 dBm 7.18 dBm 25000(GH2
Ba Spectrun Ref Level Att SGL Count • 1Pk Max 10 dBm	nd Edge n 20.00 dBm 35 dB	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH Mode Au	to FFT	Hopping	g Emiss 2.402	7.18 dBm 7.18 dBm 25000(GH2
Ba Spectrum Ref Level Att SGL Count • 1Pk Max 10 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	38 dB 👄 F	IT 1-DH5 2	2402MH Mode Au	to FFT	Hopping	g Emiss 2.402	7.18 dBm 7.18 dBm 25000(GH2
Ba Spectrum Ref Level Att SGL Count I PK Max 10 dBm- -10 dBm- -20 dBm-	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● Г	IT 1-DH5 2	2402MH Mode Au	to FFT	Hopping	g Emiss 2.402	7.18 dBm 7.18 dBm 25000(GH2
Ba Spectrum Ref Level Att SGL Count I D dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH Mode Au M1[ 	to FFT 1] 1]		2.400	7.18 dBm 05000(GH2 52.00 0 GH2 000000 GH2 100000 GH2 1000000 GH2 10000000 GH2 1000000 GH2 1000000 GH2 10000000 GH2 10000000 GH2 10000000 GH2 1000000000000000000000000000000000000
Ba Spectrum Ref Level Att SGL Count • 1Pk Max 10 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH Mode Au M1[ 	to FFT 1] 1]	Hopping	2.400	7.18 dBm 05000(GH2 52.00 0 GH2 000000 GH2 100000 GH2 1000000 GH2 10000000 GH2 1000000 GH2 1000000 GH2 10000000 GH2 10000000 GH2 10000000 GH2 1000000000000000000000000000000000000
Ba Spectrum Ref Level Att SGL Count I D dBm 0 dBm -10 dBm -20 dBm -20 dBm -40 dBm -40 dBm -60 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH Mode Au M1[ 	to FFT 1] 1]		2.400	7.18 dBm 05000(GH2 52.00 0 GH2 000000 GH2 100000 GH2 1000000 GH2 10000000 GH2 1000000 GH2 1000000 GH2 10000000 GH2 10000000 GH2 10000000 GH2 1000000000000000000000000000000000000
Ba Spectrum Ref Level Att SGL Count 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -40 dBm -70 dBm -70 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH	to FFT 1] 1]		2.402 2.400	7.18 dBm 205000 GHz 52.00 DPp 000000 dHz 52.00 DPp 00000 dHz 50.00 DPp 000000 dHz 50.00 DPp 000000 dHz 50.00 DPp 000000 dHz 50.00 DPp 0000000 dHz 50.00 DPp 000000000000000000000000000000000000
Ba Spectrum Ref Level Att SGL Count 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -40 dBm -50 dBm -	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH	to FFT 1] 1]		2.402 2.400	7.18 dBm 05000(GH2 52.00 0 GH2 000000 GH2 100000 GH2 1000000 GH2 10000000 GH2 1000000 GH2 1000000 GH2 10000000 GH2 10000000 GH2 10000000 GH2 1000000000000000000000000000000000000
Ba Spectrum Ref Level Att SGL Count SGL Count I PK Max 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -50 dBm -70 dBm	nd Edge n 20.00 dBm 35 dB 1200/1200	Offset 2.3 SWT 227	88 dB ● I .5 µs ● Y	IT 1-DH5 2	2402MH Mode Au M1[ M2[	to FFT 1] 1]		2.402 2.400	7.18 dBm 050000 GHz 52.00 Pm 000000 GHz M2 M2 M2 M2 M2 M2 M2 M2 M2 M2
Ba Spectrum Ref Level Att SGL Count ISGL Count IPK Max 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -20 dBm -40 dBm -50 dBm -70 dBm -70 dBm Start 2.30 Marker	nd Edge 20.00 dBm 35 dB 1200/1200 01 -12.670 6 GHz 6 GHz f Trc 1 1	Offset 2.3 SWT 227	M4 G GHz G GHz	IT 1-DH5 2	2402MH	to FFT 1] 1]		2.400 2.400 8top	7.18 dBm 050000 GHz 52.00 Pm 000000 GHz M2 M2 M2 M2 M2 M2 M2 M2 M2 M2
Ba           Spectrum           Ref Level           Att           SGL Count           ● 1Pk Max           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -70 dBm           Btart 2.30           Marker           Type           M1	nd Edge n 20.00 dBm 35 dB 1200/1200 -01 -12.670 -01 -12.670 -01 -12.670 -01 -12.670 -01 -12.670 -01 -12.670	Offset 2.3 SWT 227	M4 GHz GHz GHz	IT 1-DH5 2	2402MH	to FFT 1] 1]		2.400 2.400 8top	7.18 dBm 050000 GHz 52.00 Pm 000000 GHz M2 M2 M2 M2 M2 M2 M2 M2 M2 M2







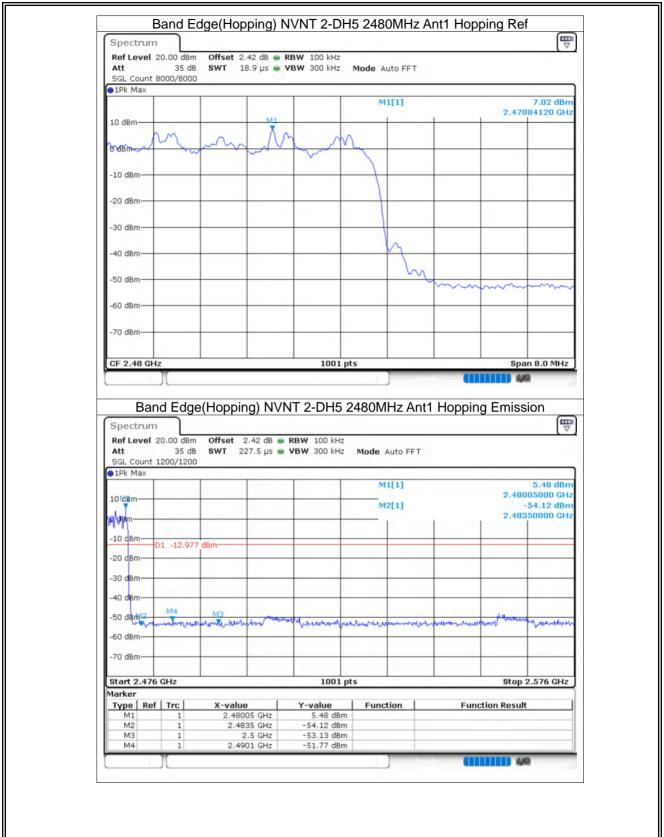




Spectru Ref Leve	20.00 dBm	Offset 2.38 dF	3 👄 RBW 100 kH	z				
Att	35 dB nt 8000/8000	SWT 18.9 µs	s 🖷 VBW 300 kH		o FFT			
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				M1[	1]		2.402	6.65 dB 200000 GI
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CF 2.402	011-		100	1 pts			Spa	in 8.0 MH
Ba Spectru Ref Leve	and Edge	Offset 2.38 d	NVNT 2-DH	5 2402MH		Hopping	g Emiss	sion
Bi Spectru Ref Leve Att SGL Cour	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH		Hoppin	g Emiss	
Ba Spectru Ref Leve Att	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin		4.15 dB
Bi Spectru Ref Leve Att SGL Cour	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB
Bi Spectru Ref Leve Att SGL Cour • 1Pk Max	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB
Bi Spectru Ref Leve Att SGL Cour PIPk Max 10 dBm- 0 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour • 1Pk Max 10 dBm— 0 dBm— -10 dBm—	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour IO dBm- 0 dBm- -10 dBm- -20 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour • 1Pk Max 10 dBm— 0 dBm— -10 dBm—	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour IO dBm- 0 dBm- -10 dBm- -20 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH: B • RBW 100 ki JS • VBW 300 ki	5 2402MH	to FFT	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour 1Pk Max 10 dBm— 0 dBm— -10 dBm— -20 dBm— -30 dBm—	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH: B • RBW 100 ki JS • VBW 300 ki	5 2402MH	to FFT 1] 1]		2.403 2.400	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att 5GL Cour 10 dBm- 0 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm- -50 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH: B • RBW 100 ki JS • VBW 300 ki	5 2402MH	to FFT 1] 1]	Hoppin	2.403	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour I 10 dBm- 0 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm- -50 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH: B • RBW 100 ki JS • VBW 300 ki	5 2402MH	to FFT 1] 1]		2.403 2.400	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att 5GL Cour 10 dBm- 0 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm- -50 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH: B • RBW 100 ki JS • VBW 300 ki	5 2402MH	to FFT 1] 1]		2.403 2.400	4.15 dB 885000 G -54.72 dB
Bi Spectru Ref Leve Att SGL Cour I 10 dBm- 0 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm- -50 dBm-	and Edge	Offset 2.38 d SWT 227.5 µ		5 2402MH	to FFT 1] 1]		2.403 2.400 <u>M3</u>	4.15 dB 885000 G -54.72 dB
B: Spectru Ref Leve Att SGL Cour P1Pk Max 10 dBm- -10 dBm- -20 dBm- -20 dBm- -30 dBm- -50 dBm- -70 dBm- Start 2.3 Marker	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH	5 2402MH	to FFT 1] 1]		2.403 2.400 M3 AM, Anna	4.15 dB 885000 G 554.72 dB 000000 G 000000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 0000 G 00000 G 0000 G 00000 G 0000 G 00000 G 000000 G 00000000
Bi Spectru Ref Leve Att SGL Cour •1Pk Max 10 dBm— 0 dBm— -10 dBm— -20 dBm— -30 dBm— -30 dBm— -50 dBm— -70 dBm— -70 dBm—	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH:	5 2402MH	to FFT 1] 1]		2.403 2.400 <u>M3</u>	4.15 dB 885000 G 554.72 dB 000000 G 000000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 0000 G 00000 G 0000 G 00000 G 0000 G 00000 G 000000 G 00000000
Bit           Spectru           Ref Leve           Att           SGL Cour           • IPk Max           • IPk Max           • IO dBm—           • O dBm—           -10 dBm—           -20 dBm—           -30 dBm—           -50 dBm—           -50 dBm—           -70 dBm—           -70 dBm—           Start 2.3           Marker           Type Is           M1           M2	and Edge	Offset 2.38 d SWT 227.5 µ dBm dBm x-value 2.40385 GH 2.4 GH	NVNT 2-DH	5 2402MH	to FFT 1] 1]		2.403 2.400 M3 AM, Anna	4.15 dB 885000 G 554.72 dB 000000 G 000000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 0000 G 00000 G 0000 G 00000 G 0000 G 00000 G 000000 G 00000000
Bi Spectru Ref Leve Att SGL Cour 9 IPk Max 10 dBm- -0 dBm- -20 dBm- -20 dBm- -30 dBm- -40 dBm- -50 dBm- -70 dBm- -70 dBm- Start 2.3 Marker Type F M1	and Edge	Offset 2.38 d SWT 227.5 µ	NVNT 2-DH:	5 2402MH	to FFT 1] 1]		2.403 2.400 M3 AM, Anna	4.15 dB 885000 G 554.72 dB 000000 G 000000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 0000 G 00000 G 0000 G 00000 G 0000 G 00000 G 00000 G 0000 G 0000 G 0000 G 00000 G 000000 G 00000 G 0
Bi Spectru Ref Leve Att 9 1Pk Max 0 dBm- -10 dBm- -20 dBm- -20 dBm- -20 dBm- -30 dBm- -50 dBm- -70 dBm- <b>Start 2.3</b> Marker Type F M1 M2 M3	and Edge	Offset 2.38 d SWT 227.5 µ dBm dBm x-value 2.40385 GH 2.4 GH 2.39 GH	NVNT 2-DH:	5 2402MH	to FFT 1] 1]		2.403 2.400 M3 AM, Anna	4.15 dB 885000 G 554.72 dB 000000 G 000000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 00000 G 0000 G 00000 G 0000 G 00000 G 0000 G 00000 G 00000 G 0000 G 0000 G 0000 G 00000 G 000000 G 00000 G 0























## 8.9 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-57.98	-20	Pass
NVNT	1-DH5	2441	Ant1	-57.35	-20	Pass
NVNT	1-DH5	2480	Ant1	-56.63	-20	Pass
NVNT	2-DH5	2402	Ant1	-56.56	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.98	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.75	-20	Pass
NVNT	3-DH5	2402	Ant1	-58.18	-20	Pass
NVNT	3-DH5	2441	Ant1	-55.07	-20	Pass
NVNT	3-DH5	2480	Ant1	-55.19	-20	Pass





