

# FCC Radio Test Report FCC ID: PP203041C

This report concerns (check one):	: Original Grant		Class II Change
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**Issued Date** : Sep. 09, 2011 **Project No.** : 1108C260A

**Equipment**: 2.4G Nano Receiver

Model Name : 03041C

**Applicant**: ShenZhen Rapoo Technology Co., Ltd.

Address : Block A1,B1,B2,1st second stage, 1st Industrial

Park, 3rd Industrial Zone ,Fenghuang Fuyong,

BaoAn, Shenzhen, P.R.CHINA

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Receipt: Aug. 30, 2011

**Date of Test:** 

Aug. 30, 2011 ~ Sep. 08, 2011

**Testing Engineer** 

(Ivan Cao)

**Technical Manager** 

(Leo Huna)

Authorized Signatory

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Report No.: NEI-FCCP-1-1108C260A Page 1 of 56



#### **Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.** 

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For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Report No.: NEI-FCCP-1-1108C260A Page 2 of 56

Table of Contents	Page
1 . CERTIFICATION	5
2 . SUMMARY OF TEST RESULTS	6
2.1 TEST FACILITY	7
2.2 MEASUREMENT UNCERTAINTY	7
3 . GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST MODES	10
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	) 11
3.4 DESCRIPTION OF SUPPORT UNITS	12
4 . EMC EMISSION TEST	13
4.1 CONDUCTED EMISSION MEASUREMENT	13
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	13
4.1.2 MEASUREMENT INSTRUMENTS LIST 4.1.3 TEST PROCEDURE	13 14
4.1.4 DEVIATION FROM TEST STANDARD	14
4.1.5 TEST SETUP	14
4.1.6 EUT OPERATING CONDITIONS 4.1.7 TEST RESULTS	14 15
4.1.7 TEST RESULTS  4.2 RADIATED EMISSION MEASUREMENT	15 17
4.2.1 RADIATED EMISSION MEASUREMENT  4.2.1 RADIATED EMISSION LIMITS	17 17
4.2.2 MEASUREMENT INSTRUMENTS LIST	18
4.2.3 TEST PROCEDURE	21
4.2.4 DEVIATION FROM TEST STANDARD 4.2.5 TEST SETUP	21 22
4.2.6 EUT OPERATING CONDITIONS	23
4.2.7 TEST RESULTS (BELOW 30MHz)	24
4.2.8 TEST RESULTS (BETWEEN 30 – 1000 MHz)	25
4.2.9 TEST RESULTS (ABOVE 1000 MHz) 4.2.10 TEST RESULTS (2400 – 2483.5 MHz)	31 43
5 BANDWIDTH TEST	44
5.1 MEASUREMENT INSTRUMENTS LIST	44
5.2 TEST PROCEDURE	44
5.3 DEVIATION FROM STANDARD 5.4 TEST SETUP	44 44
5.5 EUT OPERATION CONDITIONS	44
5.6 TEST RESULTS	45

Report No.: NEI-FCCP-1-1108C260A Page 3 of 56



Table of Contents	Page
6 . ANTENNA CONDUCTED SPURIOUS EMISSION	47
6.1 APPLIED PROCEDURES / LIMIT	47
6.1.1 MEASUREMENT INSTRUMENTS LIST	47
6.1.2 TEST PROCEDURE	47
6.1.3 DEVIATION FROM STANDARD	47
6.1.4 TEST SETUP	47
6.1.5 EUT OPERATION CONDITIONS	47
6.1.6 TEST RESULTS	48
7 . EUT TEST PHOTO	53

Report No.: NEI-FCCP-1-1108C260A Page 4 of 56

## 1. CERTIFICATION

Equipment: 2.4G Nano Receiver

Brand Name: RAPOO Model Name: 03041C

Applicant: ShenZhen Rapoo Technology Co., Ltd.

Date of Test: Aug. 30, 2011 ~ Sep. 08, 2011 Test Item: ENGINEERING SAMPLE

Standards: FCC Part15, Subpart C(15.249)/ ANSI C63.4: 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1108C260A) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

Report No.: NEI-FCCP-1-1108C260A Page 5 of 56

# 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)				
StandardSection	Test Item	Judgment	Remark	
15.207	Conducted Emission	PASS		
15.209	Radiated Emission	PASS		
15.249	Radiated Spurious Emission	PASS		

## NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

Report No.: NEI-FCCP-1-1108C260A Page 6 of 56

#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792 Neutron's test firm number for FCC 319330

## 2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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

#### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

#### B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
DG-CB03 CISPR	30MHz ~ 200MHz	V	2.48		
	CISPR	30MHz ~ 200MHz	Н	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	Н	2.66	

Report No.: NEI-FCCP-1-1108C260A Page 7 of 56



## 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

Equipment	2.4G Nano Receiver		
Brand Name	RAPOO		
Model Name.	03041C		
OEM Brand/Model Name	N/A		
Model Difference	N/A		
	The EUT is a 2.4G Nan	o Receiver.	
	Product Type	Low Power Communication	
		Device	
	Operation Frequency:	2402~2479 MHz	
	Modulation Type:	GFSK	
	Date rate:	1Mbps	
Product Description	Number of Channel	16CH .Please see Note 2.	
Product Description	Antenna Designation:	Printed antenna	
	Antenna Gain(Peak)	2.59 dBi	
	Output Power:	77.15 dBuV/m (AV Max.)	
	exhibited in User's Man ITE/Computing Device.	on, features, or specification hual, the EUT is considered as an More details of EUT technical fer to the User's Manual.	
Channel List	Please refer to the Note 2.		
Power Source	DC Voltage supplied from Host System		
Power Rating	I/P AC 120V/60Hz O/P DC 5V		
Connecting I/O Port(s)	Please refer to the Use	r's Manual	

## Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Report No.: NEI-FCCP-1-1108C260A Page 8 of 56



2.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2402MHz	09	2446MHz
02	2405MHz	10	2451MHz
03	2409MHz	11	2454MHz
04	2413MHz	12	2457MHz
05	2425MHz	13	2471MHz
06	2428MHz	14	2474MHz
07	2431MHz	15	2477MHz
08	2434MHz	16	2479MHz

# 3. Table for Filed Antenna

A	nt.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	1	N/A	N/A	Printed Antenna	N/A	2.59

Report No.: NEI-FCCP-1-1108C260A Page 9 of 56

## 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based 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.

Pretest Mode	Description
Mode 1	Normal Link
Mode 2	CH Lower – 2402MHz
Mode 3	CH Middle – 2446MHz
Mode 4	CH Highest -2479MHz

	For Conducted Test
Final Test Mode	Description
Mode 1	Normal Link

For Radiated Test		
Final Test Mode	Description	
Mode 2	CH Lower – 2402MHz	
Mode 3	CH Middle – 2446MHz	
Mode 4	CH Highest -2479MHz	

#### Note:

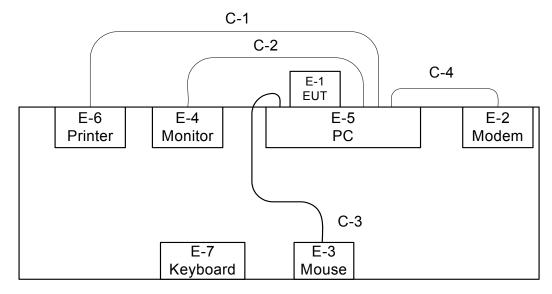
(1) The measurements are performed at the highest, middle, lowest available channels.

Report No.: NEI-FCCP-1-1108C260A Page 10 of 56



## 3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

## **Conducted: Normal Link**



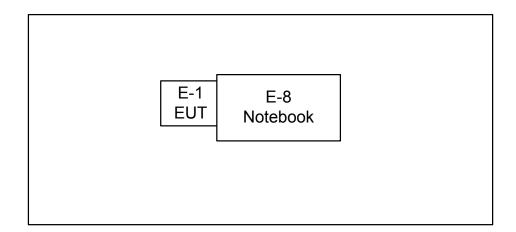
C-1: Parallel Cable

C-2: D-Sub Cable

C-3: USB Cable

C-4: RS232 Cable

## Radiated:



Report No.: NEI-FCCP-1-1108C260A Page 11 of 56

## 3.4 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	2.4G Nano Receiver	RAPOO	03041C	PP203041C	N/A	EUT
E-2	Modem	ACEEX	DM-1414V	IFAXDm1414	0603002131	
E-3	USB Mouse	Dell	MO56UOA	DOC	G01003HO	
E-4	LCD monitor	Dell	E177FPc	DOC	CNOFJ179-64180- 6AG-1WNS	
E-5	PC	Dell 320	DCSM	DOC	J4JQ52X	
E-6	Printer	SII	DPU-414	DOC	3018507 B	
E-7	Wireless Keyboard	RAPOO	E9070	PP2E9070	NA	
E-8	NOTEBOOK	DELL	INSPIRON 1420	DOC	JX193A01SDC2	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	1.5M	
C-2	YES	YES	1.5M	
C-3	YES	NO	1.8M	
C-4	YES	NO	1.5M	

## Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in m in <code>[Length]</code> column.

Report No.: NEI-FCCP-1-1108C260A Page 12 of 56

## 4. EMC EMISSION TEST

## 4.1 CONDUCTED EMISSION MEASUREMENT

## 4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B	Standard	
FREQUENCT (MITZ)	Quasi-peak	Average	Quasi-peak	Average	Statiualu
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	May.26.2012
2	LISN	R&S	ENV216	100087	May.26.2012
3	Test Cable	N/A	C_17	N/A	Mar.30.2012
4	EMI TEST RECEIVER	R&S	ESCS30	826547/022	May.26.2012
5	50Ω Terminator	SHX	TF2-3G-A	08122902	May.26.2012

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

The following table is the setting of the receiver

The fellesting dable to the beating of the federal					
Receiver Parameters	Setting				
Attenuation	10 dB				
Start Frequency	0.15 MHz				
Stop Frequency	30 MHz				
IF Bandwidth	9 kHz				

Report No.: NEI-FCCP-1-1108C260A Page 13 of 56

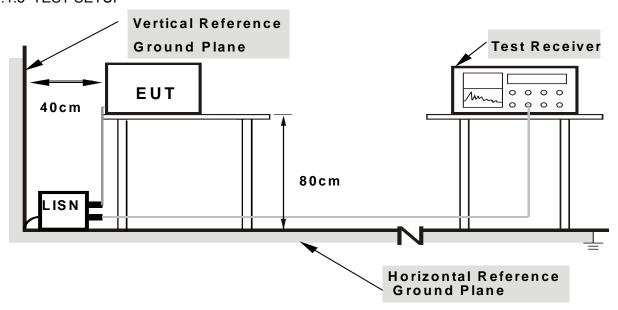
#### 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected 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.
- b. 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 40 cm long.
- c. 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.
- d LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

## 4.1.6 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting mode.

Report No.: NEI-FCCP-1-1108C260A Page 14 of 56

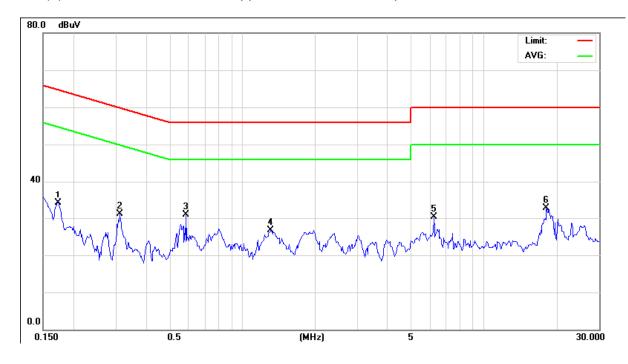
## 4.1.7 TEST RESULTS

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq.	Terminal	Measure	ed(dBuV)	Limits(	(dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	NOLE
0.17	Line	34.17	*	64.81	54.81	-30.64	(QP)
0.31	Line	31.16	*	59.94	49.94	-28.78	(QP)
0.59	Line	30.94	*	56.00	46.00	-25.06	(QP)
1.31	Line	26.80	*	56.00	46.00	-29.20	(QP)
6.22	Line	30.23	*	60.00	50.00	-29.77	(QP)
18.14	Line	32.72	*	60.00	50.00	-27.28	(QP)

#### Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform on this case, a " \* " marked in AVG Mode column of Interference Voltage Measured on the North AVG Mode column of Interference Voltage Measured on
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) " N/A" denotes test is not applicable in this Test Report.



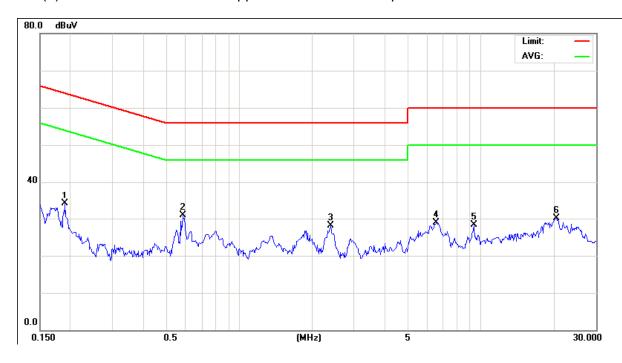
Report No.: NEI-FCCP-1-1108C260A Page 15 of 56



EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq.	Terminal	Measure	ed(dBuV)	Limits	(dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	NOIG
0.19	Neutral	34.09	*	64.02	54.02	-29.93	(QP)
0.58	Neutral	30.98	*	56.00	46.00	-25.02	(QP)
2.40	Neutral	28.06	*	56.00	46.00	-27.94	(QP)
6.56	Neutral	28.85	*	60.00	50.00	-31.15	(QP)
9.35	Neutral	28.28	*	60.00	50.00	-31.72	(QP)
20.59	Neutral	30.02	*	60.00	50.00	-29.98	(QP)

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform on this case, a " \* " marked in AVG Mode column of Interference Voltage Measured on the North AVG Mode column of Interference Voltage Measured on
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) " N/A" denotes test is not applicable in this Test Report.



Report No.: NEI-FCCP-1-1108C260A Page 16 of 56

#### 4.2 RADIATED EMISSION MEASUREMENT

## 4.2.1 RADIATED EMISSION LIMITS (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

## LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

FREQUENCY (MHz)	(dBuV/m) (at 3m)		
PREQUENCT (IVITIZ)	PEAK	AVERAGE	
Above 1000	74	54	

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

## LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

FCC Part15 (15.249) , Subpart C				
Limit	Frequency Range (MHz)			
Field strength of fundamental 50000 μV/m (94 dBμV/m) @ 3 m	2400-2483.5			
Field strength of harmonics 500 μV/m (54 dBμV/m) @ 3 m	Above 2483.5			

Report No.: NEI-FCCP-1-1108C260A Page 17 of 56



## 4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	R&S	HFH2-Z2	830749/020	May.26.2012
2	Bi-log Antenna	Schwarbeck	VULB9160	9160-3232	May.25.2012
3	Horn Antenna	ETS	3115	00075789	May.11.2012
4	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170340	Dec.15.2011
5	Amplifier	HP	8447D	2944A09673	May.25.2012
6	Amplifier	Agilent	8449B	3008A02274	May.25.2012
7	Amplifier	EMC	EMC2654045	980039	Aug.11.2012
8	Test Receiver	R&S	ESCI	100895	May.25.2012
9	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2011
10	Test Cable	N/A	C-01_CB03	N/A	Jul.04.2012
11	Test Cable	HUBER+SUHNER	SUCOFLEX_8 m	313794/4	Apr.10.2012
12	Controller	CT	SC100	N/A	N/A

Remark: " N/A" denotes No Model Name. / Serial No. and No Calibration specified.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted	3 MHz / 3 MHz for Peak, Average=PK-duty cycle
band)	The RBW should be greater than the channel bandwidth

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

Report No.: NEI-FCCP-1-1108C260A Page 18 of 56

DUTY CYCLE: TX 2402MHz (1Mbps)

Dwell time=ON/ON+OFF

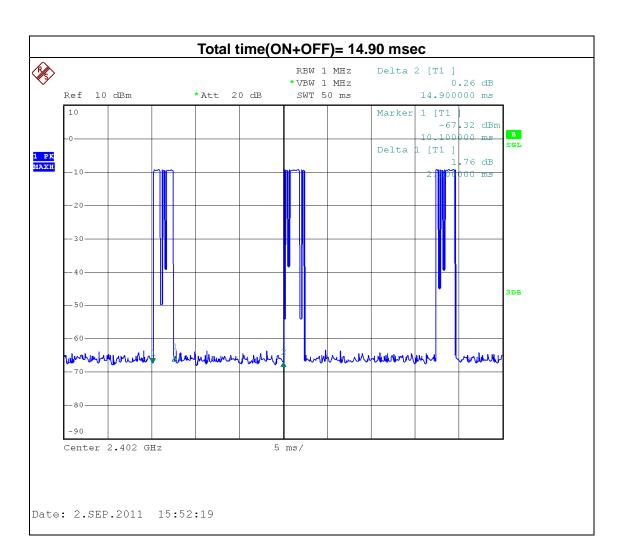
ON: 0.44\*5msec

ON+OFF: (total time):14.90msec

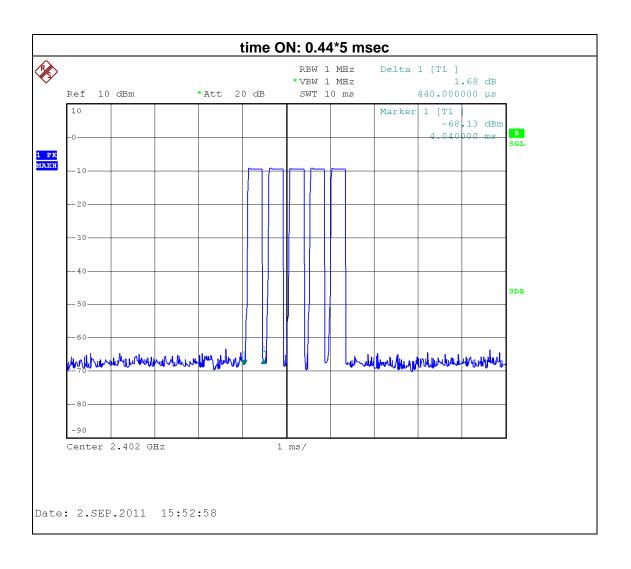
Dwell time: 14.765%

AV=PK+20 log(Dwell time)

AV=PK-16.62



Report No.: NEI-FCCP-1-1108C260A Page 19 of 56





#### 4.2.3 TEST PROCEDURE

- 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 meters above the ground at a 3m meter semi-anechoic chamber. 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; 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. 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.
- e. 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.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

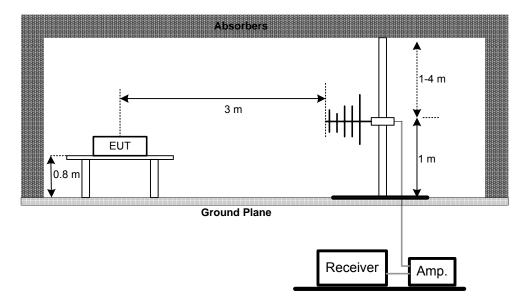
	71		
4.2.4 DEVIATION FROM T No deviation	TEST STANDAR	RD	

Report No.: NEI-FCCP-1-1108C260A Page 21 of 56

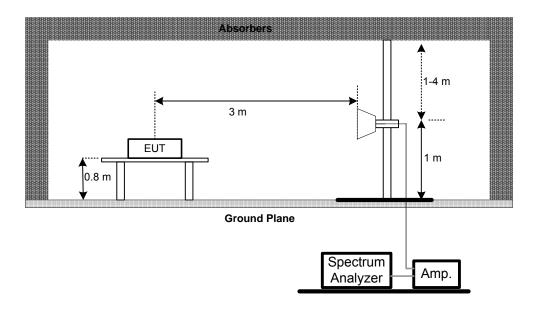


## 4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



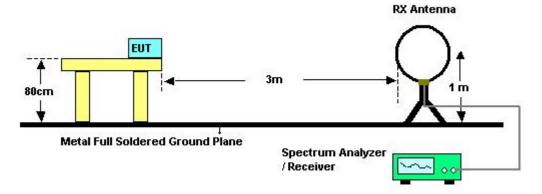
(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



Report No.: NEI-FCCP-1-1108C260A Page 22 of 56



(C) For radiated emissions below 30MHz



## 4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-1108C260A Page 23 of 56

# 4.2.7 TEST RESULTS (BELOW 30MHz)

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	53 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode		

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.16	0°	68.27	20.59	47.68	103.69	-56.00	PK
0.62	0°	60.34	20.18	40.16	71.76	-31.60	PK
2.57	0°	58.73	19.16	39.57	69.54	-29.97	PK
7.28	0°	53.27	18.02	35.25	69.54	-34.29	PK
13.54	0°	51.42	18.01	33.41	69.54	-36.13	PK
22.71	0°	54.36	16.75	37.61	69.54	-31.93	PK

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOTE
0.14	90°	67.63	20.73	46.90	104.56	-57.66	PK
1.79	90°	64.27	19.52	44.75	69.54	-24.79	PK
3.65	90°	52.21	18.97	33.25	69.54	-36.30	PK
9.33	90°	55.24	17.85	37.39	69.54	-32.15	PK
14.67	90°	51.35	18.08	33.27	69.54	-36.27	PK
26.30	90°	51.36	16.04	35.32	69.54	-34.22	PK

## Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported  $\circ$
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB); •
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor. •

Report No.: NEI-FCCP-1-1108C260A Page 24 of 56

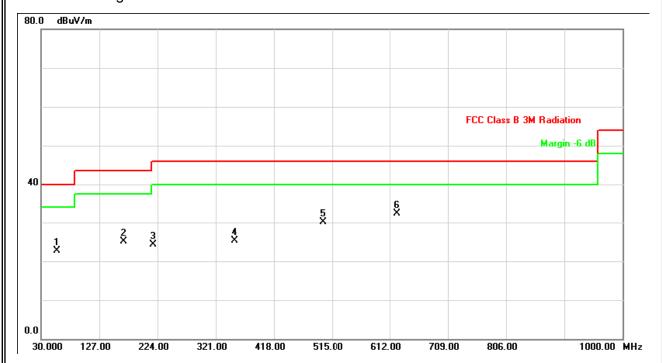
## 4.2.8 TEST RESULTS (BETWEEN 30 – 1000 MHz)

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2402MHz		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOTE
56.68	V	40.35	-17.59	22.76	40.00	- 17.24	
168.23	V	42.44	-17.35	25.09	43.50	- 18.41	
216.73	V	40.39	-16.00	24.39	46.00	- 21.61	
352.53	V	35.99	-10.75	25.24	46.00	- 20.76	
500.45	V	37.47	-7.34	30.13	46.00	- 15.87	
624.13	V	36.07	-3.82	32.25	46.00	- 13.75	

#### Remark:

- (1) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



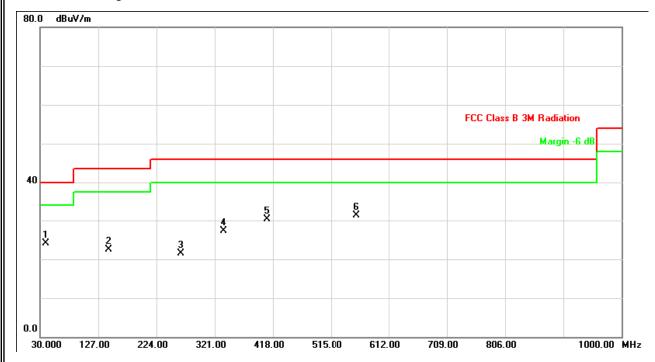
Report No.: NEI-FCCP-1-1108C260A Page 25 of 56



EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2402MHz		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOLE
39.70	Н	40.94	-16.83	24.11	40.00	- 15.89	
143.98	Н	40.07	-17.66	22.41	43.50	- 21.09	
265.23	Н	35.11	-13.55	21.56	46.00	- 24.44	
335.55	Н	38.44	-11.20	27.24	46.00	- 18.76	
408.30	Н	39.19	-8.87	30.32	46.00	- 15.68	
558.65	Н	36.57	-5.28	31.29	46.00	- 14.71	

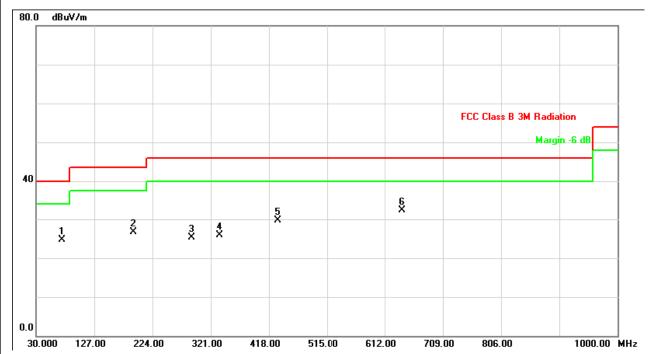
- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2446MHz		

Freq.	Ant.	• , ,	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	. 10 10
73.65	V	43.42	-18.69	24.73	40.00	- 15.27	
192.48	V	43.45	-16.69	26.76	43.50	- 16.74	
289.48	<b>V</b>	37.29	-12.08	25.21	46.00	- 20.79	
335.55	V	37.08	-11.20	25.88	46.00	- 20.12	
432.55	V	38.16	-8.43	29.73	46.00	- 16.27	
641.10	V	35.83	-3.51	32.32	46.00	- 13.68	

- (1) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



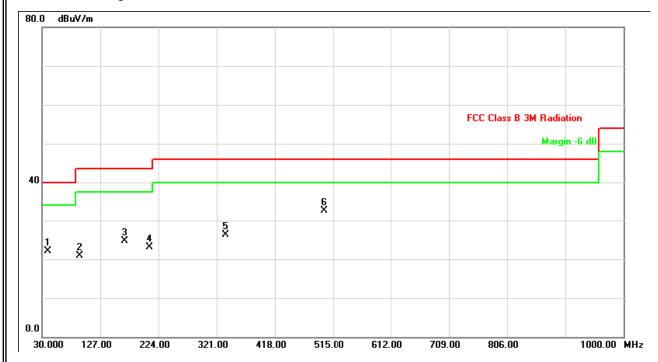
Report No.: NEI-FCCP-1-1108C260A



EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2446MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
39.70	Н	38.94	-16.83	22.11	40.00	- 17.89	
93.05	Н	39.54	-18.72	20.82	43.50	- 22.68	
168.23	Н	42.13	-17.35	24.78	43.50	- 18.72	
209.45	Н	39.42	-16.33	23.09	43.50	- 20.41	
335.55	Н	37.43	-11.20	26.23	46.00	- 19.77	
500.45	Н	39.81	-7.34	32.47	46.00	- 13.53	

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

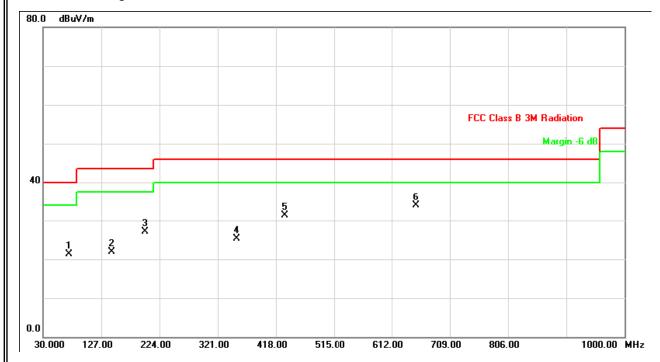




EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2479MHz		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
73.65	V	39.92	-18.69	21.23	40.00	- 18.77	
143.98	V	39.60	-17.66	21.94	43.50	- 21.56	
199.75	V	43.73	-16.57	27.16	43.50	- 16.34	
352.53	V	35.99	-10.75	25.24	46.00	- 20.76	
432.55	V	39.66	-8.43	31.23	46.00	- 14.77	
653.23	V	37.24	-3.33	33.91	46.00	- 12.09	

- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

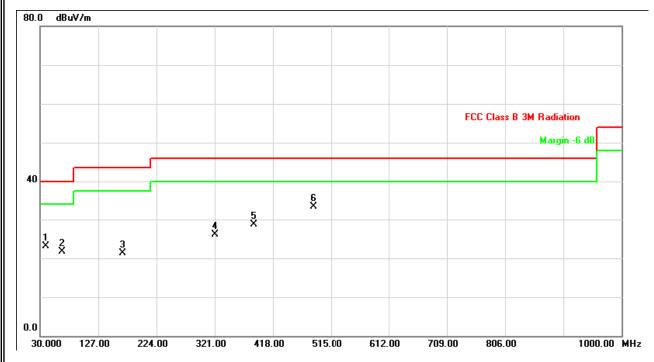




EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX Mode 2479MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
39.70	Н	39.94	-16.83	23.11	40.00	- 16.89	
66.38	Н	39.43	-17.81	21.62	40.00	- 18.38	
168.23	Н	38.63	-17.35	21.28	43.50	- 22.22	
321.00	Н	37.67	-11.55	26.12	46.00	- 19.88	
386.48	Н	38.19	-9.51	28.68	46.00	- 17.32	
485.90	Н	40.91	-7.57	33.34	46.00	- 12.66	

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Report No.: NEI-FCCP-1-1108C260A Page 30 of 56

## 4.2.9 TEST RESULTS (ABOVE 1000 MHz)

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2402MHz		

Freq.	Ant.Pol.	Rea	Reading Ant./CF		Act.		Limit		
		Peak	ΑV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	25.62	9.00	31.91	57.53	40.91	74.00	54.00	X/E
2400.00	V	37.66	21.04	31.90	69.56	52.94	74.00	54.00	X/E
2401.82	٧	57.58	40.96	31.90	89.48	72.86	114.00	94.00	X/F
4803.93	V	50.26	33.64	6.17	56.43	39.81	74.00	54.00	X/H

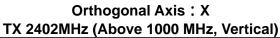
#### Remark:

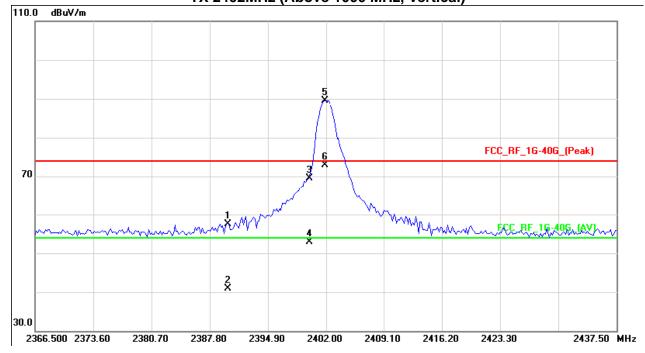
- (1) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

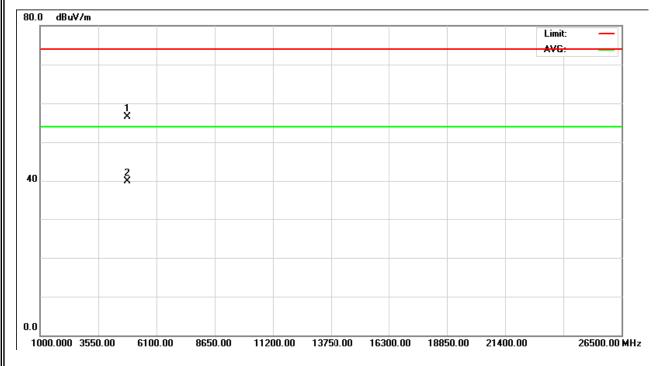
  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 31 of 56









EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2402MHz		

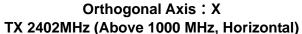
Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Lir	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	23.87	7.25	31.91	55.78	39.16	74.00	54.00	X/E
2400.00	Н	34.82	18.20	31.90	66.72	50.10	74.00	54.00	X/E
2401.75	Н	53.57	36.95	31.90	85.47	68.85	114.00	94.00	X/F
4803.94	Н	55.00	38.38	6.17	61.17	44.55	74.00	54.00	X/H

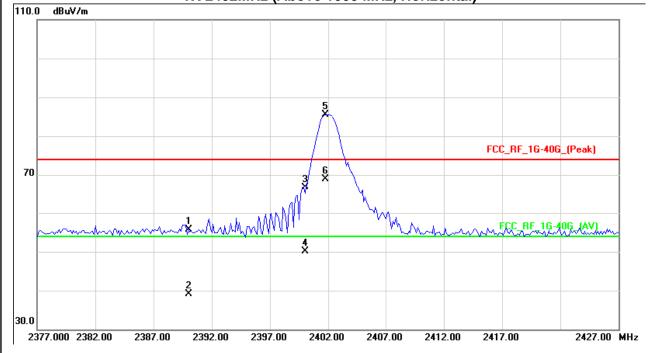
- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

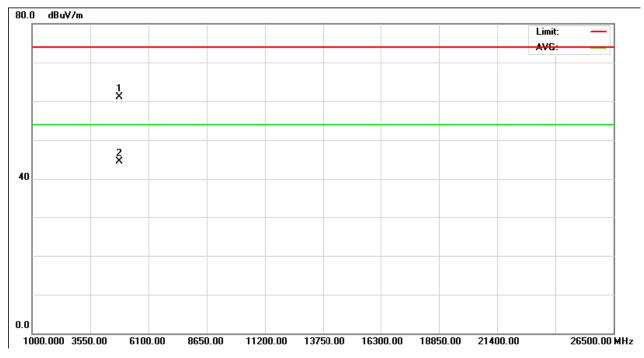
  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 33 of 56









Report No.: NEI-FCCP-1-1108C260A Page 34 of 56

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2446MHz		

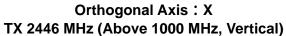
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2446.18	V	59.96	43.34	31.85	91.81	75.19	114.00	94.00	X/F
4891.90	V	55.04	38.42	6.49	61.53	44.91	74.00	54.00	X/H

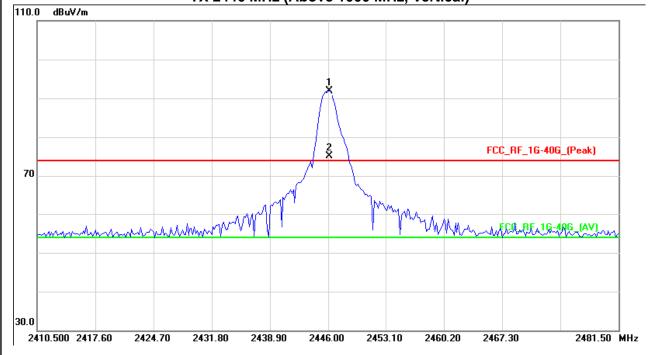
- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{F}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}^{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

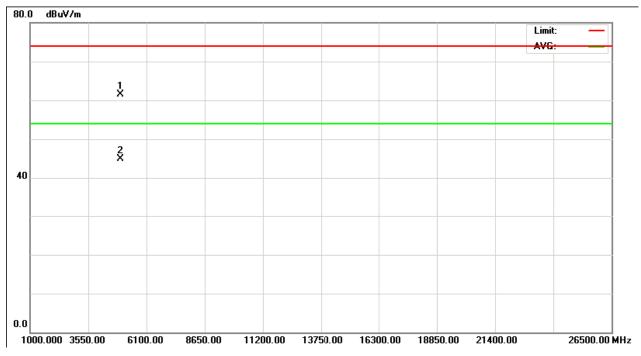
  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 35 of 56









Report No.: NEI-FCCP-1-1108C260A Page 36 of 56

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2446MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Lir	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2445.82	Н	53.54	36.92	31.85	85.39	68.77	114.00	94.00	X/F
4891.93	Н	55.48	38.86	6.49	61.97	45.35	74.00	54.00	X/H

#### Remark:

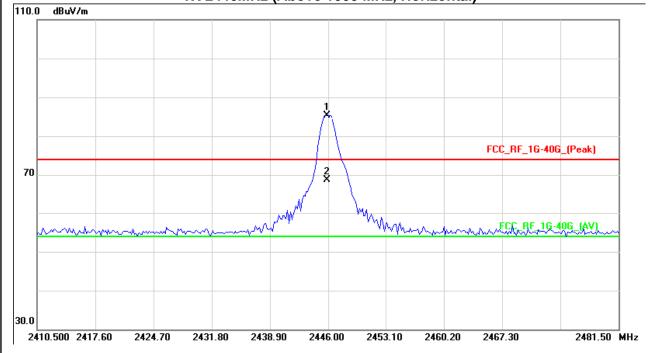
- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 37 of 56



## Orthogonal Axis: X TX 2446MHz (Above 1000 MHz, Horizontal)





Report No.: NEI-FCCP-1-1108C260A Page 38 of 56

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2479MHz		

Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Lir	nit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2479.18	٧	61.97	45.35	31.80	93.77	77.15	114.00	94.00	X/F
2483.50	V	36.50	19.88	31.80	68.30	51.68	74.00	54.00	X/E
4957.88	V	57.20	40.58	6.73	63.93	47.31	74.00	54.00	X/H

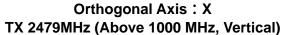
#### Remark:

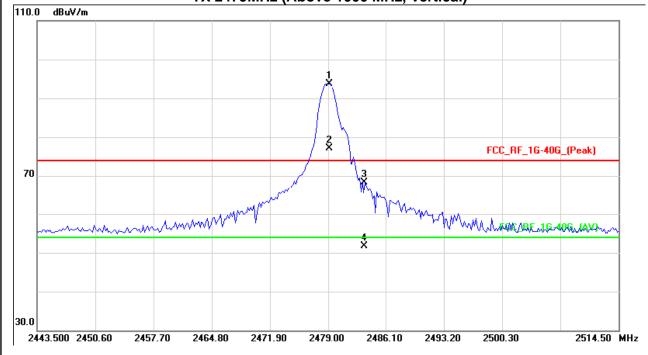
- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

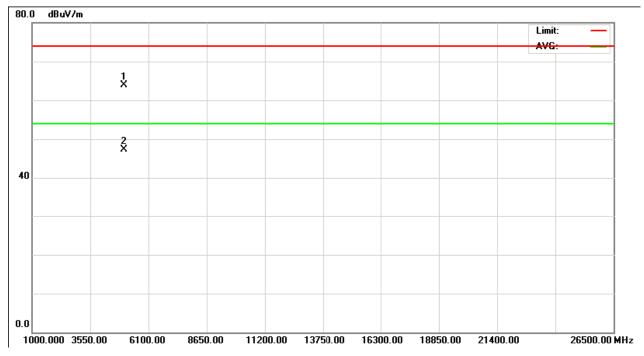
  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 39 of 56









Report No.: NEI-FCCP-1-1108C260A Page 40 of 56

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX 2479MHz		

Freq.	Ant.Pol.	Read	ling	Ant/CF	A	ct.	Lir	nit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2479.18	Н	55.28	38.66	31.80	87.08	70.46	114.00	94.00	X/F
2483.50	Н	30.31	13.69	31.80	62.11	45.49	74.00	54.00	X/E
4957.89	Н	54.57	37.95	6.73	61.30	44.68	74.00	54.00	X/H

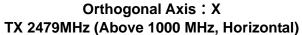
#### Remark:

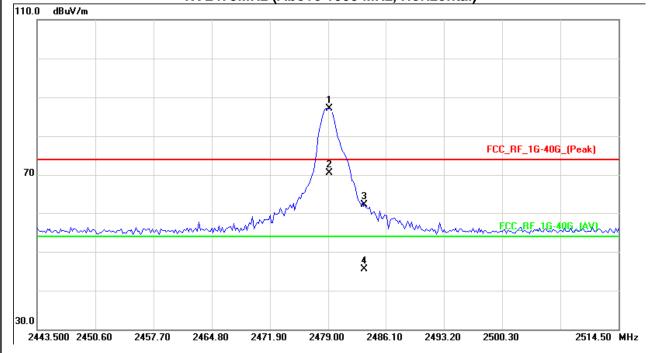
- (1) All readings are Peak unless otherwise stated QP in column of  $\lceil$ Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (8) The average value of fundamental frequency is:

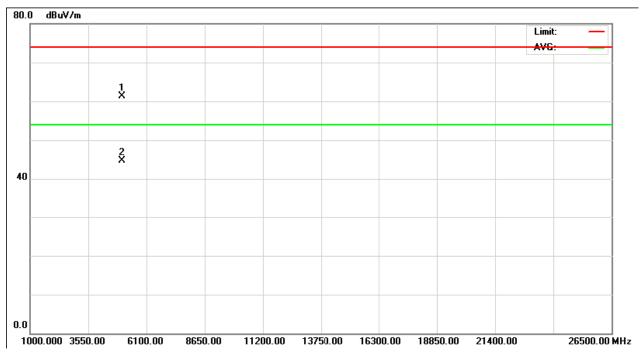
  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 41 of 56









Report No.: NEI-FCCP-1-1108C260A

Page 42 of 56

#### 4.2.10 TEST RESULTS (2400 - 2483.5 MHz)

EUT:	2.4G Nano Receiver	Model Name. :	03041C			
Temperature:	<b>25</b> ℃	Relative Humidity:	58 %			
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz			
Test Mode :	X CH 2402MHz/2446MHz/2479MHz					

		Peak	AV		Peak	AV	Peak	AV	
Freq.	Ant. Pol.	Rea	ding	Ant./CL/	Actua	alFS	Lim	it3m	
(MHz)	(H/V)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	NOTE
2401.82	V	57.58	40.96	31.90	89.48	72.86	114.00	94.00	CH01
2401.75	Н	53.57	36.95	31.90	85.47	68.85	114.00	94.00	CH01
2446.18	V	59.96	43.34	31.85	91.81	75.19	114.00	94.00	CH09
2445.82	Н	53.54	36.92	31.85	85.39	68.77	114.00	94.00	CH09
2479.18	V	61.97	45.35	31.80	93.77	77.15	114.00	94.00	CH16
2479.18	Н	55.28	38.66	31.80	87.08	70.46	114.00	94.00	CH16

#### Remark:

- (1) All readings are Peak unless otherwise stated QP in column of  $\lceil$  Note $_{
  m J}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{
  m O}$
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (5) The average value of fundamental frequency is:

  Average = Peak value + 20log(Duty cycle) , Final AV=PK-16.62

Report No.: NEI-FCCP-1-1108C260A Page 43 of 56

#### 5. BANDWIDTH TEST

#### 5.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2011

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

#### 5.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = 2.5 ms.

#### 5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 5.5 EUT OPERATION CONDITIONS

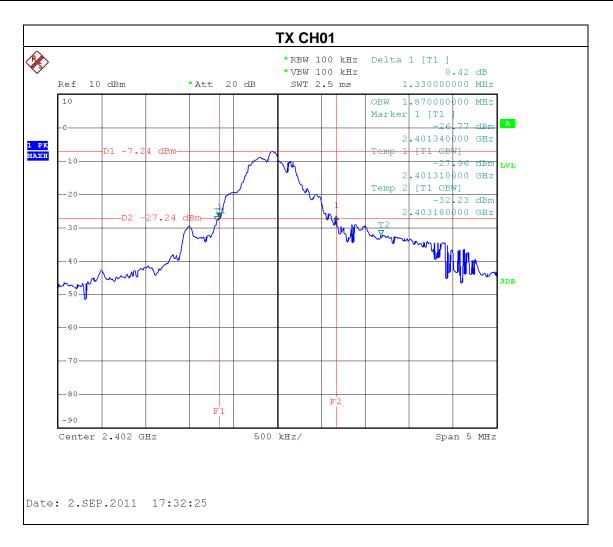
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-1108C260A Page 44 of 56

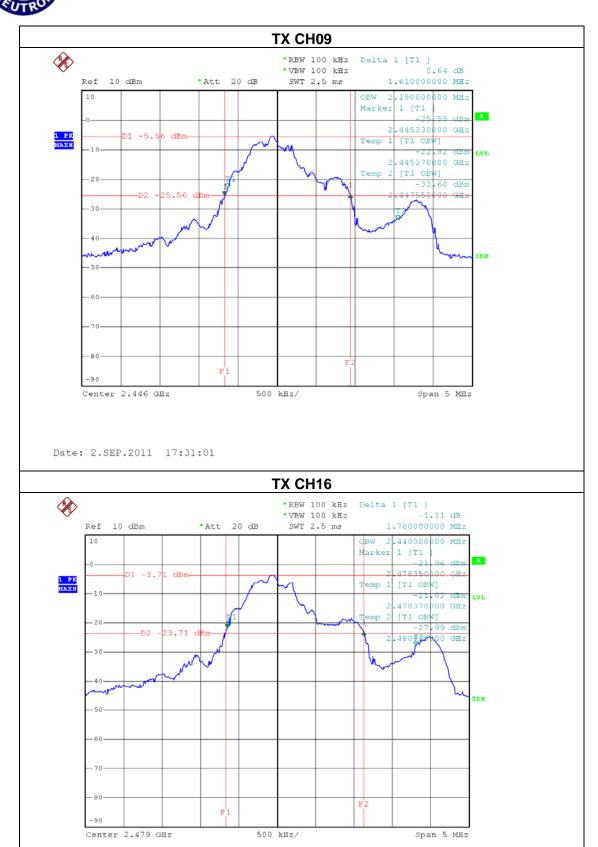
#### 5.6 TEST RESULTS

EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	55 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX CH 01/09/06		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)	99% occupied Bandwidth(MHz)
CH01	2402	1.330	1.870
CH09	2446	1.610	2.180
CH16	2479	1.780	2.440



Report No.: NEI-FCCP-1-1108C260A Page 45 of 56



Report No.: NEI-FCCP-1-1108C260A

Date: 2.SEP.2011 17:29:13

#### 6. ANTENNA CONDUCTED SPURIOUS EMISSION

#### 6.1 APPLIED PROCEDURES / LIMIT

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.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

#### 6.1.1 MEASUREMENT INSTRUMENTS LIST

ĺ	Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
	1	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2011

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

#### 6.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

#### 6.1.3 DEVIATION FROM STANDARD

No deviation.

#### 6.1.4 TEST SETUP



#### 6.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-1108C260A Page 47 of 56

#### 6.1.6 TEST RESULTS

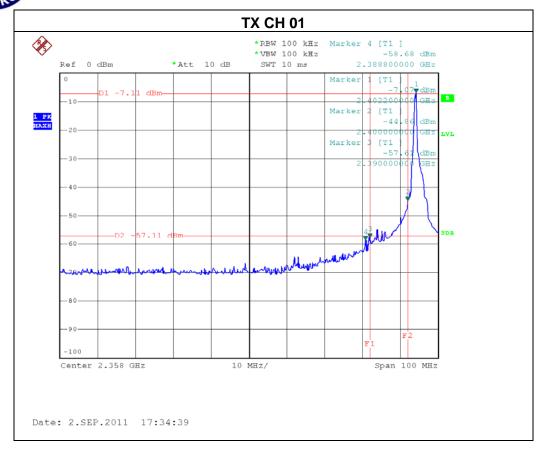
EUT:	2.4G Nano Receiver	Model Name. :	03041C
Temperature:	<b>25</b> ℃	Relative Humidity:	55 %
Pressure:	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	TX CH01, CH09, CH16		

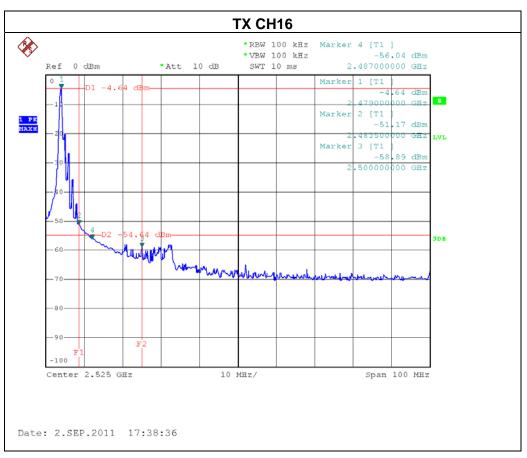
Channel of Worst Data: CH16					
The max. radio frequency power in any 100kHz bandwidth within the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.			
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)		
2390.00	-57.61	2483.50	-51.17		
Popult					

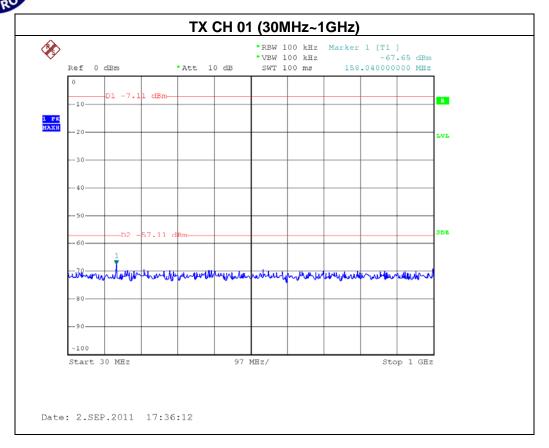
#### Result

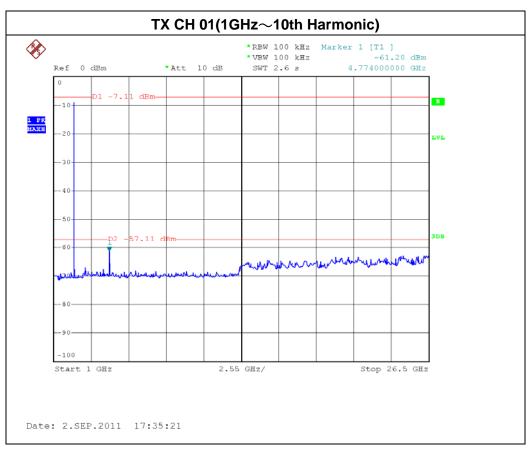
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 50dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

Report No.: NEI-FCCP-1-1108C260A Page 48 of 56

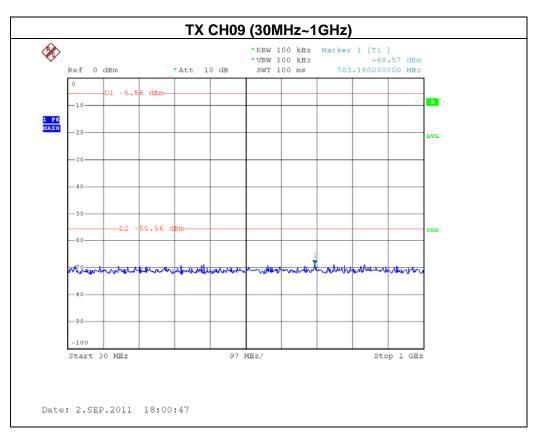


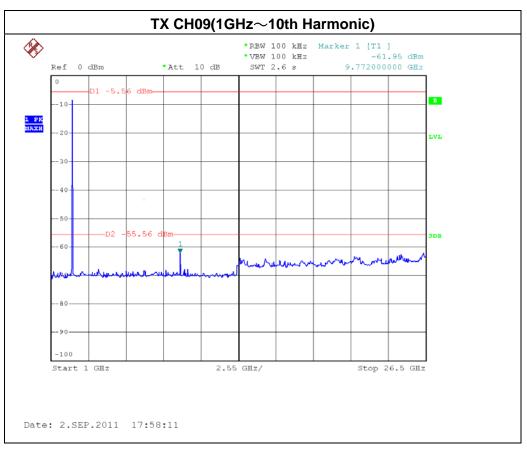




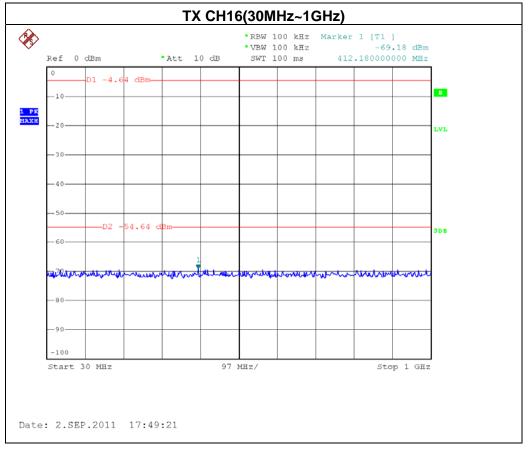


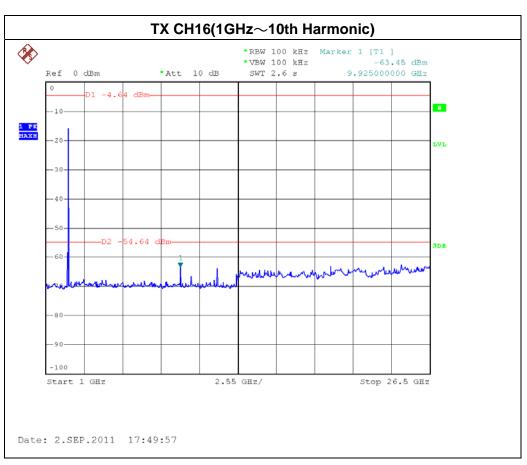






Report No.: NEI-FCCP-1-1108C260A Page 51 of 56

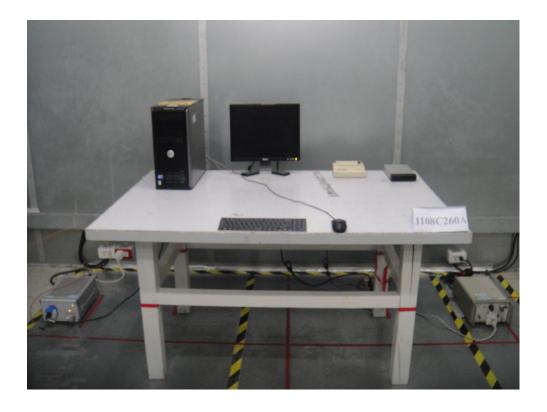






#### 7. EUT TEST PHOTO

#### Conducted Measurement Photos Normal Link





Report No.: NEI-FCCP-1-1108C260A Page 53 of 56



# Radiated Measurement Photos 9K~30MHz

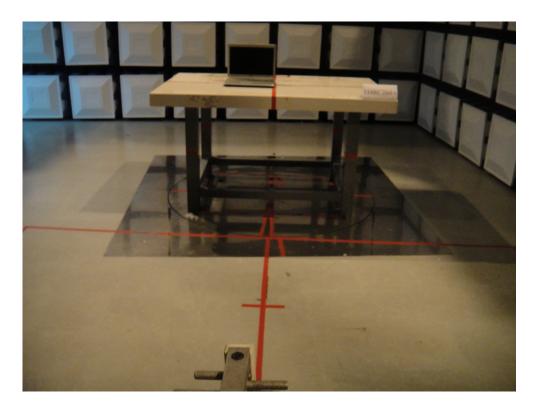


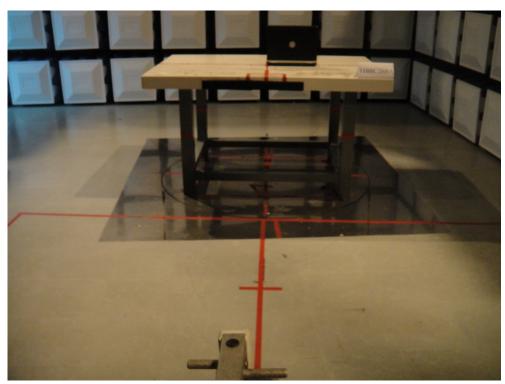


Report No.: NEI-FCCP-1-1108C260A Page 54 of 56



# Radiated Measurement Photos 30M~1000MHz



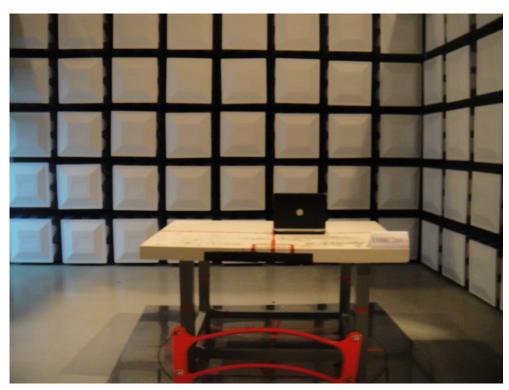


Report No.: NEI-FCCP-1-1108C260A Page 55 of 56



#### Radiated Measurement Photos Above 1000MHz





Report No.: NEI-FCCP-1-1108C260A Page 56 of 56