<section-header>FCC ID: VOB-P2570 D: 7361A-P2570 This report concerns (check one): ⊠Original Grant □Class II Change Main Market Mireless Controller Model Name : 1404C046 Equipment : 1404C046 Model Name : 22570 Address : 2701 San Tomas Expressway Santa Cara, CA95050 Market Meutron Engineering Inc. EMC Laboratory Date of Receipt: Apr. 09, 2014- May. 19, 2014 Bate of Test: Apr. 09, 2014- May. 19, 2014 Bate of Test: Apr. 09, 2014- May. 19, 2014</section-header>
This report concerns (check one): ⊠Original Grant □Class II Change Project No. : 1404C046 Equipment : Wireless Controller Model Name : P2570 Applicant : NVIDIA Corporation Address : 2701 San Tomas Expressway Santa Clara, CA95050 Tested by: Neutron Engineering Inc. EMC Laboratory Date of Receipt: Apr. 09, 2014~ May. 19, 2014
Project No.: 1404C046Equipment: Wireless ControllerModel Name: P2570Applicant: NVIDIA CorporationAddress: 2701 San Tomas Expressway Santa Clara, CA95050Tested by: Neutron Engineering Inc. EMC Laboratory Date of Receipt: Apr. 09, 2014 Date of Test: Apr. 09, 2014~ May. 19, 2014
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Date of Receipt: Apr. 09, 2014 Date of Test: Apr. 09, 2014~ May. 19, 2014
\bigcirc
Testing Engineer : <u>Varid</u> Mao (David Mao)
Technical Manager :(Leo Hung)
Authorized Signatory :(Steven Lu)



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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Neutron's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

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.



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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FICP-1-1404C046	Original Issue.	May. 20, 2014



1. CERTIFICATION

Equipment :	Wireless Controller
Brand Name :	NVIDIA
Model Name:	P2570
Applicant :	NVIDIA Corporation
Manufacturer :	NVIDIA Corporation
Address :	2701 San Tomas Expressway Santa Clara, CA95050
Factory :	NVIDIA Corporation
Address :	2701 San Tomas Expressway Santa Clara, CA95050
Date of Test :	Apr. 09, 2014~ May. 19, 2014
Test Item :	ENGINEERING SAMPLE
Standard(s) :	FCC Part15, Subpart C(15.247) / ANSI C63.4-2009
	Canada RSS-210:2010
	RSS-GEN Issue 3, Dec 2010

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-FICP-1-1404C046) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C Canada RSS-210:2010; RSS-GEN Issue 3, Dec 2010

Standard FCC	(s) Section	Test Item	Judgment	Remark
15.207	RSS-GEN 7.2.2	Conducted Emission	PASS	
15.247(d)	RSS-210 Annex 8 (A8.5)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	RSS-210 Annex 8 (A8.2(a))	6dB Bandwidth	PASS	
15.247(b)(3)	RSS-210 Annex 8 (A8.4(4))	Peak Output Power	PASS	
15.247(e)	RSS-210 Annex 8 (A8.2(b))	Power Spectral Density	PASS	
15.203	-	Antenna Requirement	PASS	
15.209/15.205	RSS-210 Annex 8 (A8.5)	Transmitter Radiated Emissions	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this test report.

(2) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r01 (Measurement Guidelines of DTS)



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

Neutron's test firm number for IC: 4428B-1

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 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%.

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
		9KHz~30MHz	V	3.79	
		9KHz~30MHz	Н	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Н	3.60	
DG-CB03	CISPR	200MHz ~ 1,000MHz	V	3.86	
DG-CB03	CIOPR	200MHz ~ 1,000MHz	Н	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	Н	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	Н	4.14	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Controller				
Brand Name	NVIDIA	NVIDIA			
Model Name	P2570				
Model Difference	N/A				
	Operation Frequency	2412~2462MHz			
	Modulation Technology	802.11b:DSSS 802.11g:OFDM			
Product Description	Bit Rate of Transmitter 802.11b: 11/5.5/2/1 Mbps 802.11g: 24/18/12/9/6 Mbps				
	Output Power (Max.)	802.11b: 4.43dBm 802.11g: 12.89dBm			
Power Source	 #1 Supplied from Lithium-ion Polymer rechargeable battery. 1)Model:PT553759 2)Model:LC18650-2200mAh #2 Supplied from USB port. 				
Power Rating	 #1 1) DC 3.7V 1250mAh 2) DC 3.6V 2200mAh #2 DC 5V 0.5A 				
Connecting I/O Port(s)	Please refer to the User's	Manual			

Note:

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

2. Channel List:

	CH 01 – CH 11 for 802.11b, 802.11g						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3 Table for Filed Antenna

Ant	. Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	Yageo Corp.	ANT5320LL24R2455A	Chip	N/A	2.17
2	Yageo Corp.	ANT5320LL24R2455A	Chip	N/A	2.17

Note:

The EUT incorporates a SISO function and only one antenna used per time

4.

Operating Mode TX Mode	1TX	2TX
802.11b	V (ANT 1 or ANT 2)	-
802.11g	V (ANT 1 or ANT 2)	-



3.2 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.

Pretest Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX MODE

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 3	TX MODE

For Radiated Test		
Final Test Mode	Description	
Mode 1	TX B MODE CHANNEL 01/06/11	
Mode 2	TX G MODE CHANNEL 01/06/11	

Note:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: DSSS (1Mbps)

802.11g mode: OFDM (6Mbps) For radiated emission tests, the highest output powers were set for final test.

(3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.



3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version	Tera Term		
Frequency	2412 MHz 2437 MHz 2462 MHz		
IEEE 802.11b DSSS	:SPW 0	:SPW 0	:SPW 0
IEEE 802.11g OFDM	:SPW 0	:SPW 0	:SPW 0

Neutron Engineering Inc.= 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED **Conducted Emissions TX Mode:** C-4 C-7 C-2 C-3 E-5 E-6 E-4 E-3 Printer Monitor Modem EUT PC C-6 C-5 C-1 E-2 E-8 E-7 Earphone Keyboard Mouse C-1 Audio Cable C-2 Parallel Cable E-1 C-3 USB Cable Host C-4 RS232 Cable C-5 USB Cable C-6 USB Cable C-7 D-Sub Cable Radiated Emissions TX Mode: EUT _____ **Control Room**

3.5 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	Host	NVIDIA	P2450	VOB-P2450	N/A	
E-2	Earphone	Apple	N/A	DOC	N/A	
E-3	PC	DELL	DCSM	DOC	G7K832X	
E-4	Modem	ACEEX	DM-1414V	N/A	0603002131	
E-5	Printer	SII	DPU-414	DOC	018507 B	
E-6	LCD monitor	Dell	E177FPc	DOC	CNOFJ179-64180-6AG-1 WNS	
E-7	USB Mouse	Dell	MO56UOA	DOC	G01003HO	
E-8	USB Keyboard	Dell	L100	DOC	CNORH6596589085C00 U7	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	1.5m	
C-2	YES	NO	1.5m	
C-3	YES	YES	1.5m	
C-4	YES	NO	1.5m	
C-5	YES	NO	1.5m	
C-6	YES	NO	1.5m	
C-7	YES	YES	1.5m	

Note:

(1) For detachable type I/O cable should be specified the length in m in $\[$ Length $\]$ column.

4. EMC EMISSION TEST

4.1CONDUCTED EMISSION MEASUREMENT

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

	Class A	(dBuV)	Class B	(dBuV)	Standard
Frequency (MHz)	Quasi-peak	Average	Quasi-peak	Average	Standard
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.

The following table is the setting of the receiver

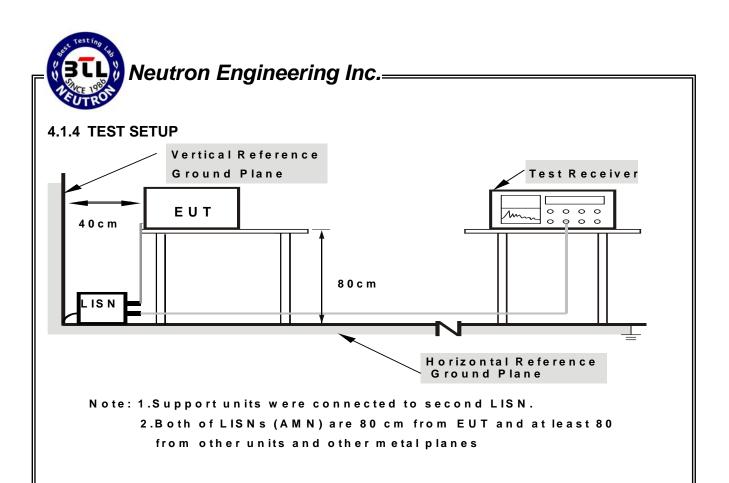
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.2 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.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation



Note: The EUT does not connect to the LISN directly but through a PC. The detail setup is shown on chapter 3.4.

4.1.5 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.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 5V(Powered through USB cable)

4.1.7 TEST RESULTS

Please refer to the Attachment A.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

20dB in any 100 KHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a) & RSS-210 section 2.2& Annex 8 (A8.5), then the 15.209(a)& RSS-Gen limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	(dBuV/m) (at 3 meters)		
Frequency (MHz)	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).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1MHz / 1MHz for Dook, 1 MHz / 10Hz for Average
(Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

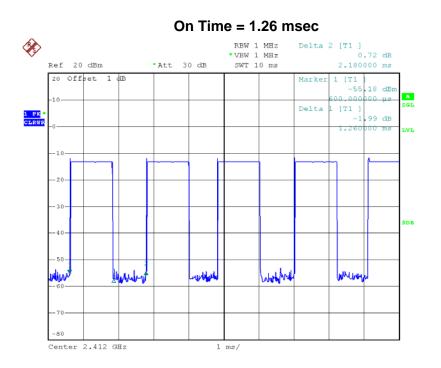


Duty Cycle=ON/(ON+OFF)

Duty Cycle=1.26/2.18

AV=Peak Value+20log(Duty Cycle)

AV=PK-4.76



Date: 18.MAY.2014 13:20:24

Note:For 802.11b mode the average value of fundamental frequency is: Average = Peak value + 20log(Duty cycle) , Final AV=PK-4.76



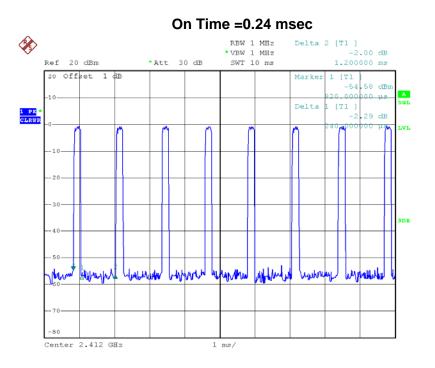
DUTY CYCLE: TX G 2412MHz

Duty Cycle=ON/(ON+OFF)

Duty Cycle=0.24/1.20

AV=Peak Value+20log(Duty Cycle)

AV=PK-13.98



Date: 18.MAY.2014 13:33:55

Note:For 802.11g mode the average value of fundamental frequency is: Average = Peak value + 20log(Duty cycle) , Final AV=PK-13.98



4.2.2 TEST PROCEDURE

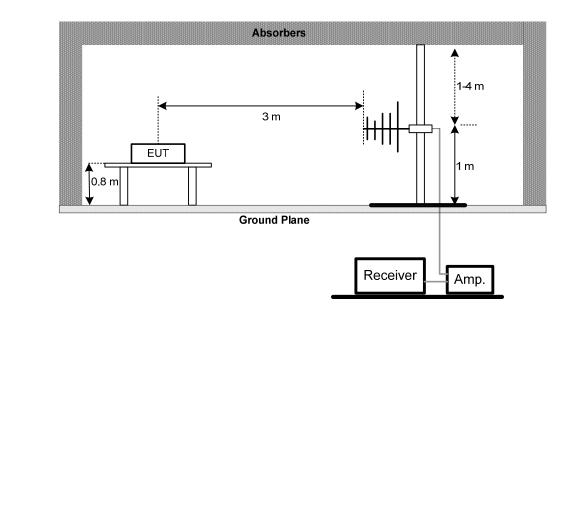
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- 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.

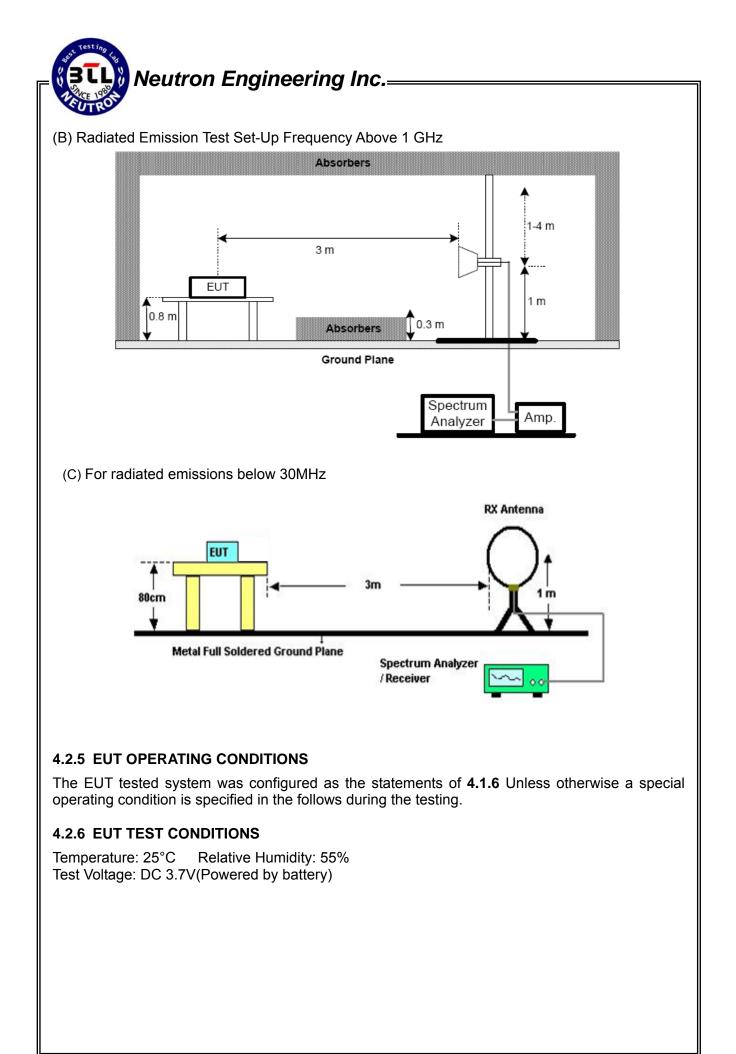
4.2.3 DEVIATION FROM TEST STANDARD

No deviation

4.2.4 TEST SETUP

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







4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

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.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

Remark:

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz.
- (2) 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.
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (2) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (3) EUT Orthogonal Axis: "X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand
- (4) 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

5. BANDWIDTH TEST

5.1 Applied procedures

FCC Part15 (15.247), Subpart C/ RSS-GEN and RSS-210						
Section	Test Item	Frequency Range (MHz)	Result			
15.247(a)(2)						
RSS-GEN section 4.6.1	Bandwidth	2400-2483.5	PASS			
RSS-210 Annex 8 (A8.2(a))						

5.1.1 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=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 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.

5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 3.7V(Powered by battery)

5.1.6 TEST RESULTS

Please refer to the Attachment E.

6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C/ RSS-210							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(b)(3) RSS-210 Annex 8.4(4)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS			

6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. The maximum peak conducted output power was performed in accordance with method 9.1.3 of FCC KDB 558074 D01 DTS Meas Guidance v03r01.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

EUT	Power Meter

6.1.4 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.

Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 3.7V(Powered by battery)

6.1.6 TEST RESULTS

Please refer to the Attachment F.



7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 Applied procedures / 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 measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

7.1.1 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=300KHz, Sweep time = Auto.

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 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.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 3.7V(Powered by battery)

7.1.6 TEST RESULTS

Please refer to the Attachment G.

8. POWER SPECTRAL DENSITY TEST

8.1 Applied procedures / limit

	FCC Part15 (15.247) , Subpart C / RSS-210							
Section	Test Item	Limit	Frequency Range (MHz)	Result				
15.247(e) RSS-210 Annex 8(A8.2(b))	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS				

8.1.1 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=3KHz, VBW=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 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.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 3.7V(Powered by battery)

8.1.6 TEST RESULTS

Please refer to the Attachment H.

9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	LISN	EMCO	3816/2	00052765	Mar. 29, 2015			
2	LISN	R&S	ENV216	101447	Mar. 29, 2015			
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015			
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 29, 2015			
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 29, 2015			

	Radiated Emission Measurement							
Item	em Kind of Equipment Manufacturer		Type No.	Serial No.	Calibrated until			
1	Antenna	EMCO	3142C	00066462	Mar. 29, 2015			
2	Antenna	EMCO	3142C	00066464	Mar. 29, 2015			
3	Amplifier	Agilent	8447D	2944A11203	Nov. 11, 2014			
4	Amplifier	Agilent	8447D	2944A11204	Nov. 11, 2014			
5	Spectrum Analyzer	Agilent	E4443A	MY48250370	Nov. 11, 2014			
6	RF Pre-selector	Agilent	N9039A	MY46520201	Nov. 11, 2014			
7	Test Cable	N/A	Cable_5m_8m _15m	N/A	Jan. 14, 2015			
8	Test Cable	N/A	Cable_5m_11 m_15m	N/A	Jan. 14, 2015			
9	Spectrum Analyzer	Agilent	E4447A	MY48250208	Nov. 11, 2014			
10	RF Pre-selector	Agilent	N9039A	MY46520214	Nov. 11, 2014			
11	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A			
12	Horn Antenna	EMCO	3115	9605-4803	Mar. 29, 2015			
13	Amplifier	Agilent	8449B	3008A02584	Nov. 11, 2014			
14	Spectrum Analyzer	Agilent	E4447A	MY48250208	Nov. 11, 2014			
15	Test Cable	Huber+Suhner	SUCOFLEX_1 5m_4m	N/A	Jan. 14, 2015			



	6dB Bandwidth Measurement					
I	ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
	1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

	Peak Output Power Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Power Meter	ANRITSU	ML2495A	1128009	May. 24, 2014		
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	May. 24, 2014		

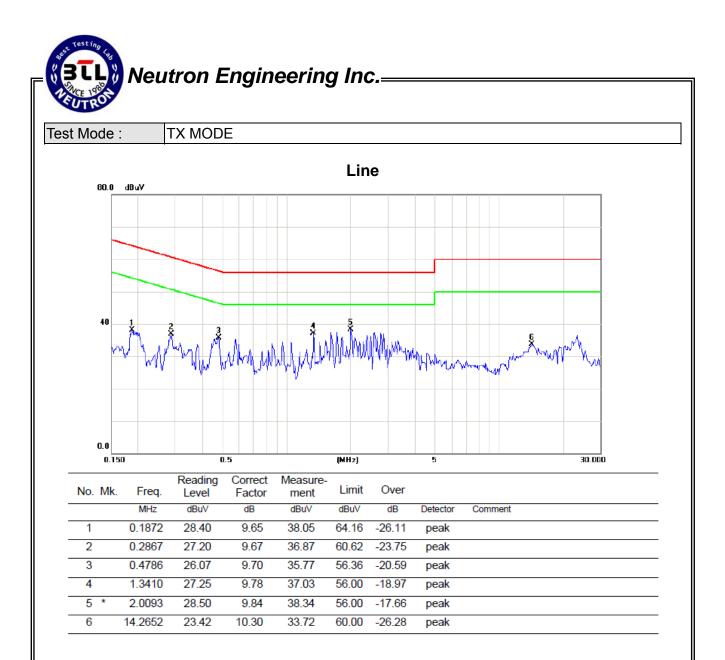
Antenna Conducted Spurious Emission Measurement						
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014	

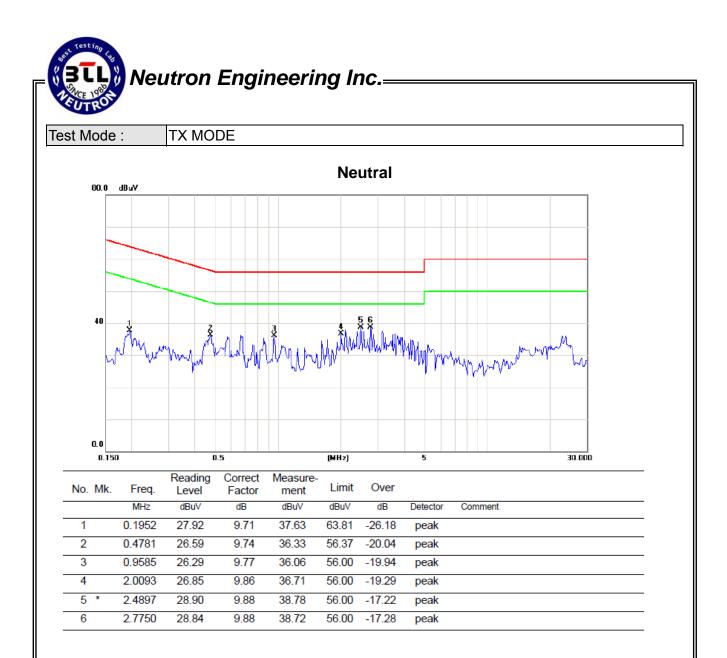
	Power Spectral Density Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014		

Remark: "N/A" denotes no model name, serial no. or calibration specified. All calibration period of equipment list is one year.



ATTACHMENT A - CONDUCTED EMISSION







ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode:	T	X Mode 2412	MHz				
Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Hote
0.0212	0°	16.73	24.22	40.95	121.08	-80.12	AVG
0.0220	0°	20.44	24.22	44.66	141.08	-96.41	PEAK
0.0279	0°	16.81	23.80	40.61	118.69	-78.08	AVG
0.0279	0°	23.17	23.80	46.97	138.69	-91.72	PEAK
0.0333	0°	16.92	23.46	40.38	117.16	-76.78	AVG
0.0333	0°	22.63	23.46	46.09	137.16	-91.07	PEAK
0.0528	0°	20.82	22.34	43.16	113.15	-69.99	AVG
0.0528	0°	24.98	22.34	47.32	133.15	-85.83	PEAK
0.3170	0°	18.03	20.24	38.27	97.58	-59.31	AVG
0.3170	0°	22.19	20.24	42.43	117.58	-75.15	PEAK
1.5210	0°	16.87	19.55	36.42	63.96	-27.54	QP
		-				-	•
Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	0°/90°	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
0.0175	90°	16.85	24.30	41.15	122.74	-81.59	AVG
0.0175	90°	22.16	24.30	46.46	142.74	-96.28	PEAK
0.0269	90°	16.82	23.86	40.68	119.01	-78.33	AVG
0.0269	90°	19.16	23.86	43.02	139.01	-95.99	PEAK
0.0375	90°	21.41	23.19	44.60	116.12	-71.52	AVG
0.0375	90°	28.13	23.19	51.32	136.12	-84.80	PEAK
0.0519	90°	16.14	22.36	38.50	113.30	-74.80	AVG
0.0519	90°	22.10	22.36	44.46	133.30	-88.84	PEAK
0.3260	90°	15.46	20.22	35.68	97.34	-61.66	AVG
0.3260	90°	20.14	20.22	40.36	117.34	-76.98	PEAK
1.6750	90°	16.16	19.53	35.69	63.12	-27.43	QP

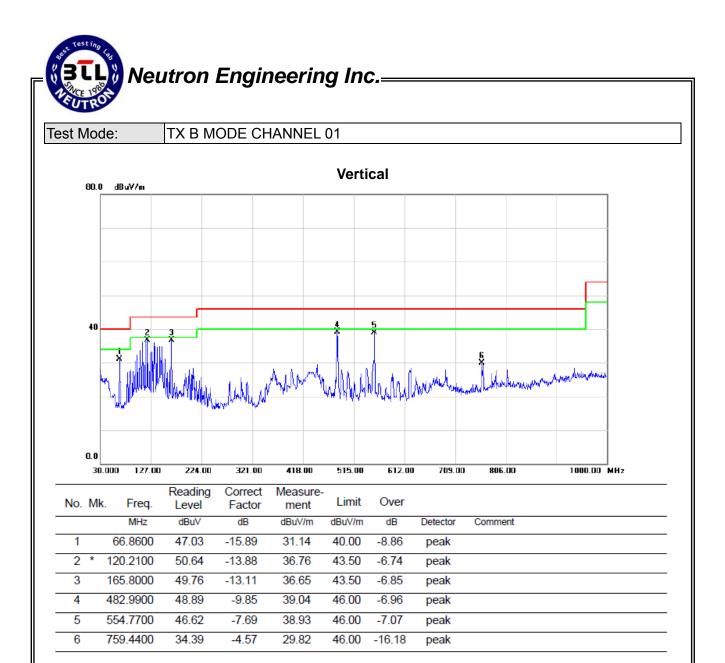
Remark:

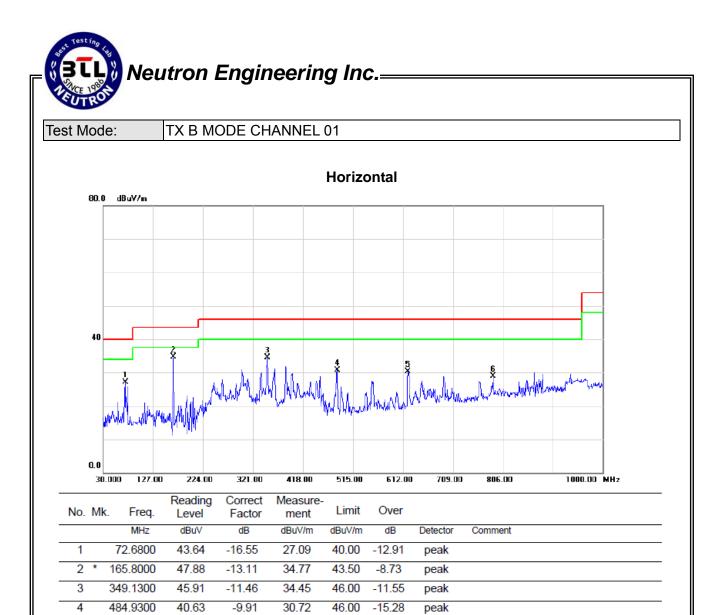
(1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

(2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
(3) Limit line = specific limits (dBuV) + distance extrapolation factor.



ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)





30.29

28.97

46.00

46.00

-15.71

-17.03

peak

peak

-7.00

-3.59

621.7000

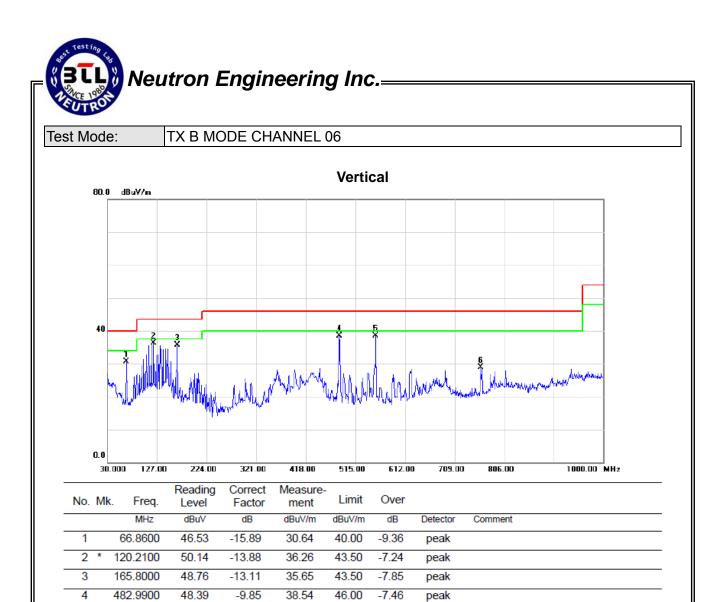
786.6000

5

6

37.29

32.56



46.00

38.43

28.82

-7.57

46.00 -17.18

peak

peak

5

6

554.7700

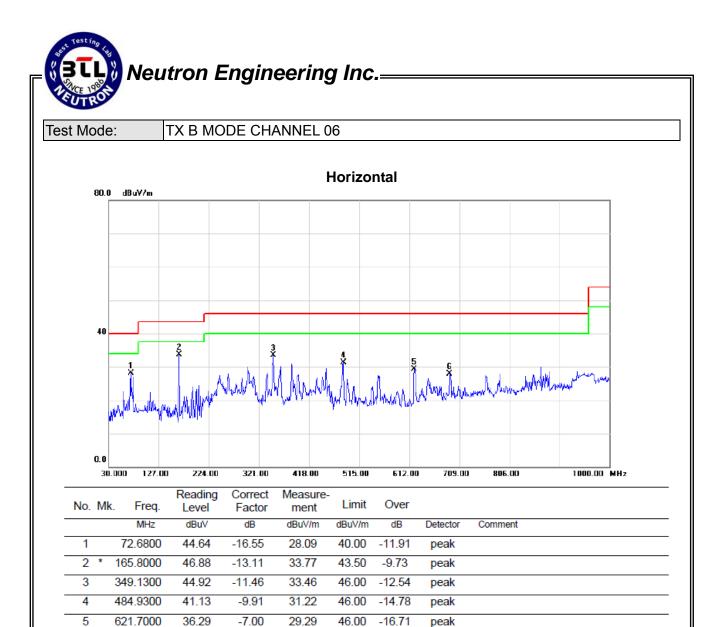
759.4400

46.12

33.39

-7.69

-4.57



690.5700

6

32.80

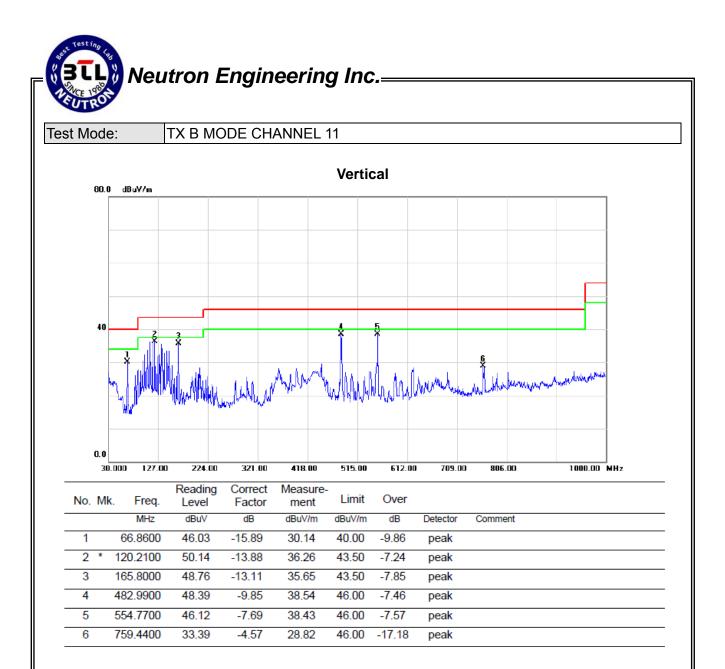
-4.94

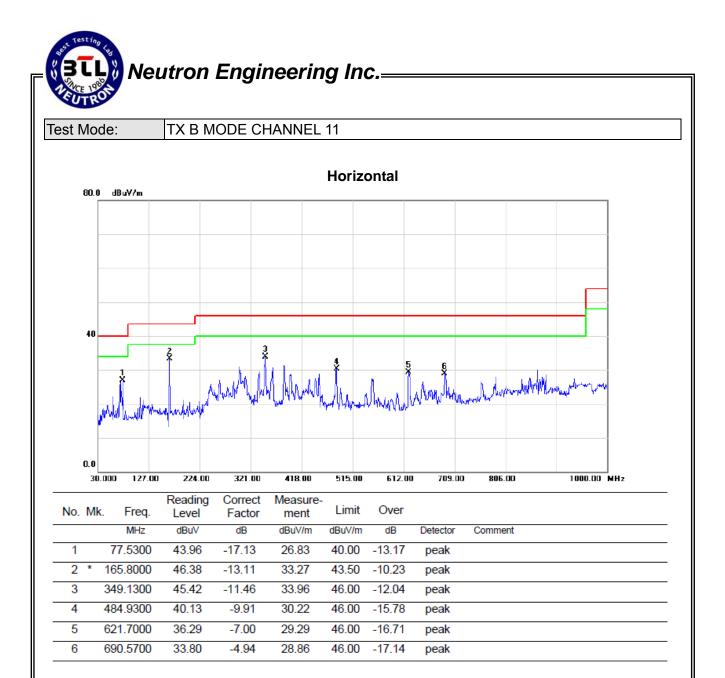
27.86

46.00

-18.14

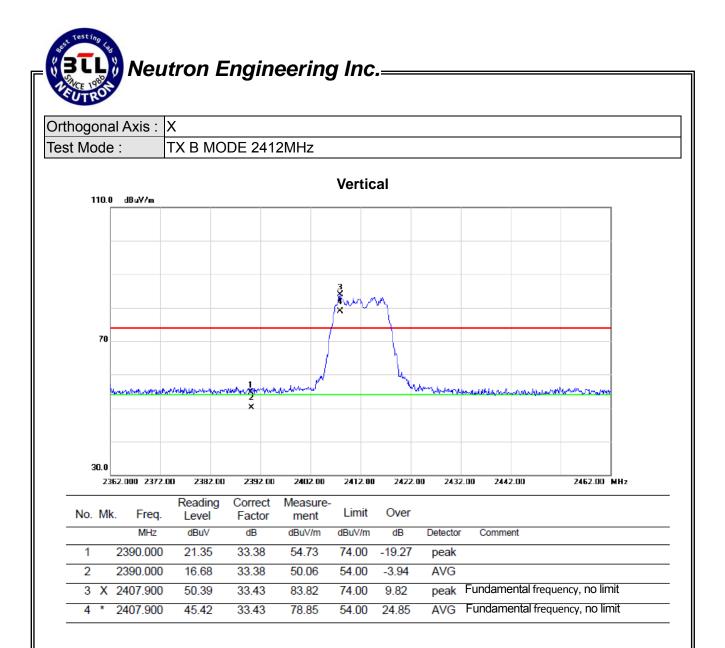
peak

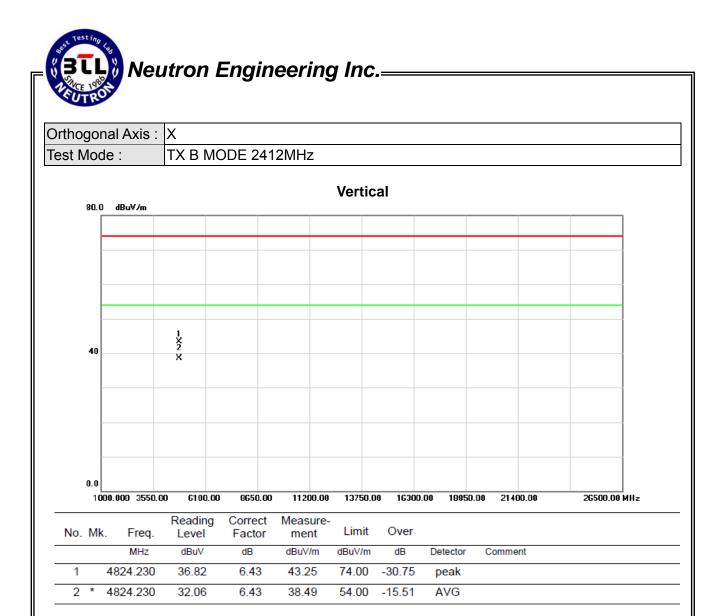


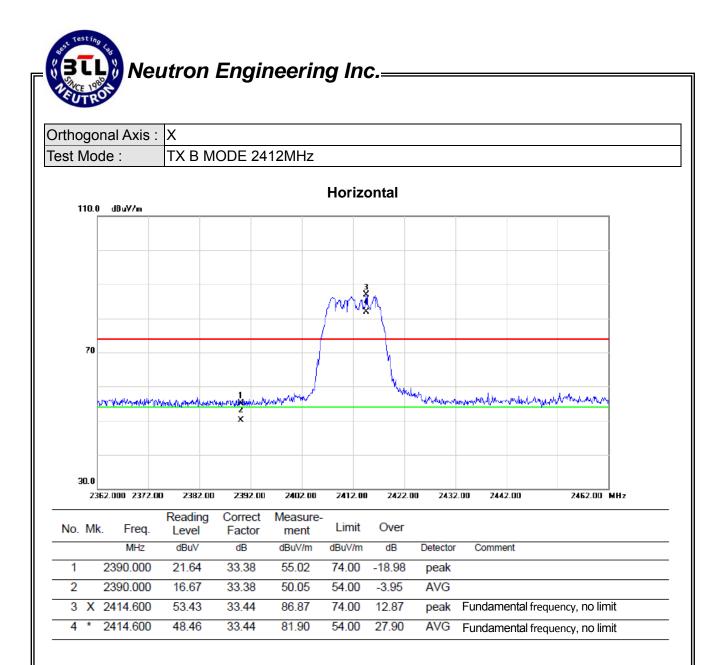


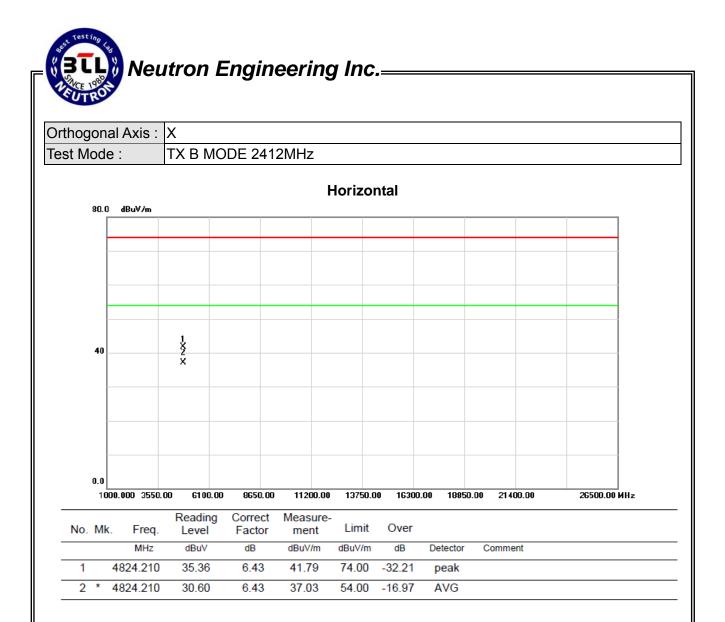


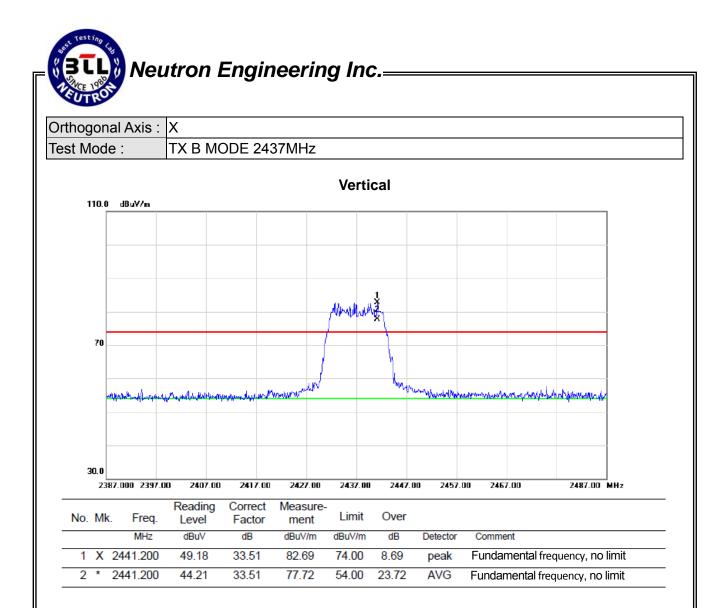
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

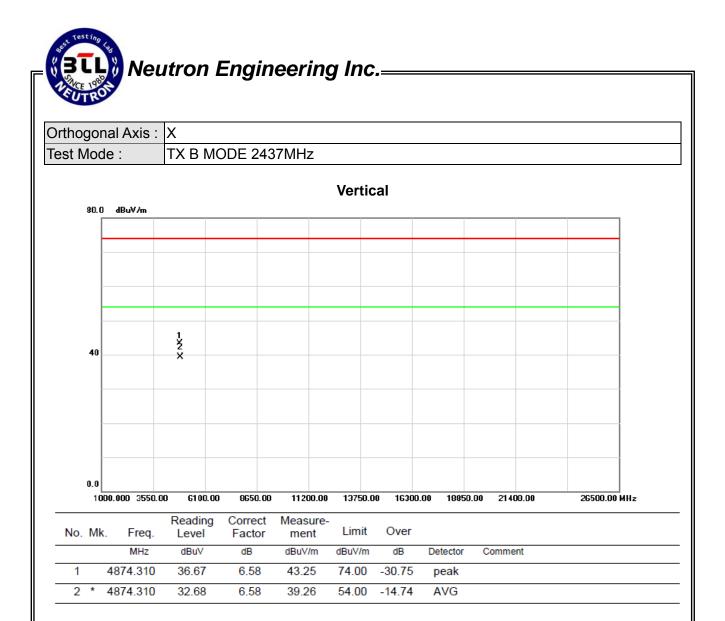


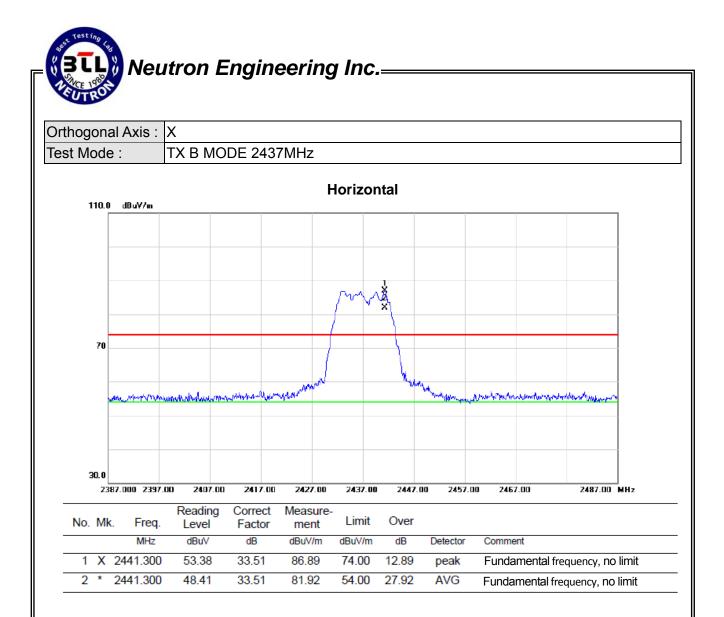


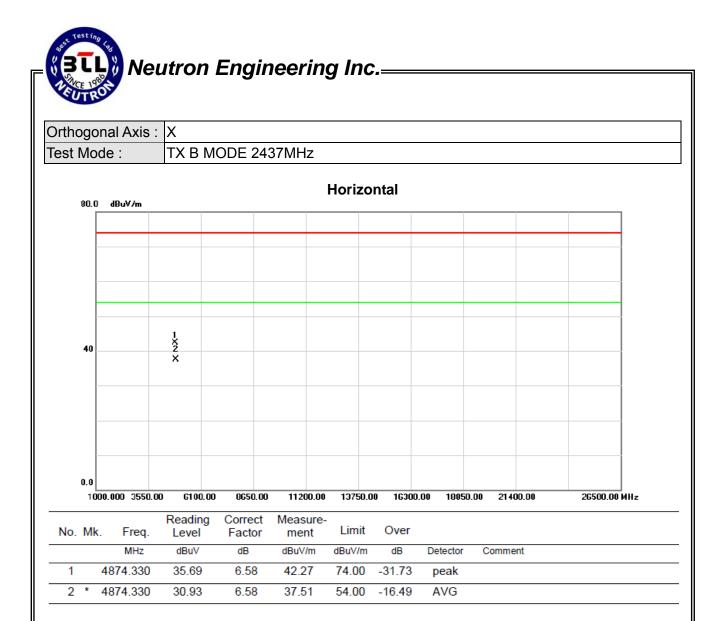


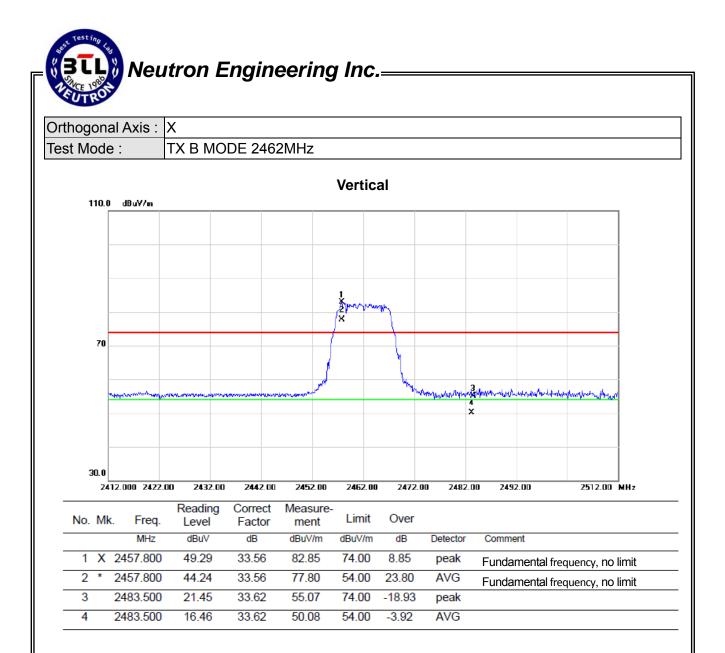


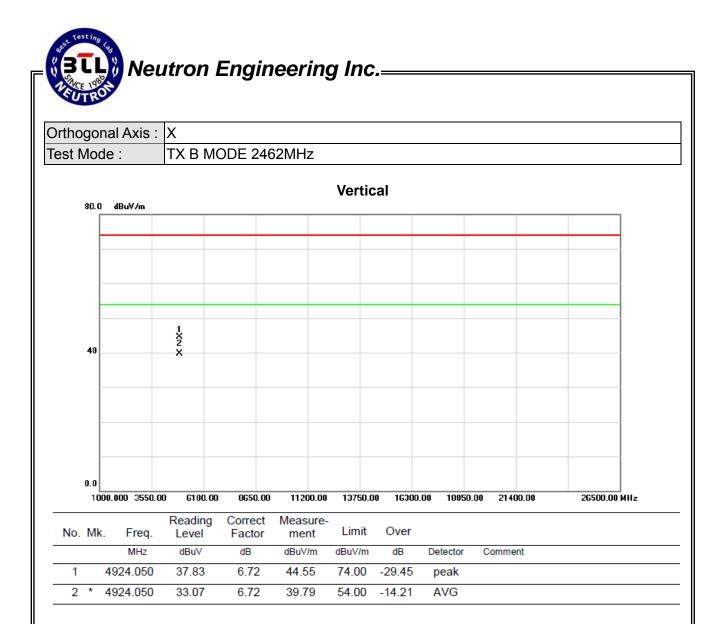


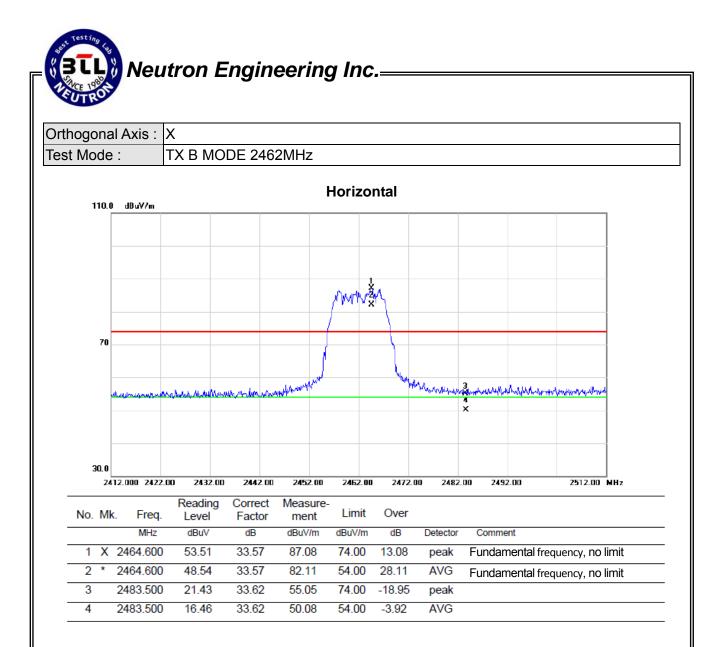


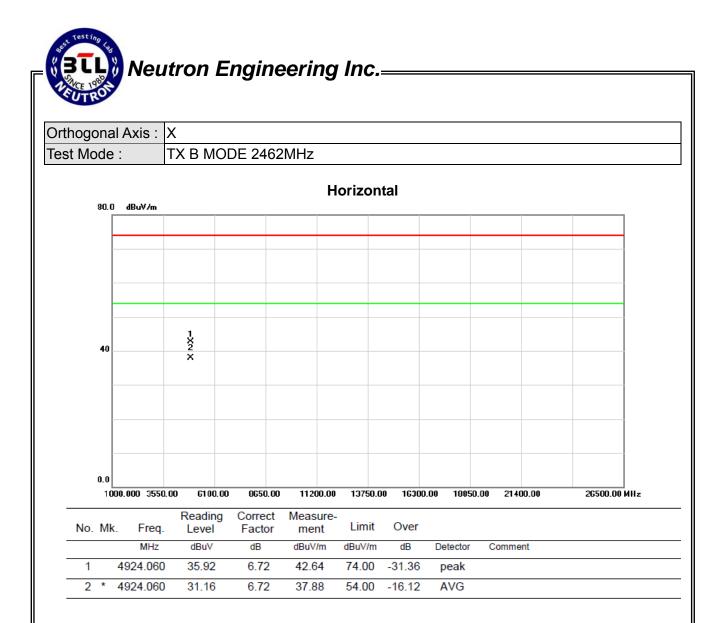


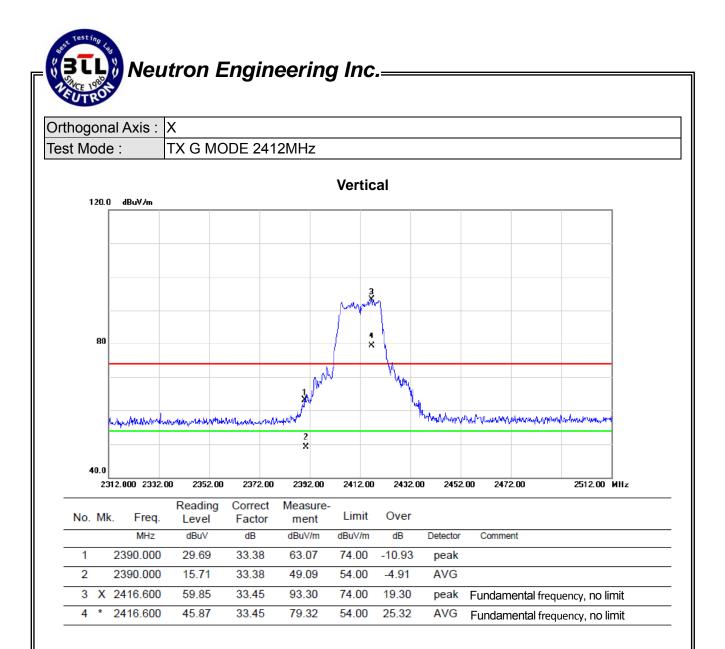


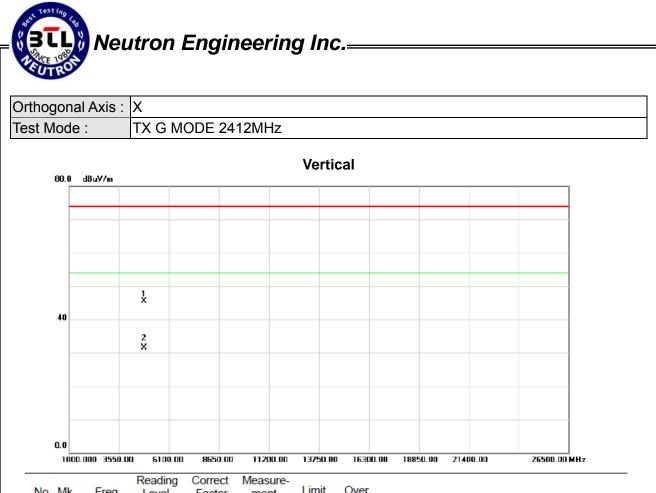




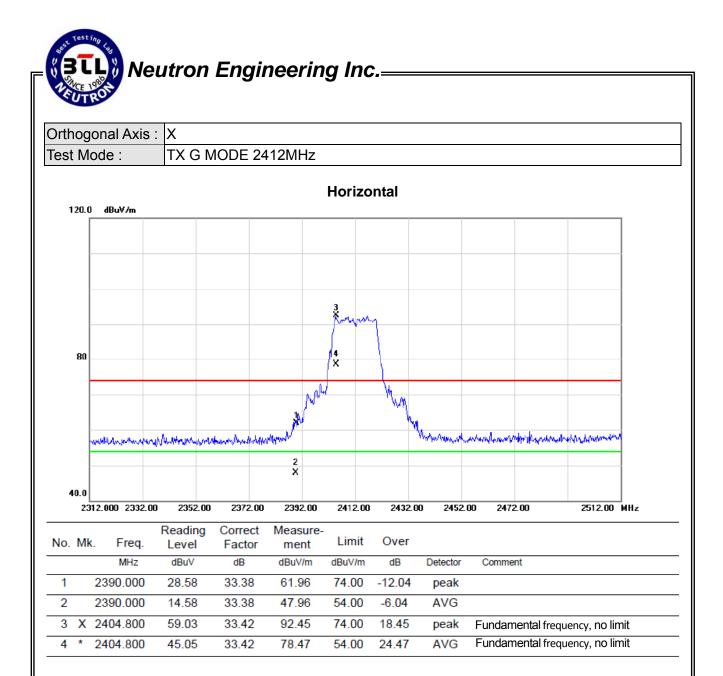


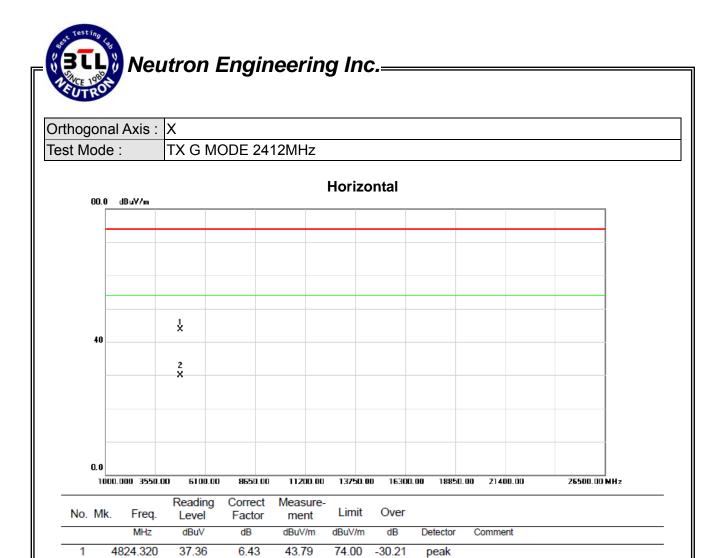






	No.	Mŀ	c. Freq.	Level	Factor	ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4824.350	39.14	6.43	45.57	74.00	-28.43	peak	
	2	*	4824.350	25.16	6.43	31.59	54.00	-22.41	AVG	





54.00 -24.19

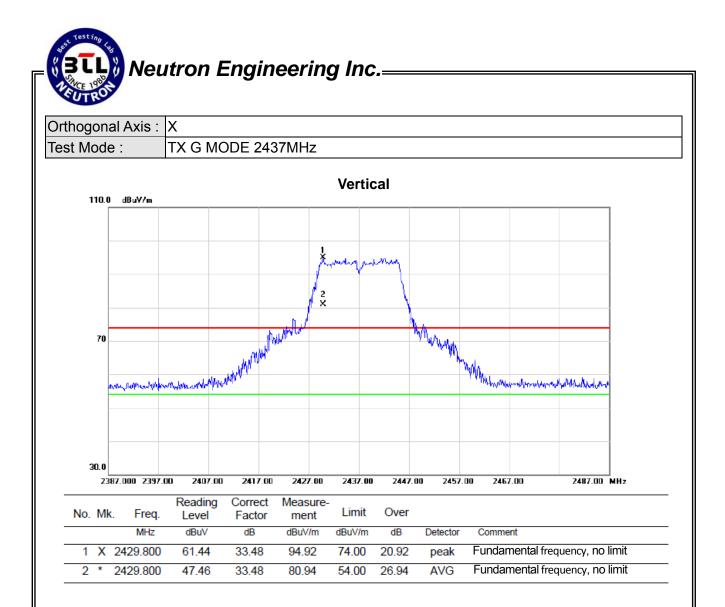
AVG

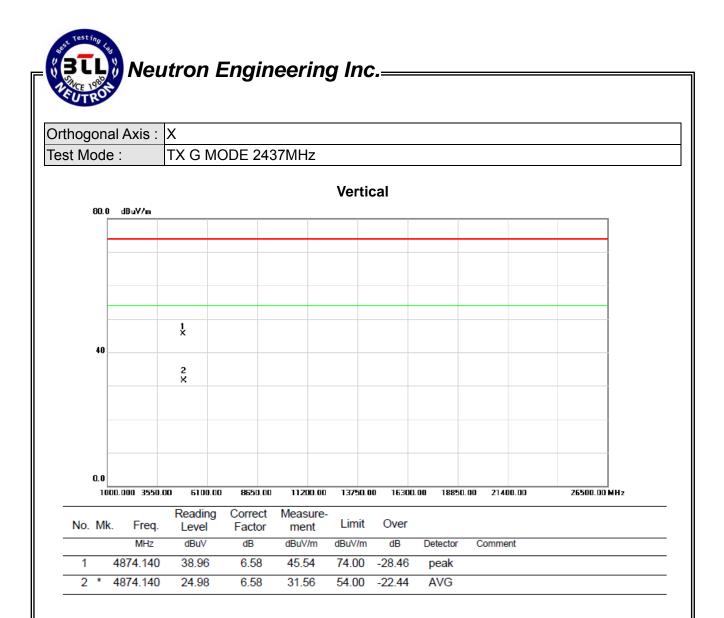
2 * 4824.320

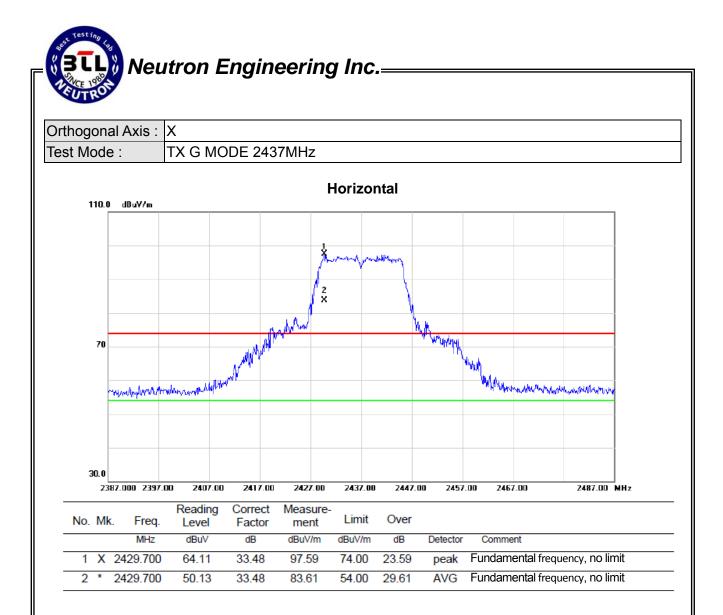
23.38

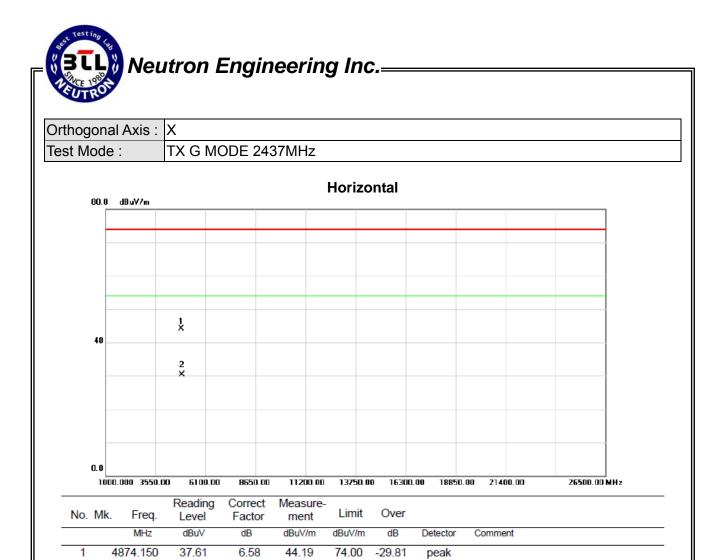
6.43

29.81









54.00 -23.79

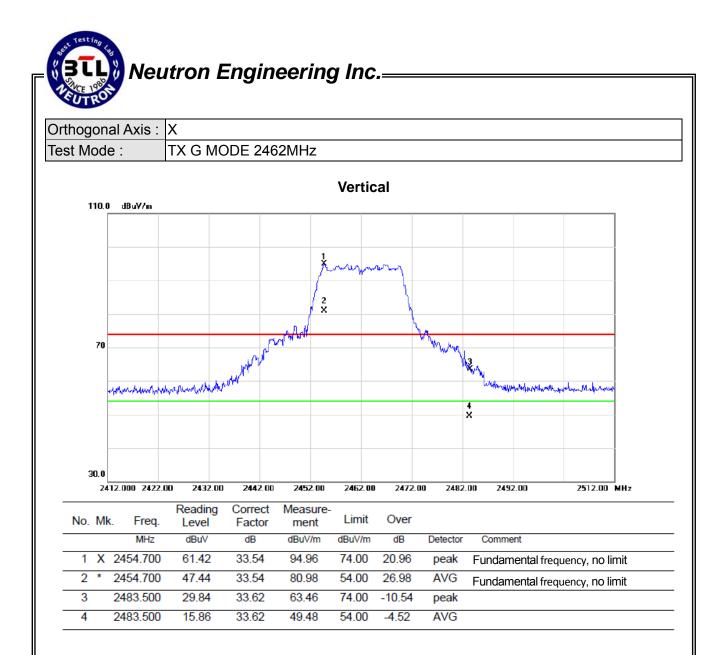
AVG

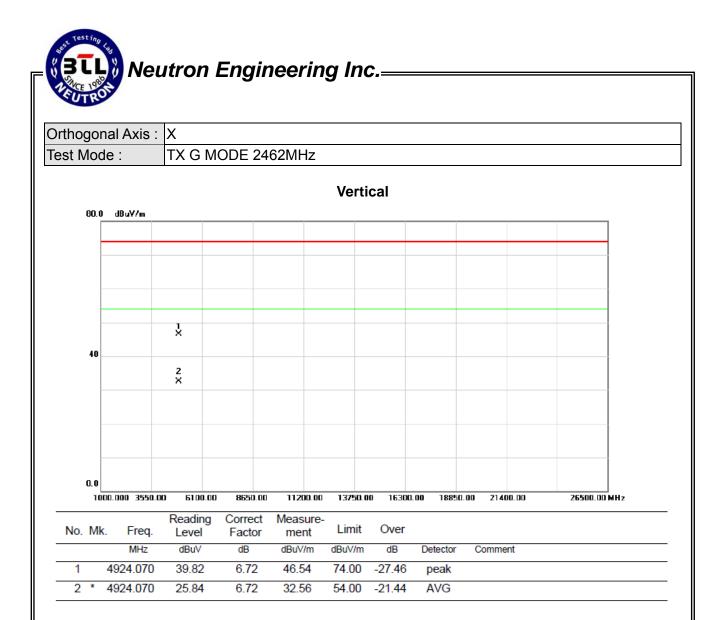
2 * 4874.150

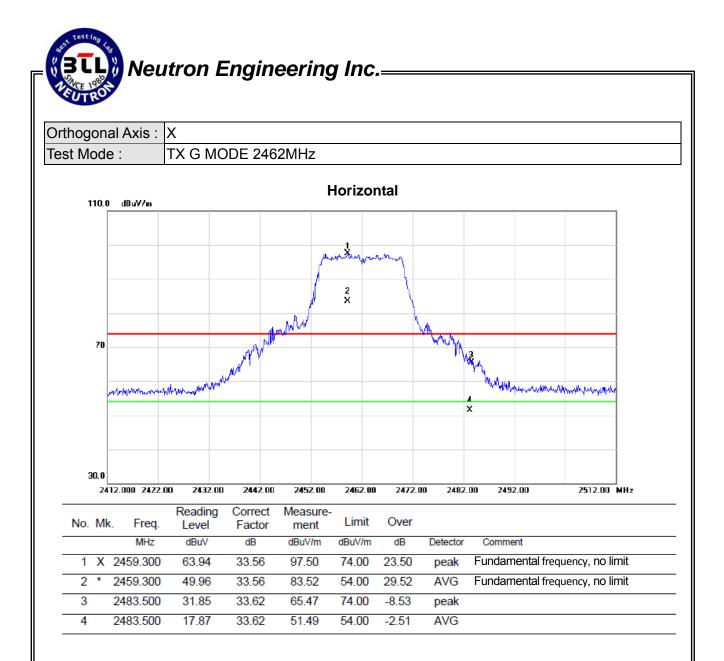
23.63

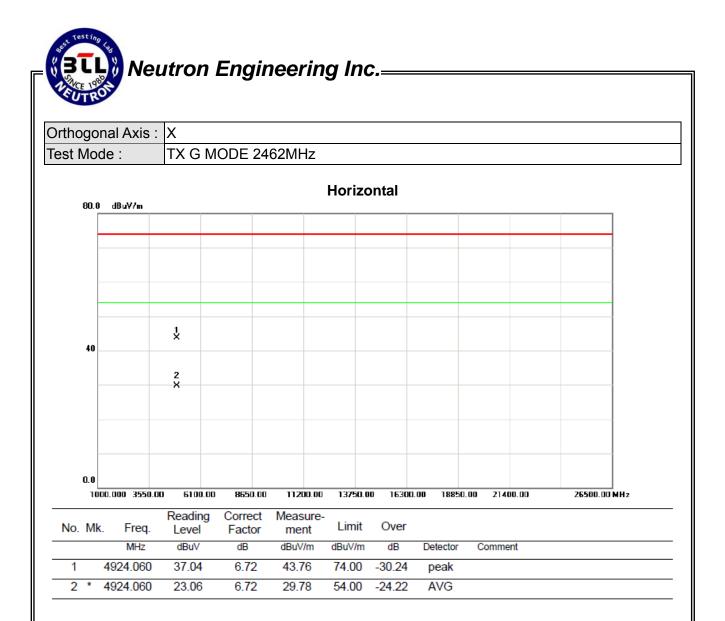
6.58

30.21



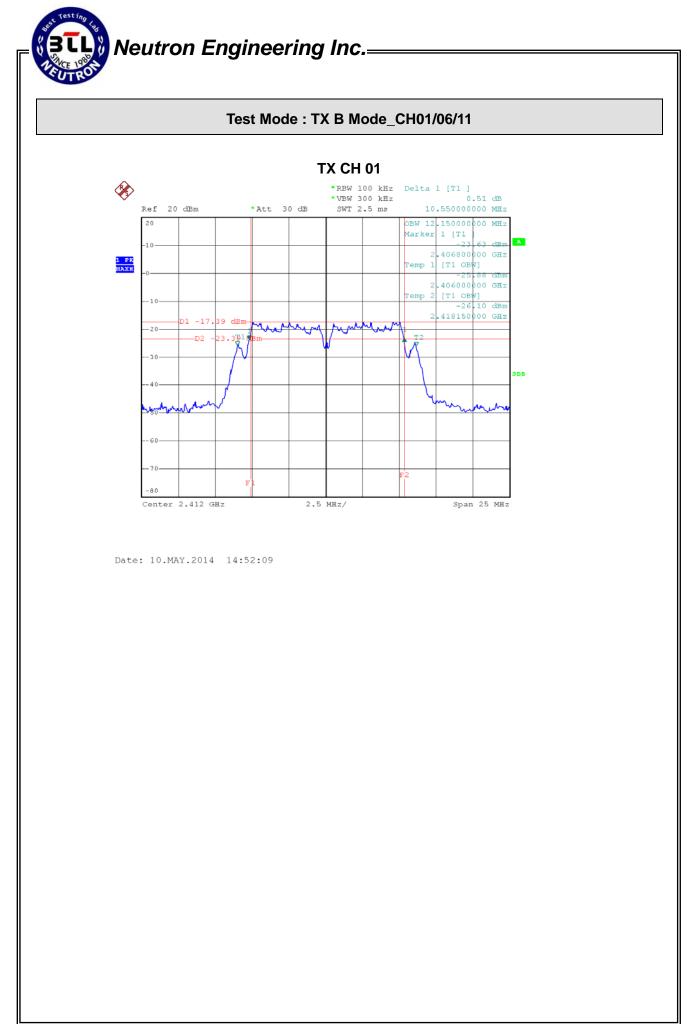


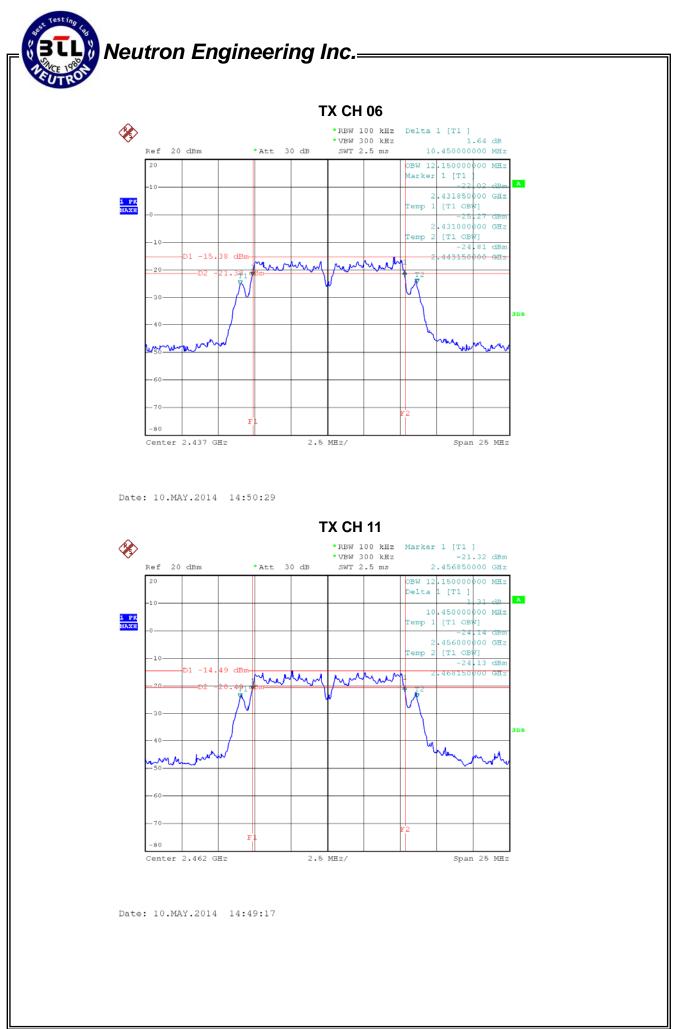


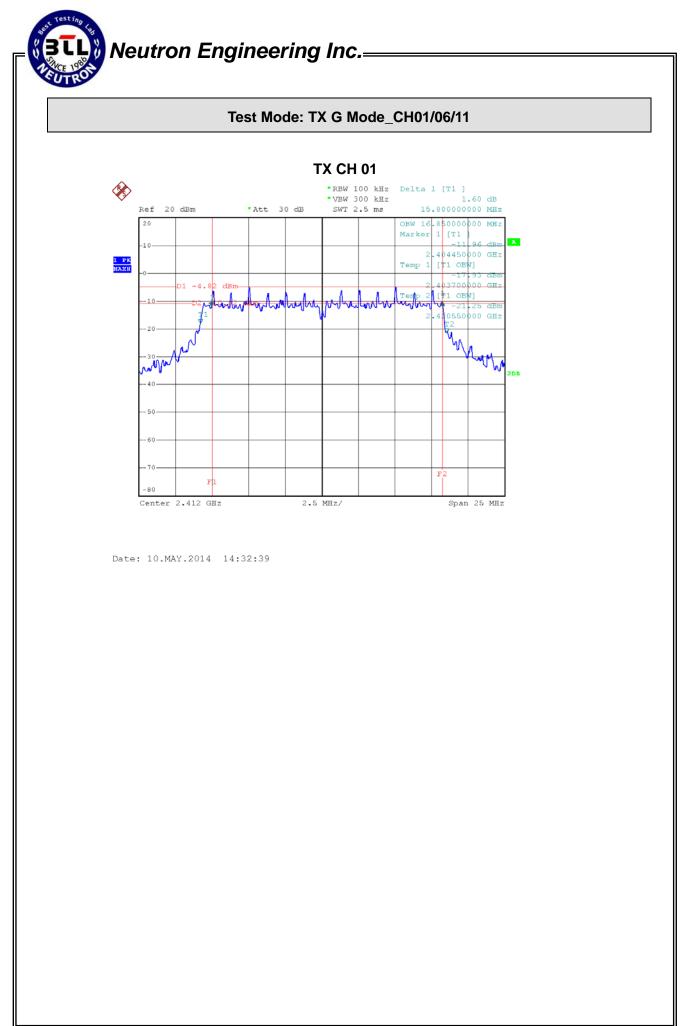


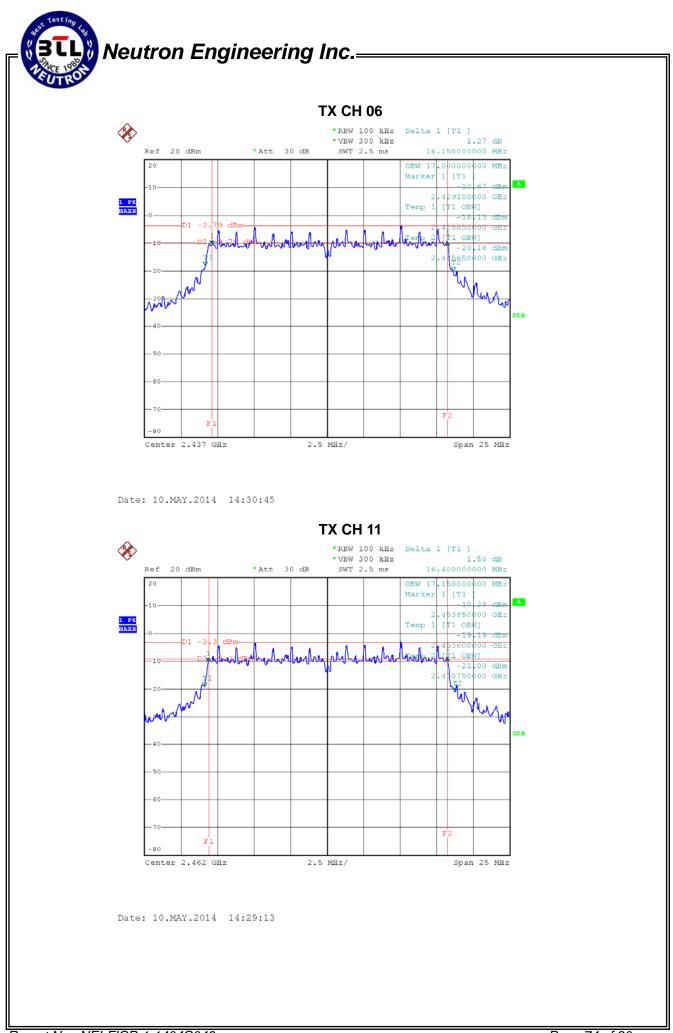


ATTACHMENT E - BANDWIDTH











ATTACHMENT F - MAXIMUM OUTPUT POWER

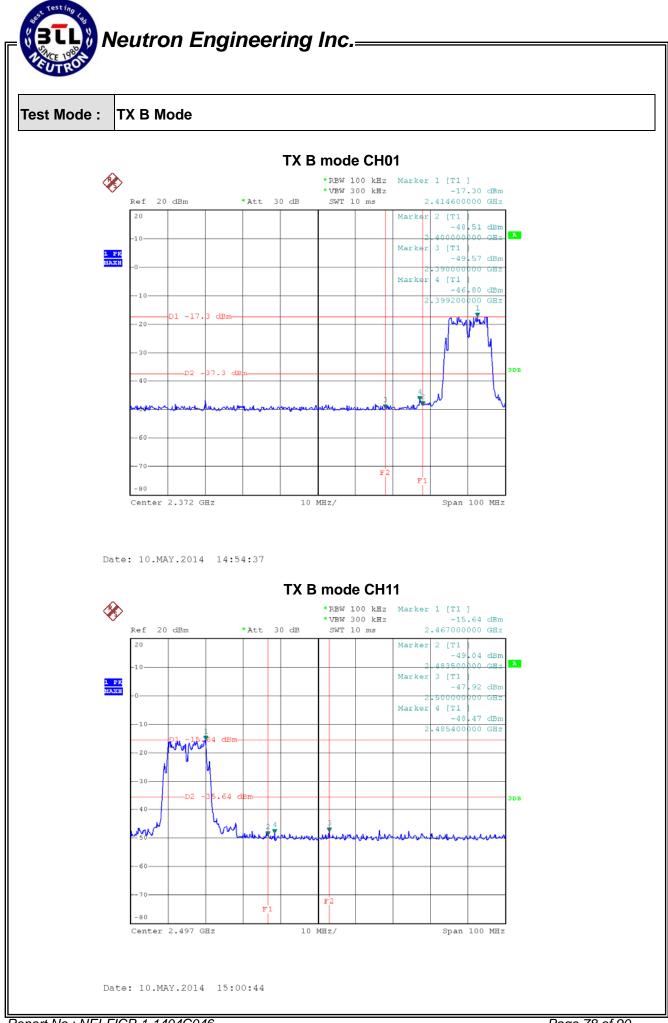


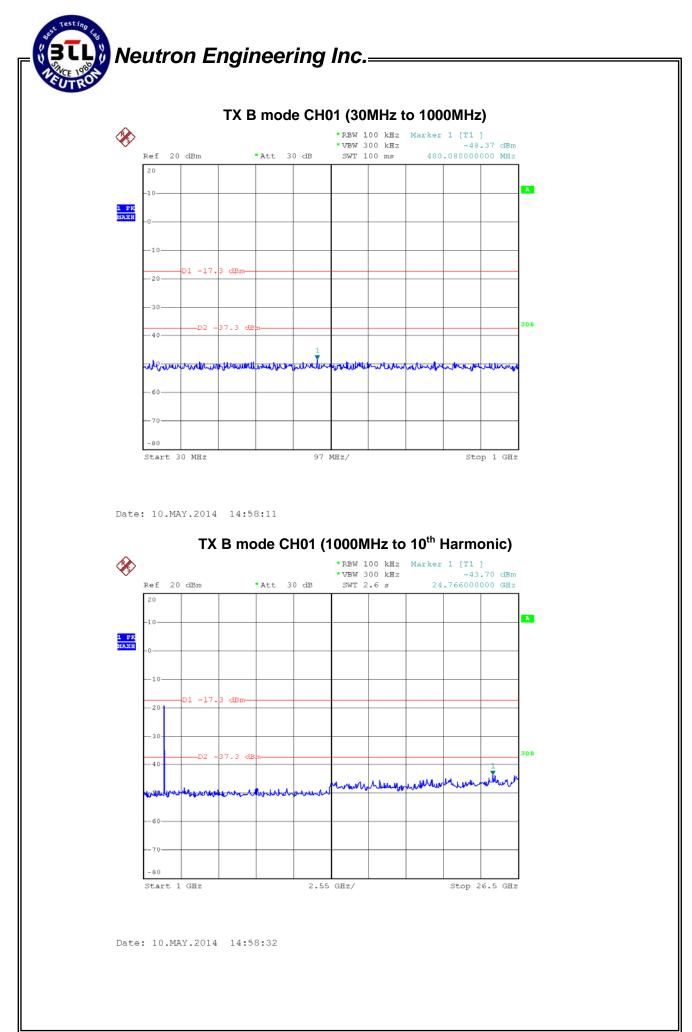
Test Mode : TX B Mode								
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)				
CH01	2412	3.70	30	1				
CH06	2437	3.92	30	1				
CH11	2462	4.43	30	1				

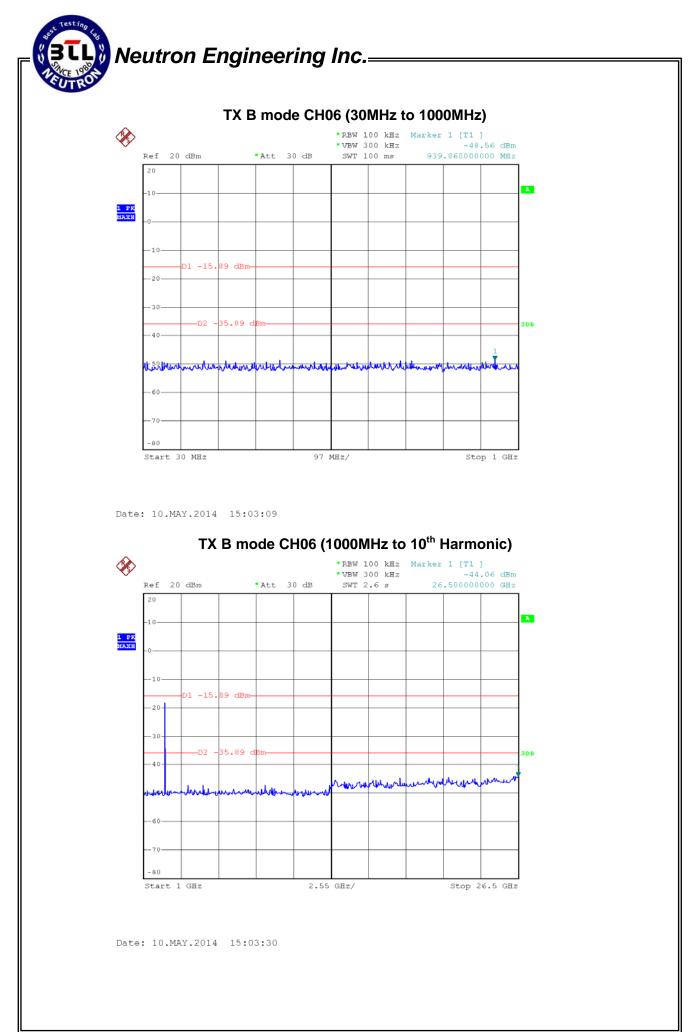
Test Mode : TX G Mode							
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)			
CH01	2412	12.61	30	1			
CH06	2437	12.67	30	1			
CH11	2462	12.89	30	1			

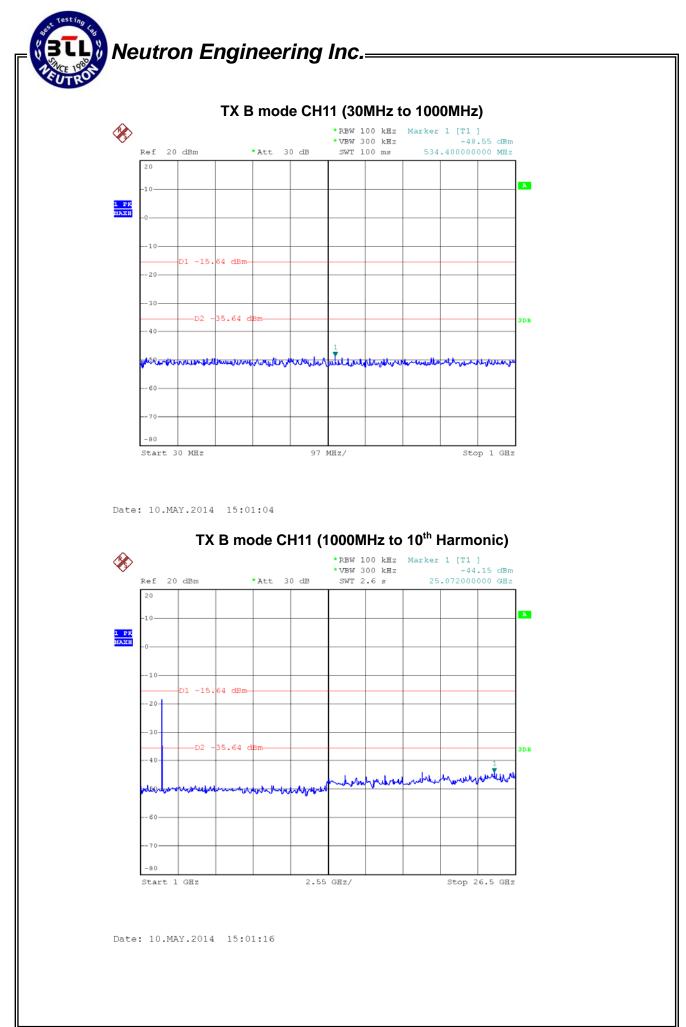


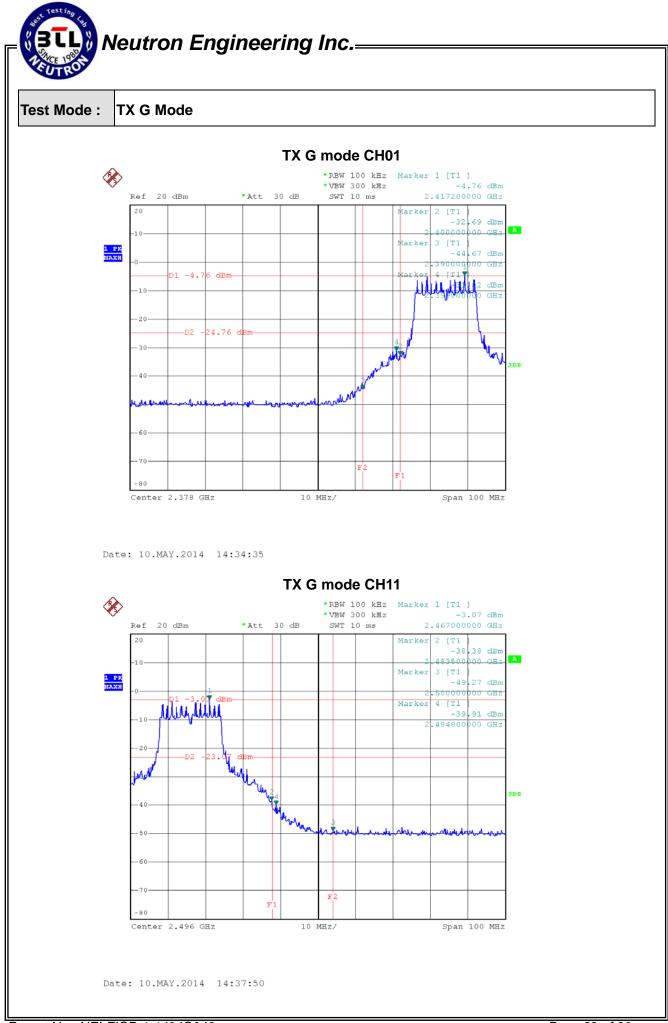
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION



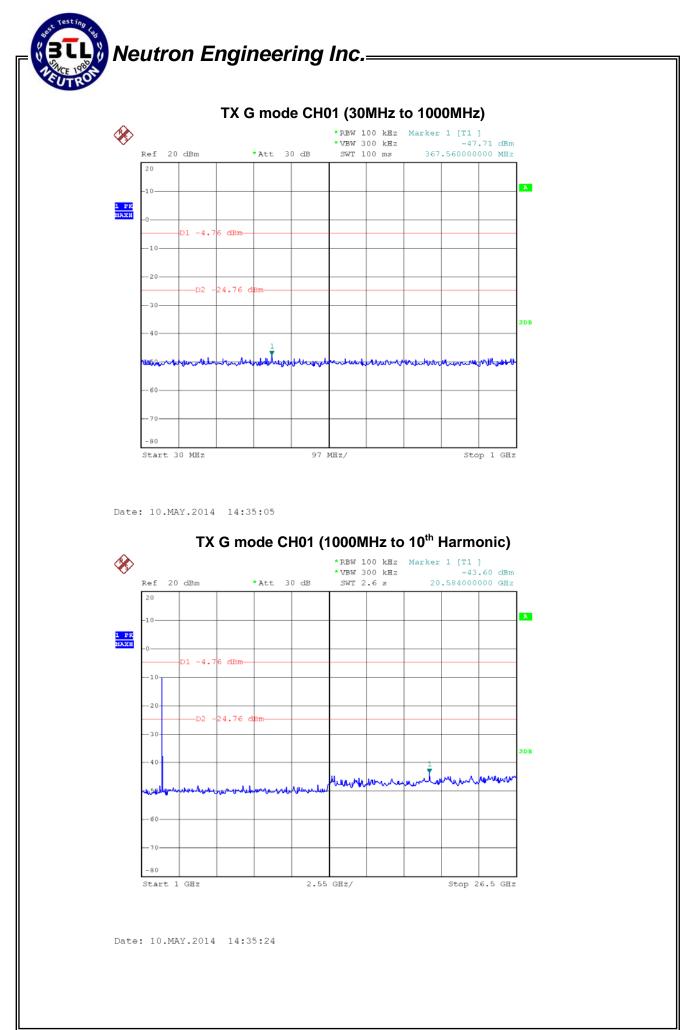


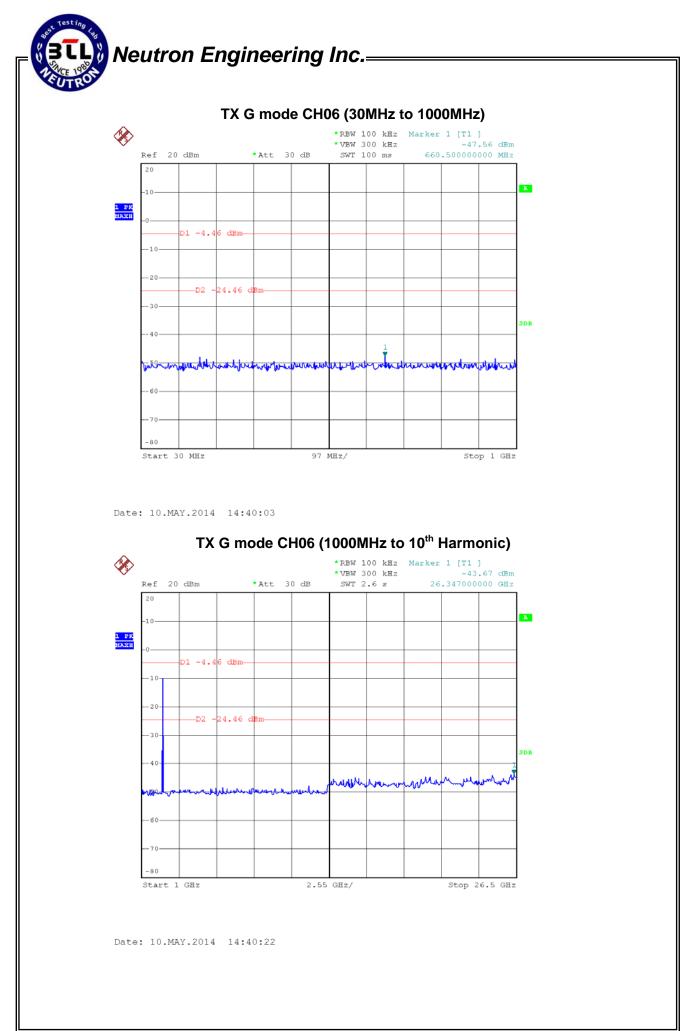


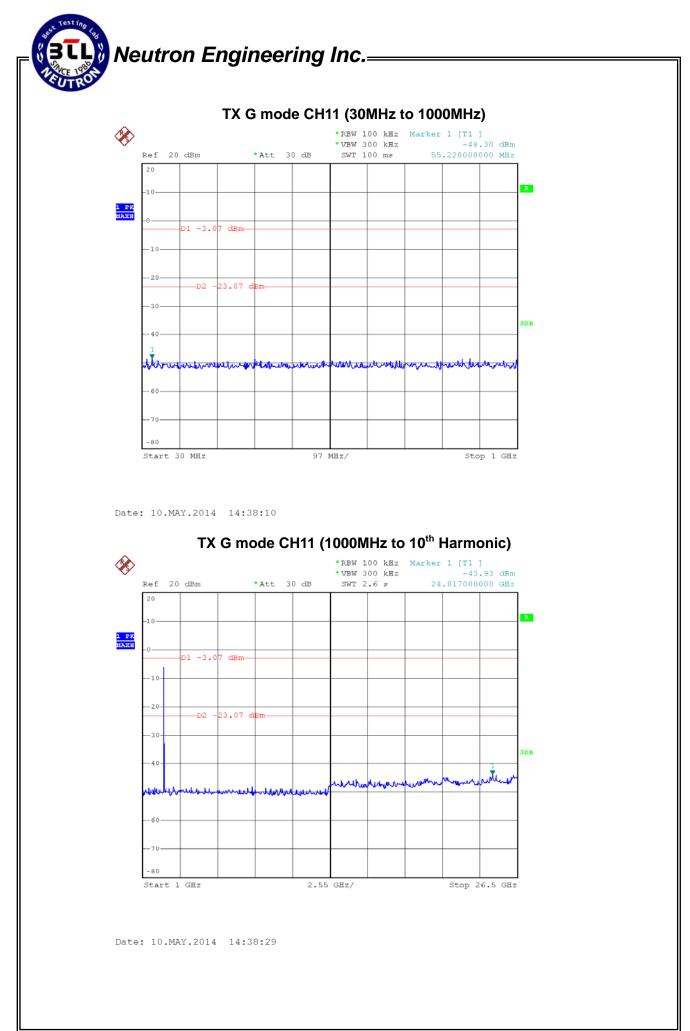




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ATTACHMENT H - POWER SPECTRAL DENSITY

