

Report No. : FR722118AC

FCC Test Report

Equipment : Floodlight Cam

Brand Name : RING

Model No. : Floodlight Cam

FCC ID : 2AEUPBHAFL001

Standard : 47 CFR FCC Part 15.247

Operating Band : 2400 MHz - 2483.5 MHz

Function : \square Point-to-multipoint; \square Point-to-point

Applicant : Bot Home Automation, Inc.

1523 26th St, Santa Monica, CA 90404, USA

Manufacturer : Chicony Electronics (Dong Guan) Co.,Ltd.

San Zhong Guan Li Qu, Qingxi Town, Dongguan City Guangdong 523651 China

The product sample received on Feb. 21, 2017 and completely tested on Mar. 22, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Phoenix Chen

SPORTON INTERNATIONAL INC.

lac MRA



SPORTON INTERNATIONAL INC. TEL: 886-3-3273456 FAX: 886-3-3270973

Report Version Issued Date

Page No.

: 1 of 23 : Rev. 01 : Mar. 27, 2017

FCC ID: 2AEUPBHAFL001



FCC Test Report

Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information	5
1.2	Testing Applied Standards	7
1.3	Testing Location Information	
1.4	Measurement Uncertainty	7
2	TEST CONFIGURATION OF EUT	8
2.1	Test Condition	8
2.2	Test Channel Mode	8
2.3	The Worst Case Measurement Configuration	
2.4	Support Equipment	
2.5	Test Setup Diagram	11
3	TRANSMITTER TEST RESULT	13
3.1	AC Power-line Conducted Emissions	13
3.2	DTS Bandwidth	14
3.3	Maximum Conducted Output Power	
3.4	Power Spectral Density	
3.5	Emissions in Non-restricted Frequency Bands	
3.6	Emissions in Restricted Frequency Bands	19
4	TEST EQUIPMENT AND CALIBRATION DATA	22
APPE	ENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS	
APPE	ENDIX B. TEST RESULTS OF DTS BANDWIDTH	
APPE	ENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER	
APPE	ENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY	
APPE	ENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS	
APPE	ENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS	
APPE	ENDIX G. TEST PHOTOS	
PHO	TOGRAPHS OF EUT V01	

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 2 of 23
Report Version : Rev. 01

Issued Date

: Mar. 27, 2017



Summary of Test Result

Conformance Test Specifications						
Report Clause	Ref. Std. Clause	Description	Limit	Result		
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied		
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied		
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied		
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied		
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied		
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 20 dBc	Complied		
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied		

SPORTON INTERNATIONAL INC. TEL: 886-3-3273456

FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 3 of 23
Report Version : Rev. 01

Issued Date : Mar. 27, 2017



Revision History

Report No.	Version	Description	Issued Date
FR722118AC	Rev. 01	Initial issue of report	Mar. 27, 2017

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 4 of 23
Report Version : Rev. 01

Issued Date

: Mar. 27, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Report No.: FR722118AC

: 5 of 23

: Rev. 01

: Mar. 27, 2017

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX(Port 1)
2.4-2.4835GHz	802.11g	20	1TX(Port 1)
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	1TX(Port 1)

Note:

- ◆ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ◆ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	PIFA Antenna	Murata	1.27
2	2	-	-	PIFA Antenna	Murata	1.27

Note: 1: 802.11b/g/n HT40 only includes 1TX and Port1 for emission.

Note: 2: 802.11n HT20 used two antennas are for signal transmitting and receiving.

SPORTON INTERNATIONAL INC. Page No.

TEL: 886-3-3273456 Report Version
FAX: 886-3-3270973 Issued Date

FCC ID: 2AEUPBHAFL001

FCC Test Report No.: FR722118AC

1.1.3 EUT Information

_							
	Identify EUT						
Pre	sentation	of Equipment		Production ;	☐ Pre-F	Produc	ction ; 🛛 Prototype
				Oper	ational C	Condi	tion
EUT	Γ Power T	уре	Fror	n AC Adaptei	r		
Bea	mforming	g Function		With beamfo	orming	\boxtimes	Without beamforming
					Type of	EUT	
\boxtimes	Stand-alo	ne					
	Combine	d (EUT where th	e rac	dio part is full	y integrat	ted wi	thin another device)
	Combined Equipment - Brand Name / Model No.:						
	Plug-in radio (EUT intended for a variety of host systems)						
	Host System - Brand Name / Model No.:						
	Other:						

1.1.4 Mode Test Duty Cycle

FCC ID: 2AEUPBHAFL001

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.98	0.088	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.872	0.595	1.401m	1k
802.11n HT20	0.761	1.186	678.125u	3k
802.11n HT40	0.725	1.397	642.5u	3k

 SPORTON INTERNATIONAL INC.
 Page I

 TEL: 886-3-3273456
 Report

 FAX: 886-3-3270973
 Issued

Page No. : 6 of 23
Report Version : Rev. 01
Issued Date : Mar. 27, 2017

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

Report No.: FR722118AC

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- KDB 558074 D01 v03r05
- KDB 662911 D01 v02r01

1.3 Testing Location Information

	Testing Location							
\boxtimes	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd	No. 52, Hwa Ya 1st Rd., Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456	886-3-327-3456 FAX : 886-3-327-0973			
	Test site Designation No. 553509 with FCC.							
	JHUBEI	ADD	:	No.8, Lane 724, Bo-ai	St., Jhul	bei	i City, HsinChu County 302, Taiwan, R.O.C.	
	TEL : 886-3-656-9065							
	Test site Designation No. TW0006 with FCC.							

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH06-HY	Gary	21.5°C / 61%	22/Mar/2017
Radiated<1G	03CH03-HY	Jeff	24.6°C / 56%	04/Mar/2017
Radiated>1G	03CH09-HY	Terry	19.1°C / 60%	17/Mar/2017
AC Conduction	CO04-HY	Teddy	25°C / 59%	09/Mar/2017

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	2.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	2.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	2.9 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

 SPORTON INTERNATIONAL INC.
 Page No.
 : 7 of 23

 TEL: 886-3-3273456
 Report Version
 : Rev. 01

 FAX: 886-3-3270973
 Issued Date
 : Mar. 27, 2017

FCC ID: 2AEUPBHAFL001



2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software	DOS
---------------	-----

Mode	Power Setting
802.11b_(1Mbps)_1TX	-
2412MHz	default
2437MHz	default
2462MHz	default
802.11g_(6Mbps)_1TX	-
2412MHz	default
2437MHz	default
2462MHz	default
802.11n HT20_Nss2,(MCS8)_2TX	-
2412MHz	default
2437MHz	default
2462MHz	default
802.11n HT40_Nss1,(MCS0)_1TX	-
2422MHz	default
2437MHz	default
2452MHz	default

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 8 of 23
Report Version : Rev. 01

Issued Date : Mar. 27, 2017

2.3 **The Worst Case Measurement Configuration**

The Worst Case Mode for Following Conformance Tests		
Tests Item	AC power-line conducted emissions	
Condition	AC power-line conducted measurement for line and neutral	
Operating Mode	Normal Link	
1	Adapter mode	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

Th	e Worst Case Mode for Following Con	formance Tests		
Tests Item	Emissions in Restricted Frequency Band	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.			
Operating Mode < 1GHz	Normal Link			
1	Adapter mode & EUT standing			
2	Adapter mode & EUT laying			
Operating Mode > 1GHz	CTX			
1	Adapter mode			
	Y Plane	Z Plane		
Orthogonal Planes of EUT				
Worst Planes of EUT	V			

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 9 of 23 Report Version : Rev. 01 : Mar. 27, 2017

Report No.: FR722118AC

Issued Date

FCC Test Report No.: FR722118AC

2.4 Support Equipment

		Support Equipment -	RF Conducted	
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	Adapter for Notebook	DELL	HA65NM130	DoC

Support Equipment – Radiated Emission < 1GHz				
No.	Equipment	Brand Name	Model Name	FCC ID
1	AP (Remove)	ASUS	RT-AC66U	D33005U
2	AC adapter for AP (Remove)	ASUS	AD82030	-

	Support Equipment – Radiated Emission > 1GHz			
No.	Equipment	Brand Name	Model Name	FCC ID
1	-	-	-	-

Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook(Remove)	DELL	Latitude E5540	DoC

SPORTON INTERNATIONAL INC. Page No.

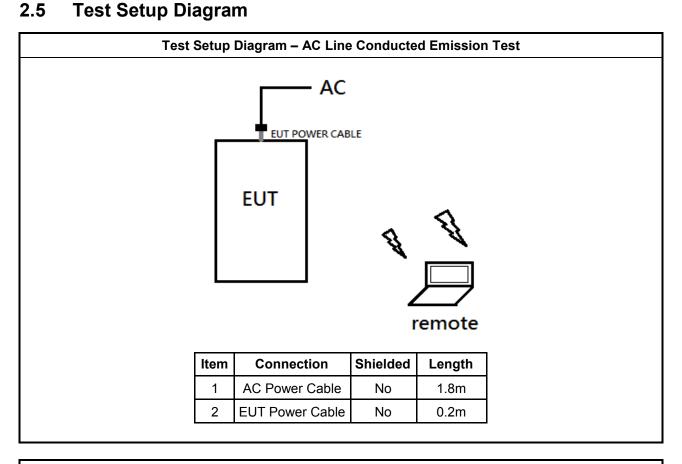
TEL: 886-3-3273456 Report Version
FAX: 886-3-3270973 Issued Date

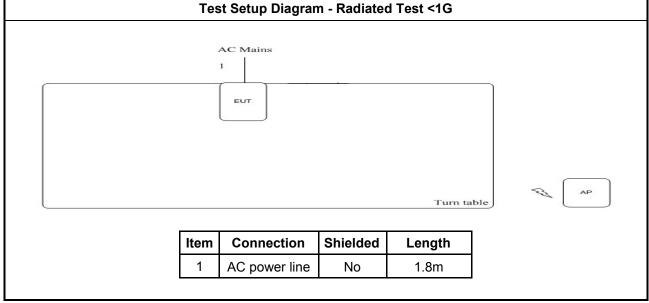
FCC ID: 2AEUPBHAFL001

eport Version : Rev. 01 sued Date : Mar. 27, 2017

: 10 of 23







SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 11 of 23
Report Version : Rev. 01

: Mar. 27, 2017

Issued Date

Test Setup Diagram - Radiated Test >1G AC Mains 1 Adapter EUT Power box Turn table Item Connection Shielded Length

No

No

3.45m

1.8m

1

2

USB Cable

AC power line

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 12 of 23 Report Version : Rev. 01 Issued Date

: Mar. 27, 2017



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

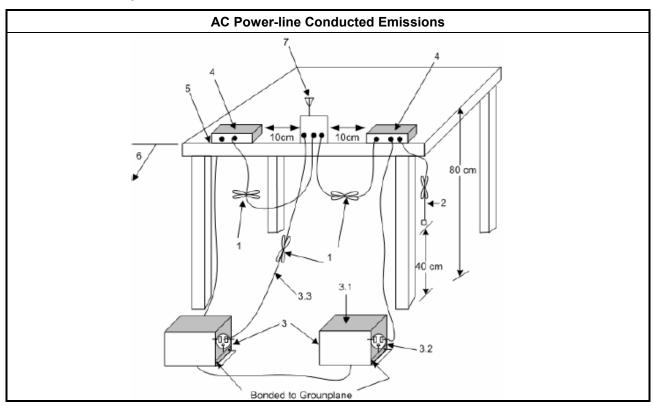
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

SPORTON INTERNATIONAL INC.
TEL: 886-3-3273456
FAX: 886-3-3270973
FCC ID: 2AEUPBHAFL001

Page No. : 13 of 23
Report Version : Rev. 01
Issued Date : Mar. 27, 2017

FCC Test Report No.: FR722118AC

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
■ 6 dB bandwidth ≥ 500 kHz.

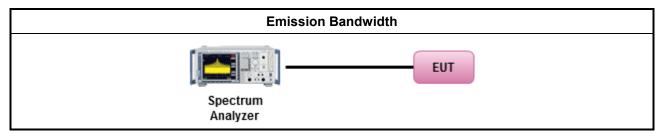
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

	Test Method						
•	■ For the emission bandwidth shall be measured using one of the options below:						
	Refer as KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.						
	Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.						
	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.						

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456

FAX: 886-3-3270973

Report Version
Issued Date
FCC ID: 2AEUPBHAFL001

Report Version : Rev. 01 Issued Date : Mar. 27, 2017

: 14 of 23

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

xir	mur	n Conducted Output Power Limit						
	•	If $G_{TX} \le 6$ dBi, then $P_{Out} \le 30$ dBm (1 W)						
	•	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm						
	•	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm						
	•	■ Smart antenna system (SAS):						
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm						
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm						
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm						
i.r.p). P	ower Limit:						
2	2400	0-2483.5 MHz Band						
	•	Point-to-multipoint systems (P2M): P _{eirp} ≤ 36 dBm (4 W)						
	•	Point-to-point systems (P2P): $P_{eirp} \le MAX(36, [P_{Out} + G_{TX}]) dBm$						
	•	Smart antenna system (SAS)						
		- Single beam: P _{eirp} ≤ MAX(36, P _{Out} + G _{TX}) dBm						
		- Overlap beam: P _{eirp} ≤ MAX(36, P _{Out} + G _{TX}) dBm						
		- Aggregate power on all beams: Peirp ≤ MAX(36, [P _{Out} + G _{TX} + 8]) dBm						

3.3.2 Measuring Instruments

FCC ID: 2AEUPBHAFL001

Refer a test equipment and calibration data table in this test report.

 SPORTON INTERNATIONAL INC.
 Page N

 TEL: 886-3-3273456
 Report

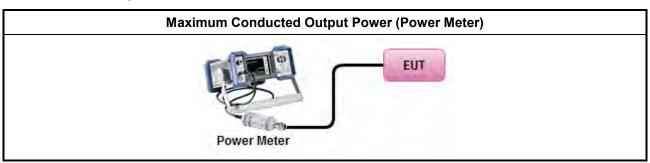
 FAX: 886-3-3270973
 Issued

Page No. : 15 of 23
Report Version : Rev. 01
Issued Date : Mar. 27, 2017

3.3.3 Test Procedures

	Test Method
•	Maximum Peak Conducted Output Power
	☐ Refer as KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	Refer as KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
•	Maximum Average Conducted Output Power
	Duty cycle ≥ 98%
	Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	Duty cycle < 98%
	Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	Refer as KDB 558074, clause 9.2.3.1 Method AVGPM (using an RF average power meter).
•	For conducted measurement.
	If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	■ If multiple transmit chains, EIRP calculation could be following as methods: P _{total} = P ₁ + P ₂ + + P _n (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP _{total} = P _{total} + DG

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001

SPORTON INTERNATIONAL INC.

Page No. : 16 of 23
Report Version : Rev. 01
Issued Date : Mar. 27, 2017

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit

Report No.: FR722118AC

Power Spectral Density (PSD) ≤ 8 dBm/3kHz

3.4.2 Measuring Instruments

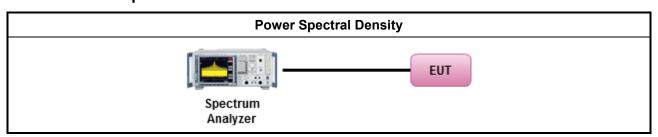
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method

- Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
 - Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).
- For conducted measurement.
 - If The EUT supports multiple transmit chains using options given below:
 - Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

 SPORTON INTERNATIONAL INC.
 Page No.
 : 17 of 23

 TEL: 886-3-3273456
 Report Version
 : Rev. 01

 FAX: 886-3-3270973
 Issued Date
 : Mar. 27, 2017

FCC ID: 2AEUPBHAFL001

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit				
RF output power procedure	Limit (dB)			
Peak output power procedure	20			
Average output power procedure	30			

Report No.: FR722118AC

- Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.
- Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

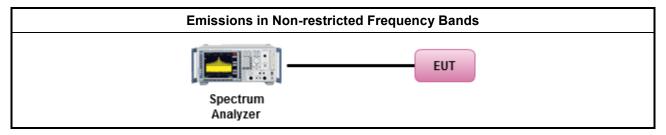
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
 Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

 SPORTON INTERNATIONAL INC.
 Page No.
 : 18 of 23

 TEL: 886-3-3273456
 Report Version
 : Rev. 01

 FAX: 886-3-3270973
 Issued Date
 : Mar. 27, 2017

FCC ID: 2AEUPBHAFL001

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit								
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)					
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300					
0.490~1.705	24000/F(kHz)	33.8 - 23	30					
1.705~30.0	30	29	30					
30~88	100	40	3					
88~216	150	43.5	3					
216~960	200	46	3					
Above 960	500	54	3					

- Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
- Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

SPORTON INTERNATIONAL INC. TEL: 886-3-3273456

FCC ID: 2AEUPBHAFL001

FAX: 886-3-3270973

Page No. : 19 of 23
Report Version : Rev. 01

Issued Date : Mar. 27, 2017

3.6.3 Test Procedures

Test Method

Report No.: FR722118AC

: 20 of 23

: Rev. 01

: Mar. 27, 2017

- The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
- Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
- For the transmitter unwanted emissions shall be measured using following options below:
 - Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands.
 - Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW≥1/T.
 - Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
- For the transmitter band-edge emissions shall be measured using following options below:
 - Refer as KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
 - Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
 - Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
- For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2.
 - For conducted unwanted emissions into restricted bands (absolute emission limits).
 Devices with multiple transmit chains using options given below:
 - (1) Measure and sum the spectra across the outputs or
 - (2) Measure and add 10 log(N) dB

FCC ID: 2AEUPBHAFL001

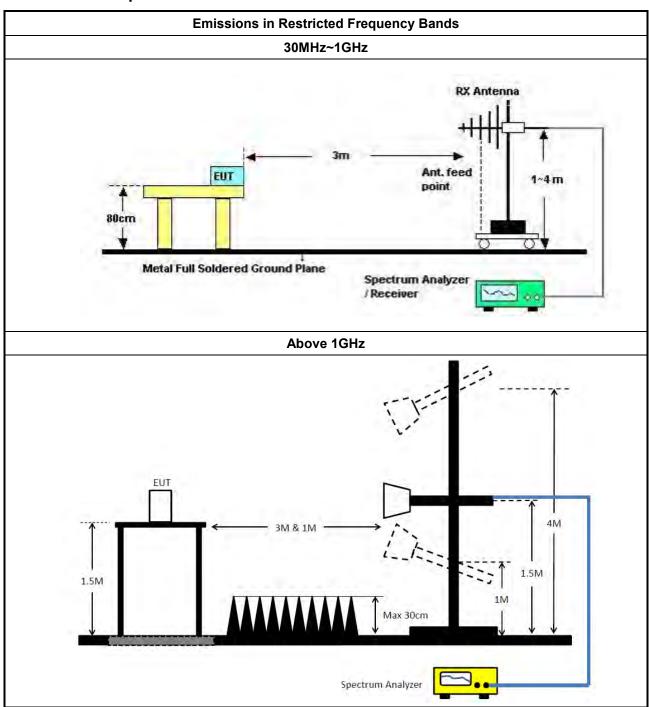
For KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

SPORTON INTERNATIONAL INC. Page No.
TEL: 886-3-3273456 Report Version
FAX: 886-3-3270973 Issued Date



Report No.: FR722118AC

3.6.4 **Test Setup**



Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001

: 21 of 23 Page No. Report Version : Rev. 01

Issued Date : Mar. 27, 2017



4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102051	9KHz ~ 3.6GHz	15/Apr/2016	14/Apr/2017
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	15/Nov/2016	14/Nov/2017
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	24/Oct/2016	23/Oct/2017

Report No.: FR722118AC

: 22 of 23

: Rev. 01

: Mar. 27, 2017

Instrument for Radiated Test <1G

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz	28/Nov/2016	27/Nov/2017
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	10/May/2016	09/May/2017
Spectrum	R&S	FSV40	101515	9kHz ~ 40GHz	28/Nov/2016	27/Nov/2017
Bilog Antenna	SCHAFFNER	CBL 6112D	2723	30MHz ~ 1GHz	01/Oct/2016	30/Sep/2017
Loop Antenna	TESEQ	HLA 6120	24155	9 kHz~30 MHz	16/Mar/2016	15/Mar/2017
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	27/Oct/2016	26/Oct/2017

Instrument for Radiated Test >1G

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	21/Jun/2016	20/Jun/2017
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	11/Apr/2016	10/Apr/2017
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	04/Jul/2016	03/Jul/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	22/Apr/2016	21/Apr/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
RF Cable-high	Jye Bao	RG142	03CH09-HY	1GHz ~ 40GHz	23/Jul/2016	22/Jul/2017

SPORTON INTERNATIONAL INC. Page No.
TEL: 886-3-3273456 Report Version
FAX: 886-3-3270973 Issued Date

FCC ID: 2AEUPBHAFL001



FCC Test Report

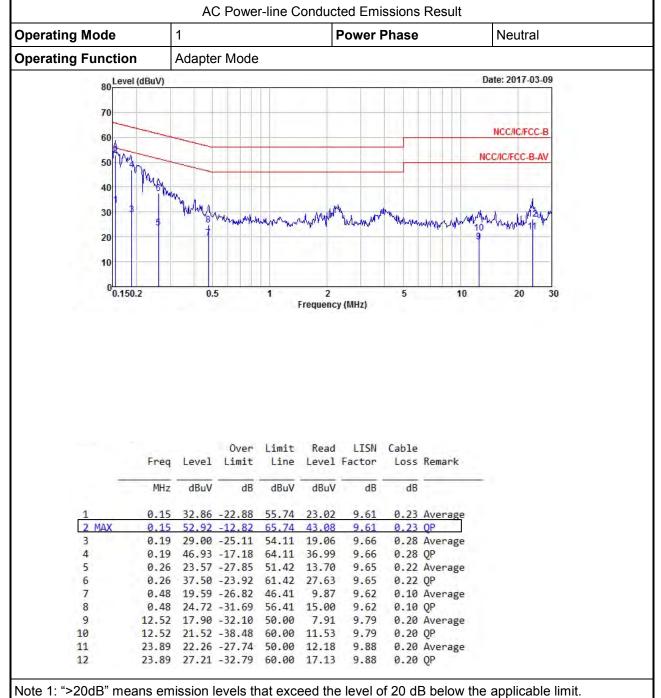
Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	10Hz~40GHz	12/May/2016	11/May/2017
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/Jul/2016	20/Jul/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY677/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY678/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10717/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY22998/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY23000/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017

 ${\tt SPORTON\ INTERNATIONAL\ INC.}$

TEL: 886-3-3273456 FAX: 886-3-3270973 FCC ID: 2AEUPBHAFL001 Page No. : 23 of 23
Report Version : Rev. 01
Issued Date : Mar. 27, 2017





Note 2: "N/E" magne Nothing Found emissions (No emissions were detected)

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

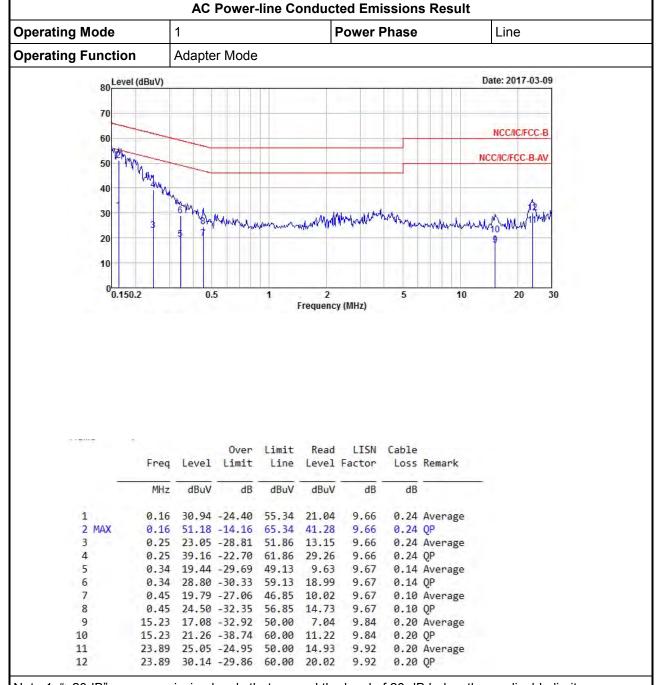
SPORTON INTERNATIONAL INC.

TEL: 886-3-3273456 FAX: 886-3-3270973 Page No.

: A1 of A2

722118





Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

SPORTON INTERNATIONAL INC.



EBW Result Appendix B

Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
802.11b_(1Mbps)_1TX	-	-	-	-	-
2.4-2.4835GHz	10.025M	14.668M	14M7G1D	9.975M	14.493M
802.11g_(6Mbps)_1TX	-	-	-	-	-
2.4-2.4835GHz	15.05M	17.341M	17M3D1D	13.725M	16.967M
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-
2.4-2.4835GHz	15.125M	17.541M	17M5D1D	14.95M	17.491M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2.4-2.4835GHz	35M	35.882M	35M9D1D	29.95M	35.832M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth; **Min-N dB** = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit	Port 1-N dB	Port 1-OBW	Port 2-N dB	Port 2-OBW
		(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
802.11b_(1Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	9.975M	14.493M		
2437MHz_TnomVnom	Pass	500k	10M	14.568M		
2462MHz_TnomVnom	Pass	500k	10.025M	14.668M		
802.11g_(6Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	14.425M	17.166M		
2437MHz_TnomVnom	Pass	500k	15.05M	16.967M		
2462MHz_TnomVnom	Pass	500k	13.725M	17.341M		
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	15.05M	17.491M	15.125M	17.516M
2437MHz_TnomVnom	Pass	500k	15.075M	17.491M	15.1M	17.541M
2462MHz_TnomVnom	Pass	500k	15.075M	17.516M	14.95M	17.541M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	500k	35M	35.882M		
2437MHz_TnomVnom	Pass	500k	29.95M	35.832M		
2452MHz_TnomVnom	Pass	500k	32.6M	35.882M		

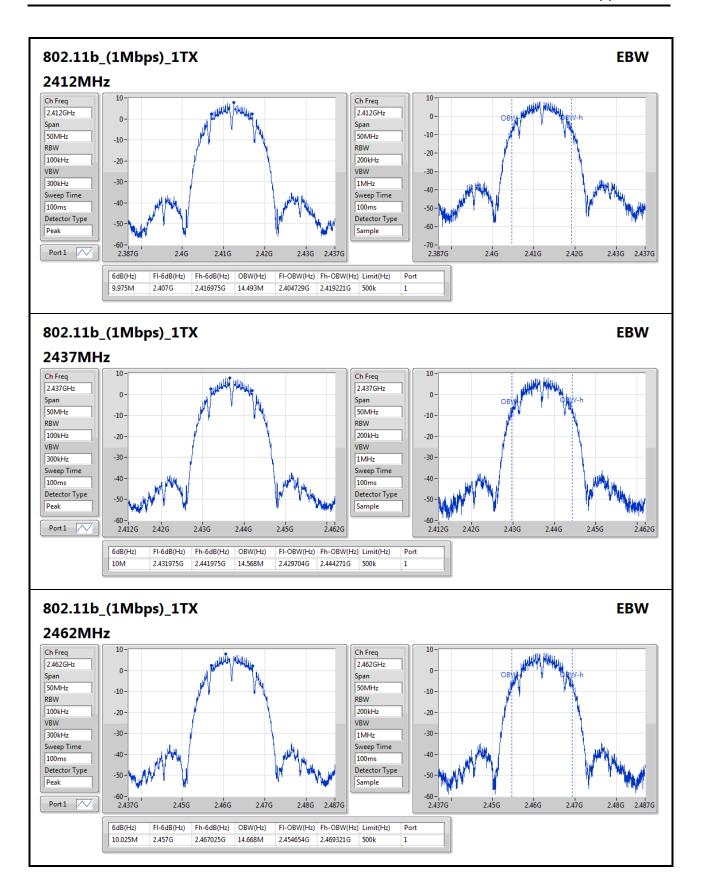
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

SPORTON INTERNATIONAL INC. Page No. : B1 of B5

722118

SPORTON LAB

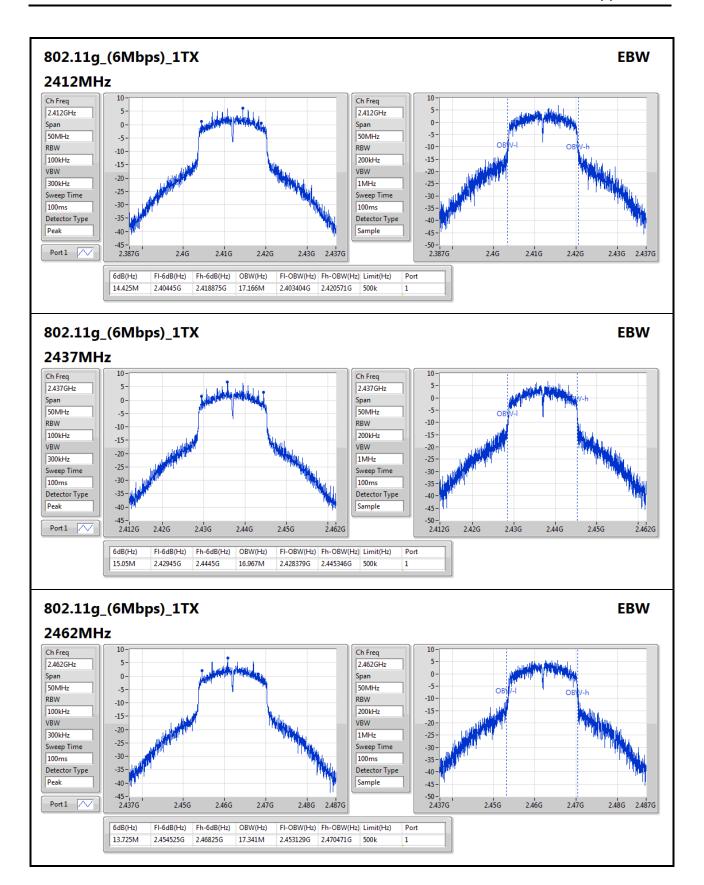
Appendix B EBW Result



SPORTON INTERNATIONAL INC.

SPORTON LAB

EBW Result Appendix B

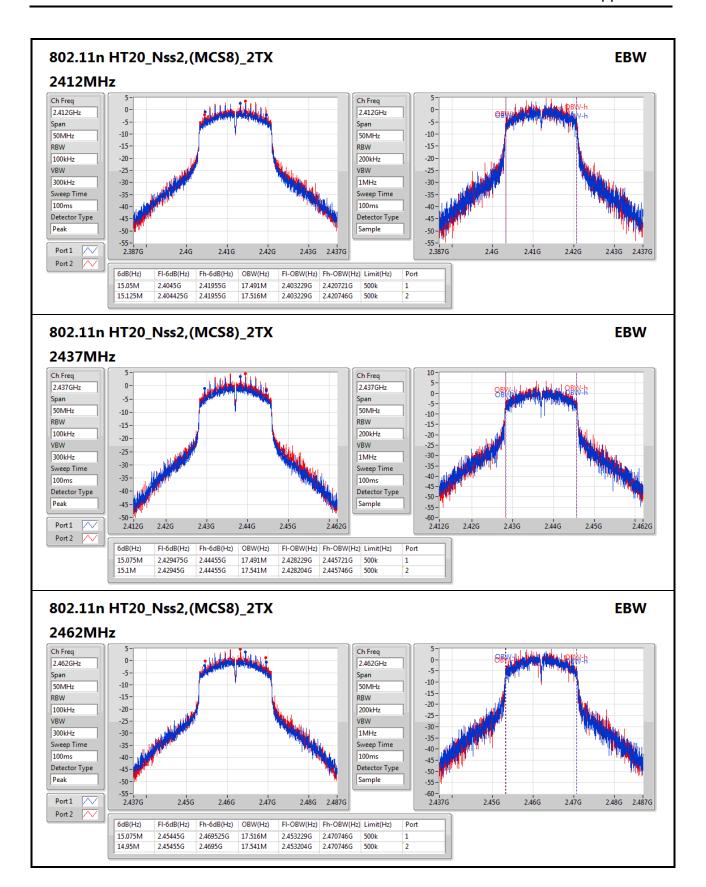


SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : B3 of B5

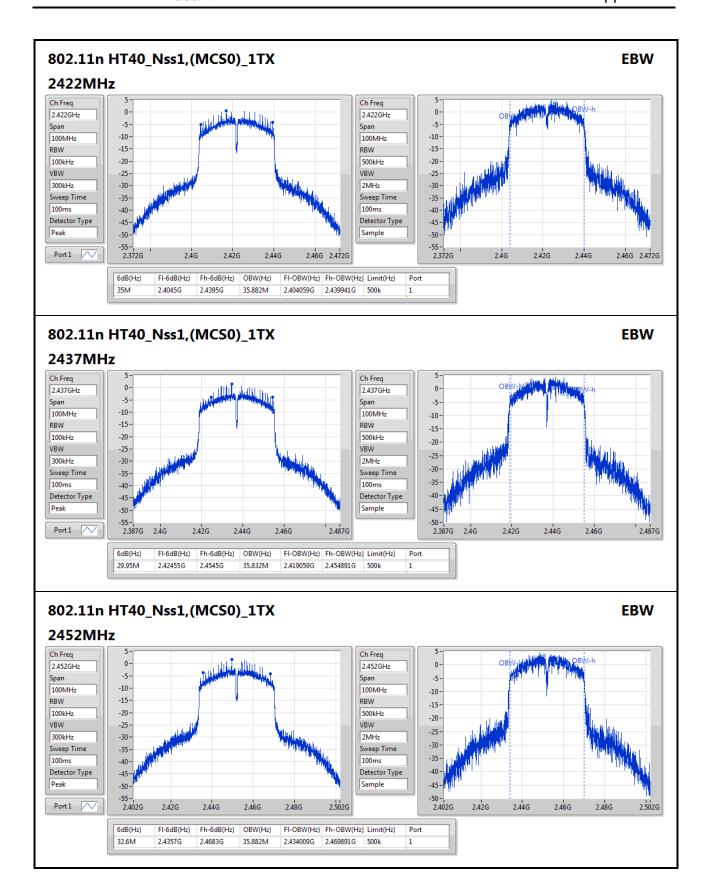
722118

EBW Result Appendix B



SPORTON INTERNATIONAL INC.

EBW Result Appendix B



SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : B5 of B5

722118



PK Power Result Appendix C

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
802.11b_(1Mbps)_1TX	-	-
2.4-2.4835GHz	18.23	0.06653
802.11g_(6Mbps)_1TX	-	-
2.4-2.4835GHz	20.40	0.10965
802.11n HT20_Nss2,(MCS8)_2TX	-	-
2.4-2.4835GHz	23.34	0.21577
802.11n HT40_Nss1,(MCS0)_1TX	-	-
2.4-2.4835GHz	20.10	0.10233

Result

Mode	Result	DG	Port 1	Port 2	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_(1Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	18.09		18.09	30.00
2437MHz_TnomVnom	Pass	1.27	18.23		18.23	30.00
2462MHz_TnomVnom	Pass	1.27	18.22		18.22	30.00
802.11g_(6Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	20.29		20.29	30.00
2437MHz_TnomVnom	Pass	1.27	20.40		20.40	30.00
2462MHz_TnomVnom	Pass	1.27	20.39		20.39	30.00
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	19.92	20.45	23.20	30.00
2437MHz_TnomVnom	Pass	1.27	19.92	20.64	23.31	30.00
2462MHz_TnomVnom	Pass	1.27	19.92	20.70	23.34	30.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	1.27	20.04		20.04	30.00
2437MHz_TnomVnom	Pass	1.27	20.10		20.10	30.00
2452MHz_TnomVnom	Pass	1.27	20.09		20.09	30.00

DG = Directional Gain; **Port X** = Port X output power

SPORTON INTERNATIONAL INC. Page No. : C1 of C2



AV Power Result Appendix C

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
802.11b_(1Mbps)_1TX	-	-
2.4-2.4835GHz	16.28	0.04246
802.11g_(6Mbps)_1TX	-	-
2.4-2.4835GHz	15.98	0.03963
802.11n HT20_Nss2,(MCS8)_2TX	-	-
2.4-2.4835GHz	16.56	0.04529
802.11n HT40_Nss1,(MCS0)_1TX	-	-
2.4-2.4835GHz	13.54	0.02259

Result

Mode	Result	DG	Port 1	Port 2	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_(1Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	16.12		16.12	30.00
2437MHz_TnomVnom	Pass	1.27	16.28		16.28	30.00
2462MHz_TnomVnom	Pass	1.27	16.21		16.21	30.00
802.11g_(6Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	15.71		15.71	30.00
2437MHz_TnomVnom	Pass	1.27	15.98		15.98	30.00
2462MHz_TnomVnom	Pass	1.27	15.95		15.95	30.00
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	12.83	13.64	16.26	30.00
2437MHz_TnomVnom	Pass	1.27	13.02	14.02	16.56	30.00
2462MHz_TnomVnom	Pass	1.27	12.91	13.80	16.39	30.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	1.27	13.41		13.41	30.00
2437MHz_TnomVnom	Pass	1.27	13.54		13.54	30.00
2452MHz_TnomVnom	Pass	1.27	13.52		13.52	30.00

DG = Directional Gain; **Port X** = Port X output power

SPORTON INTERNATIONAL INC. Page No. : C2 of C2

TEL: 886-3-327-3456 FAX: 886-3-327-0973

722118



Appendix D **PSD Result**

Summary

Mode	PD
	(dBm/RBW)
802.11b_(1Mbps)_1TX	-
2.4-2.4835GHz	-7.36
802.11g_(6Mbps)_1TX	-
2.4-2.4835GHz	-8.01
802.11n HT20_Nss2,(MCS8)_2TX	-
2.4-2.4835GHz	-8.54
802.11n HT40_Nss1,(MCS0)_1TX	-
2.4-2.4835GHz	-12.43

RBW=3kHz.

Result

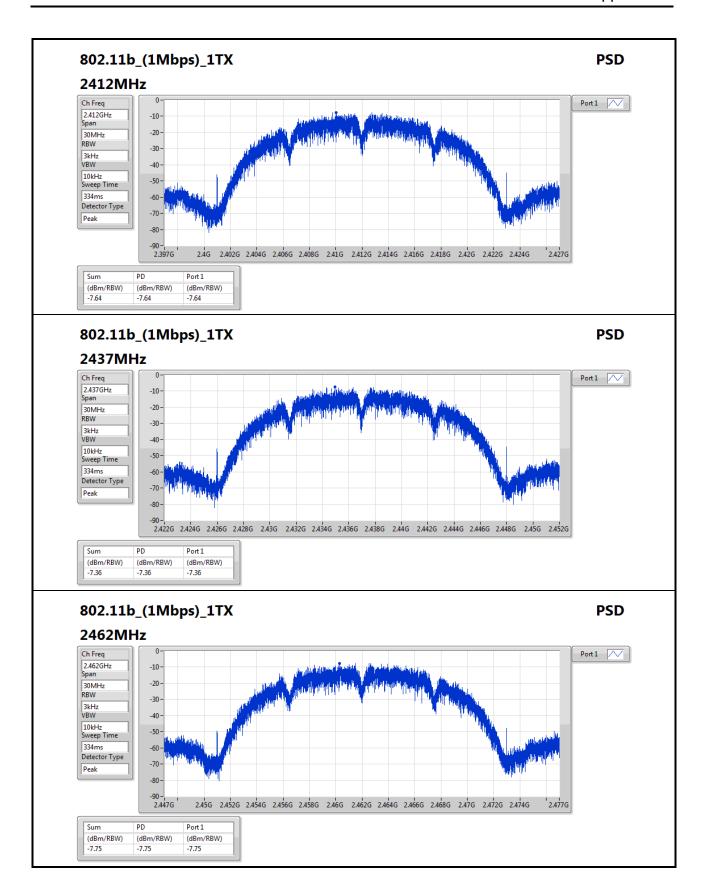
Mode	Result	DG	Port 1	Port 2	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.11b_(1Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	-7.64		-7.64	8.00
2437MHz_TnomVnom	Pass	1.27	-7.36		-7.36	8.00
2462MHz_TnomVnom	Pass	1.27	-7.75		-7.75	8.00
802.11g_(6Mbps)_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	-8.87		-8.87	8.00
2437MHz_TnomVnom	Pass	1.27	-8.74		-8.74	8.00
2462MHz_TnomVnom	Pass	1.27	-8.01		-8.01	8.00
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.27	-11.46	-11.92	-10.74	8.00
2437MHz_TnomVnom	Pass	1.27	-11.69	-10.40	-8.54	8.00
2462MHz_TnomVnom	Pass	1.27	-11.90	-10.44	-8.57	8.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	1.27	-12.43		-12.43	8.00
2437MHz_TnomVnom	Pass	1.27	-13.83		-13.83	8.00
2452MHz_TnomVnom	Pass	1.27	-14.13		-14.13	8.00

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

SPORTON INTERNATIONAL INC. Page No. : D1 of D5

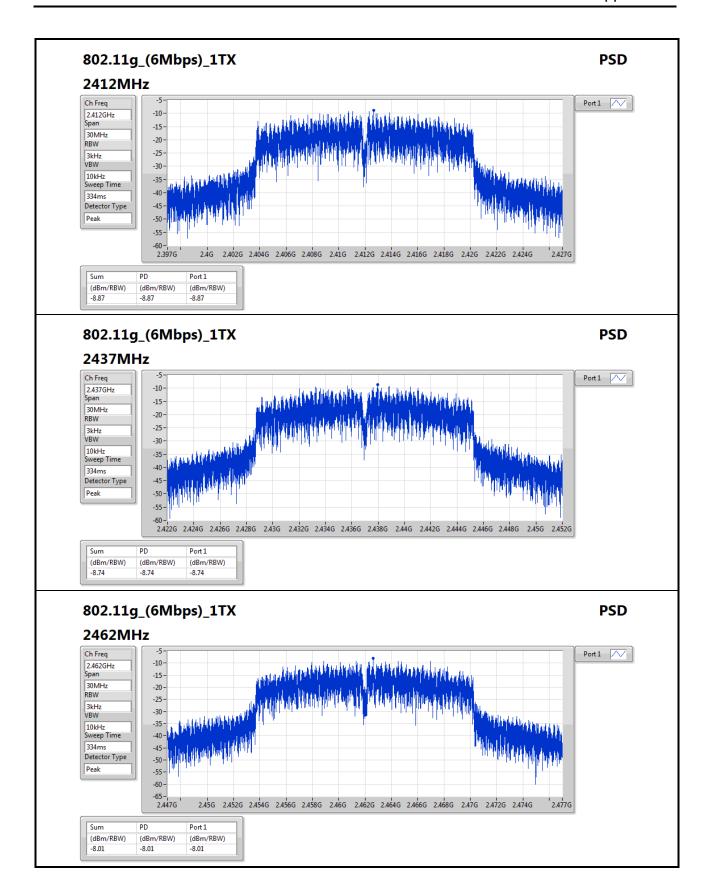
722118

PSD Result Appendix D



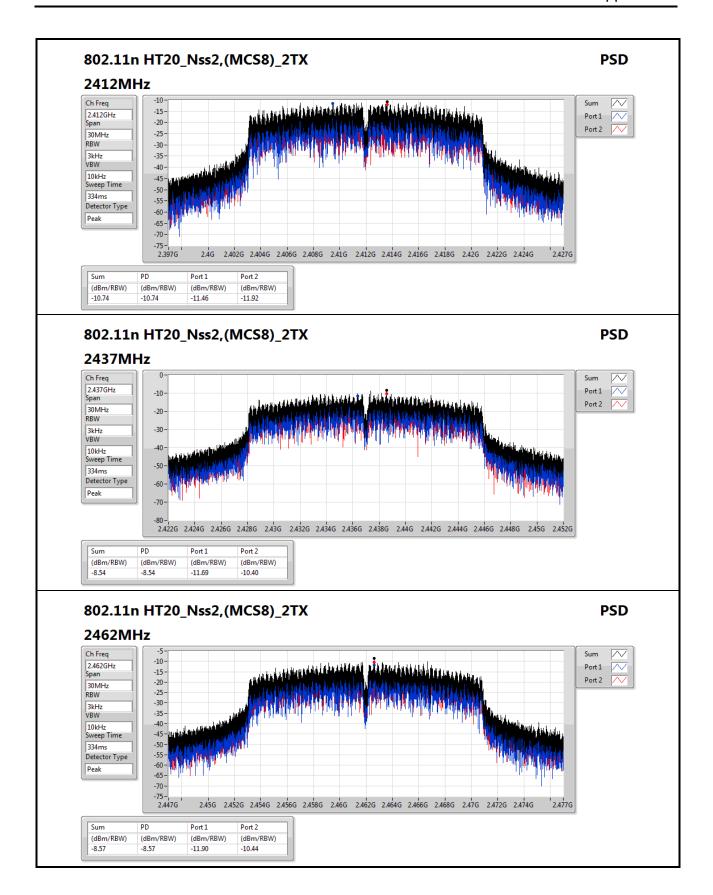
SPORTON INTERNATIONAL INC.

PSD Result Appendix D



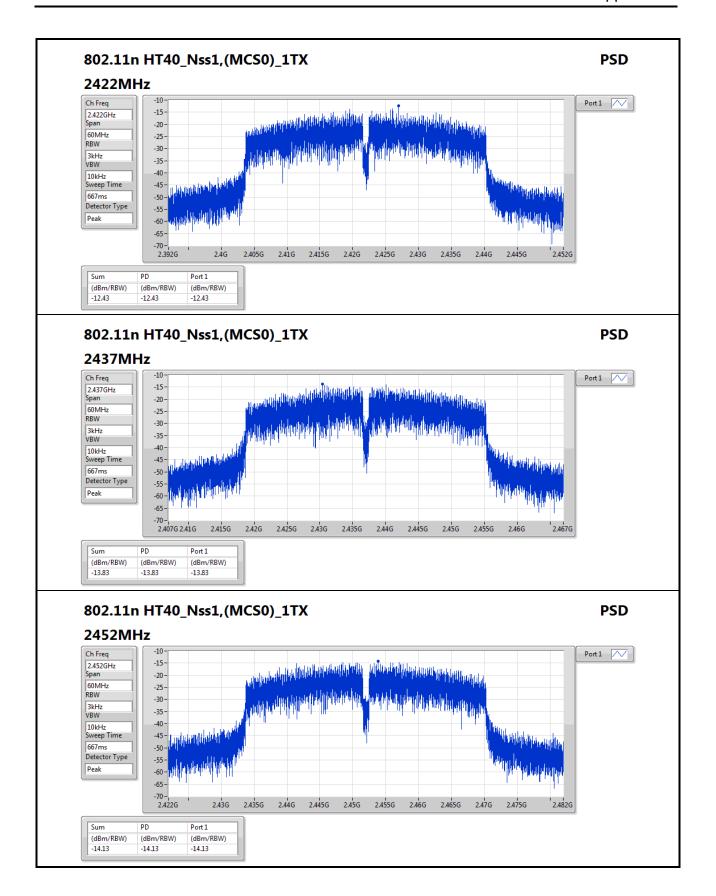
SPORTON INTERNATIONAL INC.

PSD Result Appendix D



SPORTON INTERNATIONAL INC.

PSD Result Appendix D



SPORTON INTERNATIONAL INC.



CSE Non-restricted Band Result

Appendix E

Summary

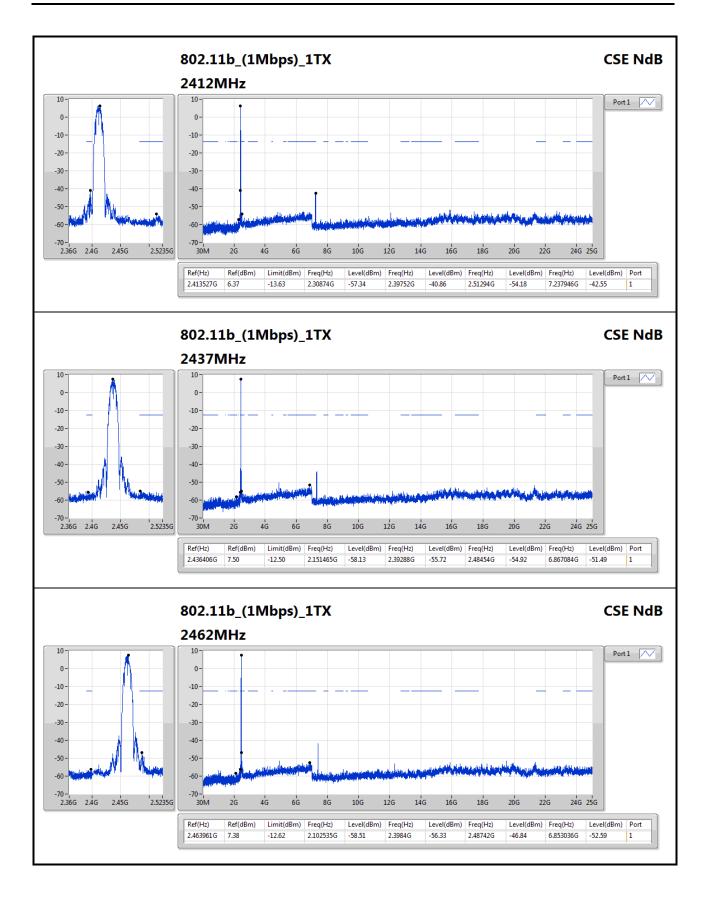
Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11g_(6Mbps)_1TX	-	•	-	-	-	-	-	-	-	-		-	-
2.4-2.4835GHz	Pass	2.414362G	6.01	-13.99	2.30874G	-57.98	2.39952G	-18.41	2.51262G	-54.97	7.235136G	-41.09	1

Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11b_(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.413527G	6.37	-13.63	2.30874G	-57.34	2.39752G	-40.86	2.51294G	-54.18	7.237946G	-42.55	1
2437MHz	Pass	2.436406G	7.50	-12.50	2.151465G	-58.13	2.39288G	-55.72	2.48454G	-54.92	6.867084G	-51.49	1
2462MHz	Pass	2.463961G	7.38	-12.62	2.102535G	-58.51	2.3984G	-56.33	2.48742G	-46.84	6.853036G	-52.59	1
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.414362G	6.01	-13.99	2.30874G	-57.98	2.39952G	-18.41	2.51262G	-54.97	7.235136G	-41.09	1
2437MHz	Pass	2.435738G	6.46	-13.54	885.11M	-56.89	2.39984G	-46.51	2.48438G	-53.30	6.459697G	-52.94	1
2462MHz	Pass	2.459619G	5.22	-14.78	2.132825G	-56.98	2.3992G	-53.94	2.48414G	-30.30	6.912037G	-52.89	1
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.413193G	2.96	-17.04	2.130495G	-58.40	2.3996G	-25.58	2.5123G	-55.61	7.235136G	-47.08	1
2412MHz	Pass	2.406847G	2.37	-17.63	2.144475G	-58.52	2.39848G	-24.03	2.51342G	-56.07	7.235136G	-45.76	2
2437MHz	Pass	2.435738G	2.45	-17.55	2.30175G	-57.40	2.39752G	-53.29	2.4943G	-54.87	6.218075G	-52.55	1
2437MHz	Pass	2.435738G	1.79	-18.21	809.385M	-58.10	2.39816G	-53.76	2.48694G	-55.27	6.212456G	-52.63	2
2462MHz	Pass	2.460788G	3.67	-16.33	945.69M	-58.45	2.39624G	-56.53	2.48454G	-38.10	6.875512G	-52.39	1
2462MHz	Pass	2.460788G	4.00	-16.00	689.39M	-57.91	2.392G	-55.73	2.48382G	-35.93	6.271456G	-52.85	2
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.419372G	1.32	-18.68	718.145M	-58.64	2.39712G	-26.01	2.48462G	-51.06	7.249924G	-51.03	1
2437MHz	Pass	2.431897G	0.15	-19.85	751.35M	-57.34	2.39936G	-32.71	2.48382G	-44.25	16.204892G	-52.60	1
2452MHz	Pass	2.455778G	1.20	-18.80	2.135655G	-57.89	2.39328G	-42.49	2.48574G	-32.33	16.210501G	-52.79	1

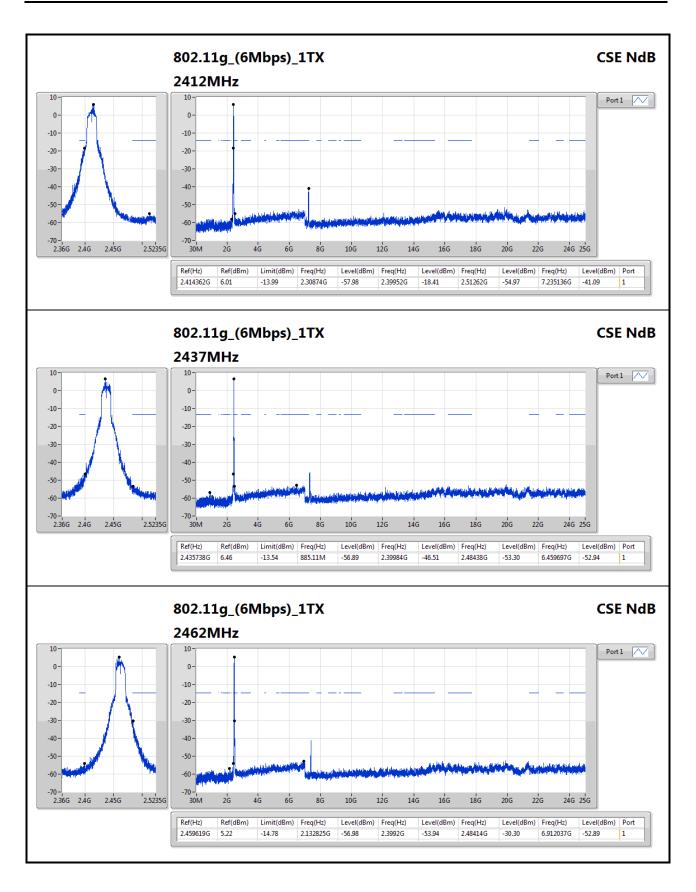
SPORTON INTERNATIONAL INC. Page No. : E1 of E5





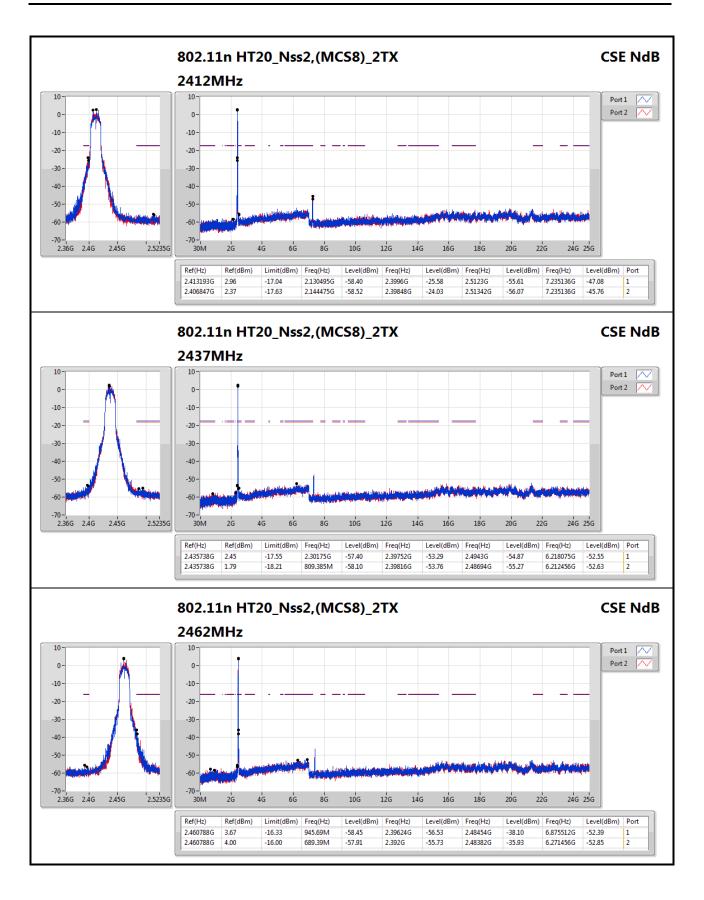
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E2 of E5





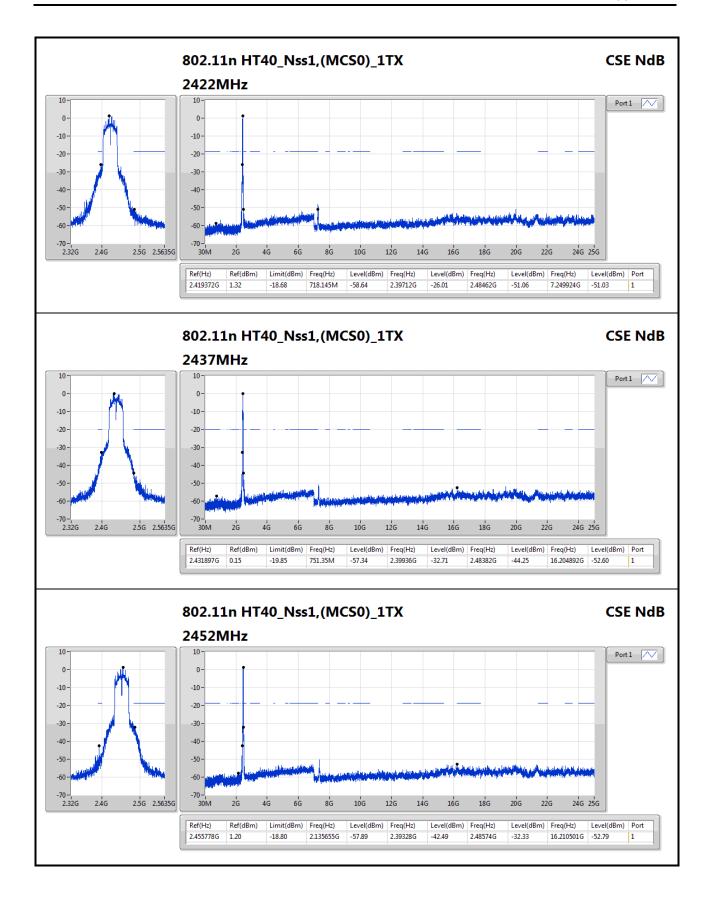
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E3 of E5





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E4 of E5





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E5 of E5



RSE TX below 1GHz Result

Appendix F

722118

Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth	Height (m)	Comments
Mode 1	Pass	PK	49.4M	36.28	40.00	-3.72	-12.42	3	V	360	3.00	-
Mode 2	Pass	PK	392.78M	40.76	46.00	-5.24	-2.95	3	V	360	3.00	-

SPORTON INTERNATIONAL INC. Page No. : F1 of F59



RSE TX below 1GHz Result

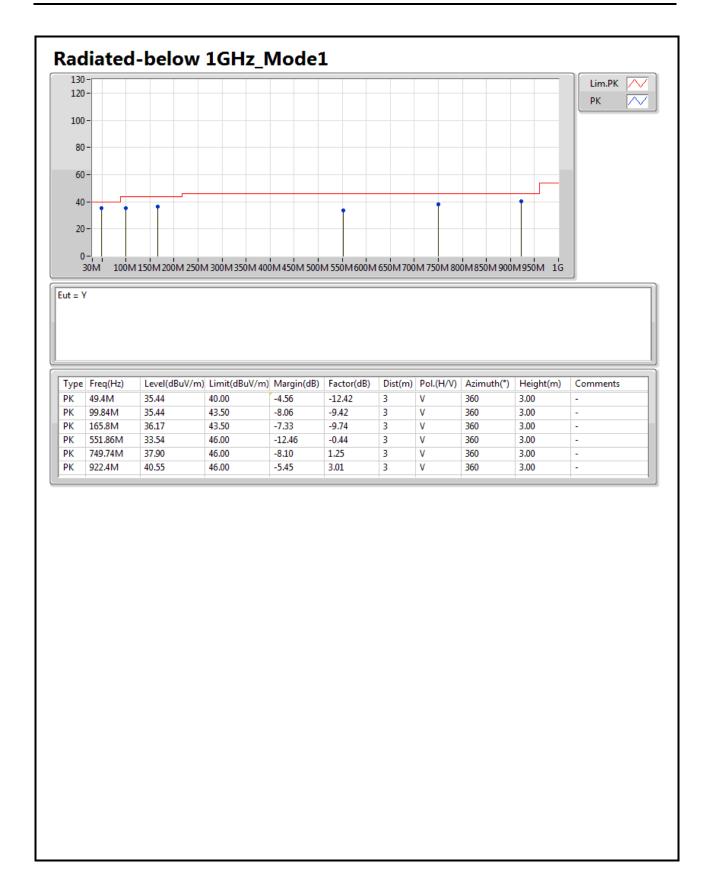
Appendix F

Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
Mode 1	Pass	PK	31.94M	28.62	40.00	-11.38	-4.62	3	Н	0	1.00	-
Mode 1	Pass	PK	97.9M	29.96	43.50	-13.54	-9.85	3	Н	0	1.00	-
Mode 1	Pass	PK	99.84M	28.78	43.50	-14.72	-9.42	3	Н	0	3.00	-
Mode 1	Pass	PK	165.8M	33.13	43.50	-10.37	-9.74	3	Н	0	3.00	-
Mode 1	Pass	PK	266.68M	32.03	46.00	-13.97	-6.16	3	Н	0	1.00	-
Mode 1	Pass	PK	266.68M	31.52	46.00	-14.48	-6.16	3	Н	0	3.00	-
Mode 1	Pass	PK	49.4M	35.44	40.00	-4.56	-12.42	3	V	360	3.00	-
Mode 1	Pass	PK	49.4M	36.28	40.00	-3.72	-12.42	3	V	360	3.00	-
Mode 1	Pass	PK	97.9M	34.61	43.50	-8.89	-9.85	3	٧	360	3.00	-
Mode 1	Pass	PK	99.84M	35.44	43.50	-8.06	-9.42	3	V	360	3.00	-
Mode 1	Pass	PK	165.8M	36.17	43.50	-7.33	-9.74	3	V	360	3.00	-
Mode 1	Pass	PK	165.8M	35.67	43.50	-7.83	-9.74	3	V	360	3.00	-
Mode 2	Pass	PK	328.76M	26.92	46.00	-19.08	-5.24	3	Н	0	1.00	-
Mode 2	Pass	PK	328.76M	30.88	46.00	-15.12	-5.24	3	Н	0	3.00	-
Mode 2	Pass	PK	536.34M	33.78	46.00	-12.22	-0.79	3	Н	0	3.00	-
Mode 2	Pass	PK	551.86M	31.26	46.00	-14.74	-0.44	3	Н	0	1.00	-
Mode 2	Pass	PK	687.66M	29.14	46.00	-16.86	0.15	3	Н	0	1.00	-
Mode 2	Pass	PK	922.4M	40.45	46.00	-5.55	3.01	3	Н	0	3.00	-
Mode 2	Pass	PK	328.76M	29.41	46.00	-16.59	-5.24	3	V	360	3.00	-
Mode 2	Pass	PK	392.78M	40.76	46.00	-5.24	-2.95	3	V	360	3.00	-
Mode 2	Pass	PK	551.86M	33.54	46.00	-12.46	-0.44	3	V	360	3.00	-
Mode 2	Pass	PK	749.74M	37.90	46.00	-8.10	1.25	3	V	360	3.00	-
Mode 2	Pass	PK	922.4M	40.55	46.00	-5.45	3.01	3	V	360	3.00	-
Mode 2	Pass	PK	934.04M	37.81	46.00	-8.19	3.16	3	V	360	3.00	-

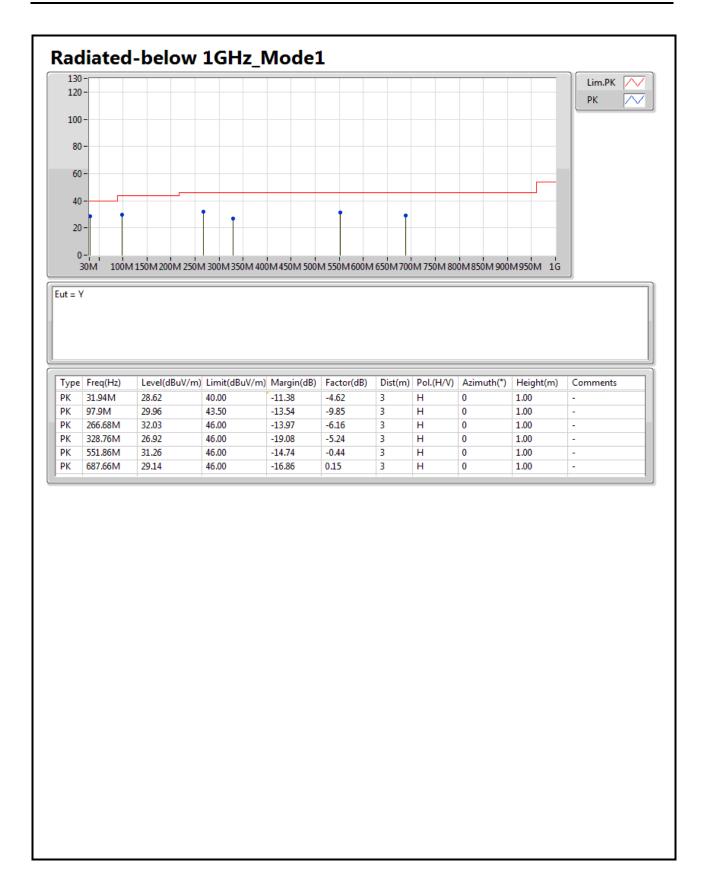
SPORTON INTERNATIONAL INC. Page No. : F2 of F59





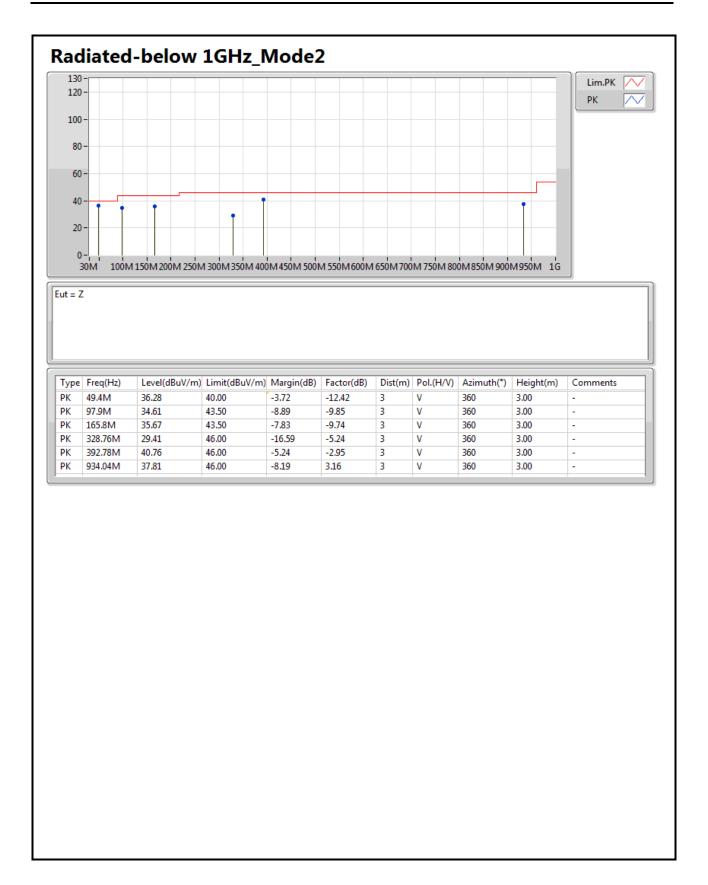
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F3 of F59



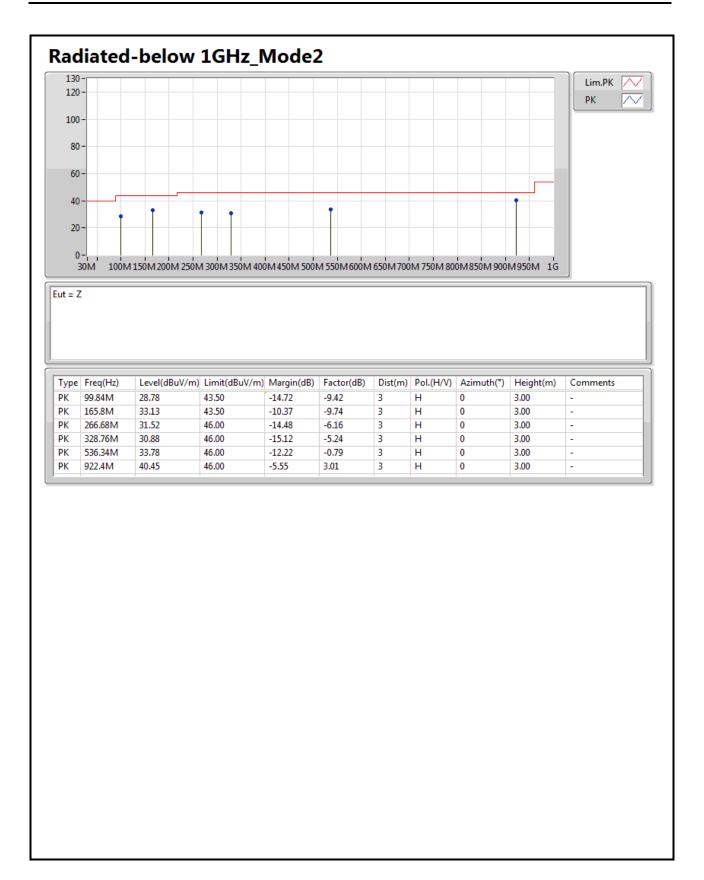


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F4 of F59











Appendix F

722118

Summary

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	+		-		,	-
2.4-2.4835GHz	Pass	AV	2.4836G	51.58	54.00	-2.42	31.53	3	٧	50	3.33	-

SPORTON INTERNATIONAL INC. Page No. : F7 of F59



Appendix F

Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
802.11b_(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.386G	46.41	54.00	-7.59	31.18	3	Н	66	1.01	-
2412MHz	Pass	AV	2.413G	88.65	Inf	-Inf	31.28	3	Н	66	1.01	-
2412MHz	Pass	PK	2.3852G	57.97	74.00	-16.03	31.18	3	Н	66	1.01	-
2412MHz	Pass	PK	2.412G	91.47	Inf	-Inf	31.27	3	Н	66	1.01	-
2412MHz	Pass	AV	2.3866G	46.32	54.00	-7.68	31.18	3	V	302	1.03	-
2412MHz	Pass	AV	2.413G	88.59	Inf	-Inf	31.28	3	V	302	1.03	-
2412MHz	Pass	PK	2.3792G	58.42	74.00	-15.58	31.15	3	V	302	1.03	-
2412MHz	Pass	PK	2.413G	91.47	Inf	-Inf	31.28	3	V	302	1.03	-
2412MHz	Pass	AV	4.824G	34.78	54.00	-19.22	2.44	3	Н	0	1.50	-
2412MHz	Pass	PK	4.824G	45.87	74.00	-28.13	2.44	3	Н	0	1.50	-
2412MHz	Pass	AV	4.824G	33.56	54.00	-20.44	2.44	3	V	360	1.50	-
2412MHz	Pass	PK	4.824G	45.78	74.00	-28.22	2.44	3	V	360	1.50	-
2437MHz	Pass	AV	2.3874G	46.25	54.00	-7.75	31.18	3	Н	67	1.47	-
2437MHz	Pass	AV	2.4358G	88.17	Inf	-Inf	31.36	3	Н	67	1.47	_
2437MHz	Pass	AV	2.4918G	47.08	54.00	-6.92	31.56	3	Н	67	1.47	_
2437MHz	Pass	PK	2.3534G	57.22	74.00	-16.78	31.06	3	Н	67	1.47	_
2437MHz	Pass	PK	2.437G	91.09	Inf	-Inf	31.36	3	Н	67	1.47	-
2437MHz	Pass	PK	2.489G	57.88	74.00	-16.12	31.55	3	н	67	1.47	_
2437MHz	Pass	AV	2.3898G	46.34	54.00	-7.66	31.19	3	٧	35	2.64	_
2437MHz	Pass	AV	2.4382G	86.59	Inf	-Inf	31.37	3	V	35	2.64	_
2437MHz	Pass	AV	2.4946G	47.05	54.00	-6.95	31.57	3	V	35	2.64	
2437MHz	Pass	PK	2.3778G	57.19	74.00	-16.81	31.15	3	V	35	2.64	<u> </u>
2437MHz	Pass	PK	2.437G	89.42	Inf	-Inf	31.36	3	V	35	2.64	-
2437MHz	Pass	PK	2.4974G	58.37	74.00	-15.63	31.58	3	V	35	2.64	_
2437MHz	Pass	AV	4.874G	34.90	54.00	-19.10	2.52	3	Н	360	1.50	-
2437MHz	Pass	PK	4.874G	46.24	74.00	-27.76	2.52	3	н	360	1.50	
2437MHz	Pass	AV	4.874G	34.01	54.00	-19.99	2.52	3	V	0	1.50	
2437MHz	Pass	PK	4.874G	46.34	74.00	-27.66	2.52	3	V	0	1.50	-
2462MHz	Pass	AV	2.461G	89.10	Inf	-Inf	31.45	3	Н	178	1.04	_
2462MHz	Pass	AV	2.4876G	47.39	54.00	-6.61	31.55	3	н	178	1.04	-
2462MHz	Pass	PK	2.462G	92.05	Inf	-Inf	31.45	3	н	178	1.04	_
2462MHz	Pass	PK	2.4874G	58.07	74.00	-15.93	31.54	3	н	178	1.04	_
2462MHz	Pass	AV	2.463G	88.40	Inf	-Inf	31.46	3	V	39	3.26	_
2462MHz	Pass	AV	2.4876G	47.16	54.00	-6.84	31.55	3	V	39	3.26	-
2462MHz	Pass	PK	2.462G	91.30	Inf	-Inf	31.45	3	V	39	3.26	_
2462MHz	Pass	PK	2.4838G	58.03	74.00	-15.97	31.53	3	V	39	3.26	_
2462MHz	Pass	AV	4.924G	34.01	54.00	-19.99	2.60	3	Н	0	1.50	_
2462MHz	Pass	PK	4.924G	46.01	74.00	-27.99	2.60	3	Н	0	1.50	_
2462MHz	Pass	AV	4.924G	34.04	54.00	-19.96	2.60	3	V	360	1.50	
2462MHz	Pass	PK	4.924G	46.28	74.00	-27.72	2.60	3	V	360	1.50	_
802.11g_(6Mbps)_1TX	-	-	-	-	-	-	-	-		-	1.50	
2412MHz	Pass	AV	2.39G	49.83	54.00	-4.17	31.19	3	Н	163	1.01	1
2412MHz	Pass	AV	2.413G	86.38	Inf	-4.17 -Inf	31.19	3	Н	163	1.01	1
2412MHz	Pass	PK	2.413G 2.3892G	63.72	74.00	-10.28	31.19	3	Н	163	1.01	
2412MHz	Pass	PK	2.3692G 2.41G	94.87	Inf	-10.26 -Inf	31.19	3	Н	163	1.01	
2412MHz	Pass	AV	2.41G 2.39G	48.88	54.00	-5.12	31.19	3	V	291	1.01	-
									V			+ -
2412MHz	Pass	AV	2.4134G	86.15	Inf	-Inf	31.28	3	٧	291	1.01	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F8 of F59



Appendix F

	ſ	I		1			1	ı		I	ſ	
Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
2412MHz	Pass	PK	2.39G	61.40	74.00	-12.60	31.19	3	V	291	1.01	-
2412MHz	Pass	PK	2.4152G	94.13	Inf	-Inf	31.28	3	V	291	1.01	-
2412MHz	Pass	AV	4.824G	34.07	54.00	-19.93	2.60	3	Н	360	1.50	-
2412MHz	Pass	PK	4.824G	45.92	74.00	-28.08	2.60	3	Н	360	1.50	-
2412MHz	Pass	AV	4.824G	34.05	54.00	-19.95	2.44	3	V	0	1.50	-
2412MHz	Pass	PK	4.824G	46.50	74.00	-27.50	2.44	3	V	0	1.50	-
2437MHz	Pass	AV	2.3862G	46.31	54.00	-7.69	31.18	3	Н	72	1.08	-
2437MHz	Pass	AV	2.4354G	86.66	Inf	-Inf	31.36	3	Н	72	1.08	-
2437MHz	Pass	AV	2.495G	47.14	54.00	-6.86	31.57	3	Н	72	1.08	-
2437MHz	Pass	PK	2.387G	57.50	74.00	-16.50	31.18	3	Н	72	1.08	-
2437MHz	Pass	PK	2.4358G	94.67	Inf	-Inf	31.36	3	Н	72	1.08	-
2437MHz	Pass	PK	2.4982G	57.78	74.00	-16.22	31.58	3	Н	72	1.08	-
2437MHz	Pass	AV	2.3886G	46.35	54.00	-7.65	31.19	3	٧	35	1.66	-
2437MHz	Pass	AV	2.4358G	85.56	Inf	-Inf	31.36	3	V	35	1.66	-
2437MHz	Pass	AV	2.495G	47.15	54.00	-6.85	31.57	3	V	35	1.66	-
2437MHz	Pass	PK	2.3754G	57.21	74.00	-16.79	31.14	3	V	35	1.66	-
2437MHz	Pass	PK	2.437G	93.79	Inf	-Inf	31.36	3	V	35	1.66	-
2437MHz	Pass	PK	2.4926G	57.60	74.00	-16.40	31.56	3	V	35	1.66	-
2437MHz	Pass	AV	4.874G	32.75	54.00	-21.25	2.52	3	Н	360	1.50	-
2437MHz	Pass	PK	4.874G	45.18	74.00	-28.82	2.52	3	Н	NaN	NaN	-
2437MHz	Pass	AV	4.874G	34.18	54.00	-19.82	2.52	3	V	0	1.50	-
2437MHz	Pass	PK	4.874G	46.16	74.00	-27.84	2.52	3	V	0	1.50	-
2462MHz	Pass	AV	2.461G	86.17	Inf	-Inf	31.45	3	Н	164	1.03	-
2462MHz	Pass	AV	2.4836G	50.33	54.00	-3.67	31.53	3	Н	164	1.03	-
2462MHz	Pass	PK	2.4606G	94.51	Inf	-Inf	31.45	3	Н	164	1.03	-
2462MHz	Pass	PK	2.4838G	63.26	74.00	-10.74	31.53	3	Н	164	1.03	-
2462MHz	Pass	AV	2.461G	86.34	Inf	-Inf	31.45	3	V	288	3.26	-
2462MHz	Pass	AV	2.4838G	48.59	54.00	-5.41	31.53	3	V	288	3.26	-
2462MHz	Pass	PK	2.4602G	94.39	Inf	-Inf	31.45	3	V	288	3.26	-
2462MHz	Pass	PK	2.4838G	61.45	74.00	-12.55	31.53	3	V	288	3.26	-
2462MHz	Pass	AV	4.924G	34.20	54.00	-19.80	2.60	3	Н	0	1.50	_
2462MHz	Pass	PK	4.924G	45.58	74.00	-28.42	2.60	3	Н	0	1.50	-
2462MHz	Pass	AV	4.924G	34.21	54.00	-19.79	2.60	3	V	360	1.50	
2462MHz	Pass	PK	4.924G	46.21	74.00	-27.79	2.60	3	V	360	1.50	
802.11n HT20_Nss2,(MCS8)_2TX	- 1 033	-	1.7210	70.21		-21.17	2.00	-	-	-	1.50	
2412MHz	Pass	AV	2.39G	48.14	54.00	-5.86	31.19	3	Н	277	1.01	
2412MHz	Pass	AV	2.39G 2.4134G	90.06	Inf	-5.66 -Inf	31.19	3	Н	277	1.01	-
2412MHz	Pass	PK	2.4134G 2.3892G	61.72	74.00	-12.28	31.19	3	Н	277	1.01	
2412MHz	Pass	PK	2.3692G 2.4146G	100.22	Inf	-12.20 -Inf	31.19	3	Н	277	1.01	
		AV	2.4146G 2.39G	47.57	54.00	-6.43	31.28	3	V	28	2.94	-
2412MHz	Pass								V			-
2412MHz	Pass	AV	2.4136G	88.06	Inf	-Inf	31.28	3		28	2.94	-
2412MHz	Pass	PK	2.3896G	58.83	74.00	-15.17	31.19	3	V	28	2.94	-
2412MHz	Pass	PK	2.4106G	97.87	Inf	-Inf	31.27	3	V	28	2.94	-
2412MHz	Pass	AV	4.824G	32.83	54.00	-21.17	2.44	3	Н	360	1.50	-
2412MHz	Pass	PK	4.824G	46.25	74.00	-27.75	2.44	3	Н	360	1.50	-
2412MHz	Pass	AV	4.824G	32.89	54.00	-21.11	2.44	3	V	0	1.50	-
2412MHz	Pass	PK	4.824G	45.42	74.00	-28.58	2.44	3	V	0	1.50	-
2437MHz	Pass	AV	2.3898G	46.33	54.00	-7.67	31.19	3	Н	277	1.09	-
2437MHz	Pass	AV	2.4362G	91.40	Inf	-Inf	31.36	3	Н	277	1.09	-

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F9 of F59



Appendix F

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
2437MHz	Pass	AV	2.4946G	47.13	54.00	-6.87	31.57	3	Н	277	1.09	-
2437MHz	Pass	PK	2.3714G	57.54	74.00	-16.46	31.12	3	Н	277	1.09	-
2437MHz	Pass	PK	2.435G	100.67	Inf	-Inf	31.36	3	Н	277	1.09	-
2437MHz	Pass	PK	2.4894G	58.51	74.00	-15.49	31.55	3	Н	277	1.09	-
2437MHz	Pass	AV	2.3842G	46.26	54.00	-7.74	31.17	3	V	0	2.88	-
2437MHz	Pass	AV	2.4382G	89.05	Inf	-Inf	31.37	3	V	0	2.88	-
2437MHz	Pass	AV	2.499G	47.13	54.00	-6.87	31.59	3	V	0	2.88	-
2437MHz	Pass	PK	2.3814G	57.19	74.00	-16.81	31.16	3	V	0	2.88	_
2437MHz	Pass	PK	2.4382G	98.40	Inf	-Inf	31.37	3	V	0	2.88	_
2437MHz	Pass	PK	2.4914G	58.79	74.00	-15.21	31.56	3	V	0	2.88	_
2437MHz			4.874G		54.00		2.52	3	Н			-
	Pass	AV		33.86		-20.14				360	1.50	-
2437MHz	Pass	PK	4.874G	46.29	74.00	-27.71	2.52	3	Н	360	1.50	-
2437MHz	Pass	AV	4.874G	33.75	54.00	-20.25	2.52	3	V	0	1.50	-
2437MHz	Pass	PK	4.874G	46.26	74.00	-27.74	2.52	3	V	0	1.50	-
2462MHz	Pass	AV	2.461G	92.02	Inf	-Inf	31.45	3	Н	279	1.01	-
2462MHz	Pass	AV	2.4836G	50.97	54.00	-3.03	31.53	3	H	279	1.01	-
2462MHz	Pass	PK	2.4602G	102.17	Inf	-Inf	31.45	3	Н	279	1.01	-
2462MHz	Pass	PK	2.4836G	63.78	74.00	-10.22	31.53	3	Н	279	1.01	-
2462MHz	Pass	AV	2.4628G	90.74	Inf	-Inf	31.46	3	V	18	3.16	-
2462MHz	Pass	AV	2.4836G	50.16	54.00	-3.84	31.53	3	V	18	3.16	-
2462MHz	Pass	PK	2.4598G	100.23	Inf	-Inf	31.45	3	V	18	3.16	-
2462MHz	Pass	PK	2.4836G	63.46	74.00	-10.54	31.53	3	V	18	3.16	-
2462MHz	Pass	AV	4.924G	32.85	54.00	-21.15	2.60	3	Н	360	1.50	-
2462MHz	Pass	PK	4.924G	47.21	74.00	-26.79	2.60	3	Н	360	1.50	-
2462MHz	Pass	AV	4.924G	34.21	54.00	-19.79	2.60	3	V	0	1.50	-
2462MHz	Pass	PK	4.924G	46.72	74.00	-27.28	2.60	3	V	0	1.50	-
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	AV	2.39G	48.78	54.00	-5.22	31.19	3	Н	154	1.01	-
2422MHz	Pass	AV	2.4244G	80.59	Inf	-Inf	31.32	3	Н	154	1.01	-
2422MHz	Pass	AV	2.4916G	47.15	54.00	-6.85	31.56	3	Н	154	1.01	-
2422MHz	Pass	PK	2.3888G	62.31	74.00	-11.69	31.19	3	Н	154	1.01	-
2422MHz	Pass	PK	2.4244G	89.52	Inf	-Inf	31.32	3	Н	154	1.01	-
2422MHz	Pass	PK	2.4944G	58.17	74.00	-15.83	31.57	3	Н	154	1.01	-
2422MHz	Pass	AV	2.39G	48.05	54.00	-5.95	31.19	3	٧	295	1.02	-
2422MHz	Pass	AV	2.418G	79.16	Inf	-Inf	31.29	3	V	295	1.02	
2422MHz	Pass	AV	2.4988G	47.13	54.00	-6.87	31.59	3	V	295	1.02	-
2422MHz	Pass	PK	2.39G	59.95	74.00	-14.05	31.19	3	V	295	1.02	-
2422MHz	Pass	PK	2.4256G	88.03	Inf	-Inf	31.32	3	V	295	1.02	-
2422MHz	Pass	PK	2.4928G	57.82	74.00	-16.18	31.56	3	V	295	1.02	-
2422MHz	Pass	AV	4.844G	34.01	54.00	-19.99	2.47	3	Н	0	1.50	
2422MHz	Pass	PK	4.844G	45.62	74.00	-28.38	2.47	3	Н	0	1.50	-
2422MHz	Pass	AV	4.844G	33.31	54.00	-20.69	2.47	3	V	360	1.50	-
2422MHz	Pass	PK	4.844G	46.08	74.00	-27.92	2.47	3	V	360	1.50	
2422WHZ 2437MHz	Pass	AV	2.3898G	46.47	54.00	-7.53	31.19	3	Н	66	1.49	
		AV				-7.53 -Inf			Н			
2437MHz	Pass		2.4346G	80.75	Inf		31.35	3		66	1.49	•
2437MHz	Pass	AV	2.4862G	47.29	54.00	-6.71	31.54	3	Н	66	1.49	-
2437MHz	Pass	PK	2.373G	57.93	74.00	-16.07	31.13	3	Н	66	1.49	-
2437MHz	Pass	PK	2.435G	89.55	Inf	-Inf	31.36	3	Н	66	1.49	-
2437MHz	Pass	PK	2.4854G	58.90	74.00	-15.10	31.54	3	Н	66	1.49	-

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F10 of F59

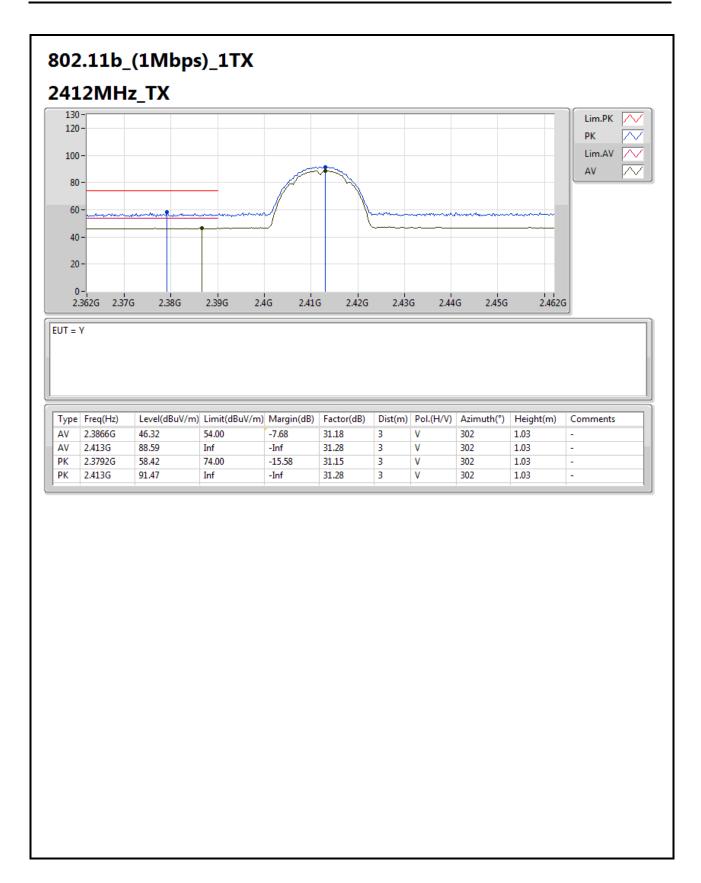


Appendix F

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
2437MHz	Pass	AV	2.3898G	46.42	54.00	-7.58	31.19	3	V	297	1.01	-
2437MHz	Pass	AV	2.441G	80.32	Inf	-Inf	31.38	3	V	297	1.01	-
2437MHz	Pass	AV	2.4838G	47.25	54.00	-6.75	31.53	3	V	297	1.01	-
2437MHz	Pass	PK	2.3586G	57.98	74.00	-16.02	31.08	3	V	297	1.01	-
2437MHz	Pass	PK	2.443G	88.97	Inf	-Inf	31.38	3	V	297	1.01	-
2437MHz	Pass	PK	2.4846G	58.72	74.00	-15.28	31.53	3	V	297	1.01	-
2437MHz	Pass	AV	4.874G	33.92	54.00	-20.08	2.52	3	Н	360	1.50	-
2437MHz	Pass	PK	4.874G	46.33	74.00	-27.67	2.52	3	Н	360	1.50	-
2437MHz	Pass	AV	4.874G	34.05	54.00	-19.95	2.52	3	V	0	1.50	-
2437MHz	Pass	PK	4.874G	45.00	74.00	-29.00	2.52	3	V	0	1.50	-
2452MHz	Pass	AV	2.3596G	46.24	54.00	-7.76	31.08	3	Н	66	1.01	-
2452MHz	Pass	AV	2.4536G	81.81	Inf	-Inf	31.42	3	Н	66	1.01	-
2452MHz	Pass	AV	2.4836G	50.36	54.00	-3.64	31.53	3	Н	66	1.01	-
2452MHz	Pass	PK	2.358G	57.50	74.00	-16.50	31.07	3	Н	66	1.01	-
2452MHz	Pass	PK	2.4576G	90.37	Inf	-Inf	31.44	3	Н	66	1.01	-
2452MHz	Pass	PK	2.4844G	64.16	74.00	-9.84	31.53	3	Н	66	1.01	-
2452MHz	Pass	AV	2.3888G	46.30	54.00	-7.70	31.19	3	V	50	3.33	-
2452MHz	Pass	AV	2.4572G	82.04	Inf	-Inf	31.44	3	V	50	3.33	-
2452MHz	Pass	AV	2.4836G	51.58	54.00	-2.42	31.53	3	V	50	3.33	-
2452MHz	Pass	PK	2.3548G	57.68	74.00	-16.32	31.06	3	V	50	3.33	-
2452MHz	Pass	PK	2.4572G	90.64	Inf	-Inf	31.44	3	V	50	3.33	-
2452MHz	Pass	PK	2.4836G	64.97	74.00	-9.03	31.53	3	V	50	3.33	-
2452MHz	Pass	AV	4.904G	33.91	54.00	-20.09	2.57	3	Н	0	1.50	-
2452MHz	Pass	PK	4.904G	45.87	74.00	-28.13	2.57	3	Н	0	1.50	-
2452MHz	Pass	AV	4.904G	34.67	54.00	-19.33	2.57	3	V	0	1.50	-
2452MHz	Pass	PK	4.904G	44.67	74.00	-29.33	2.57	3	V	0	1.50	-

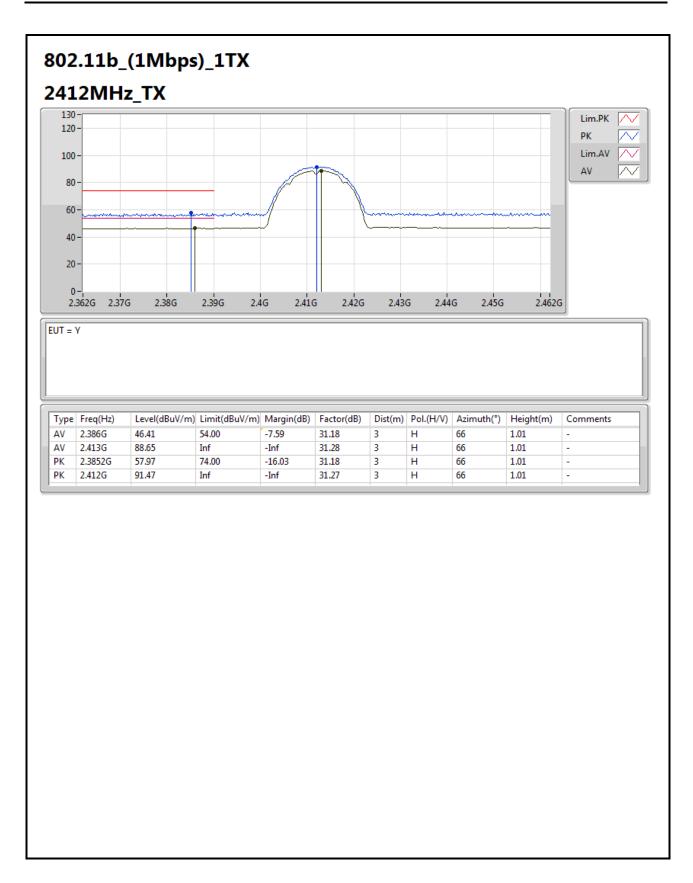
SPORTON INTERNATIONAL INC. Page No. : F11 of F59





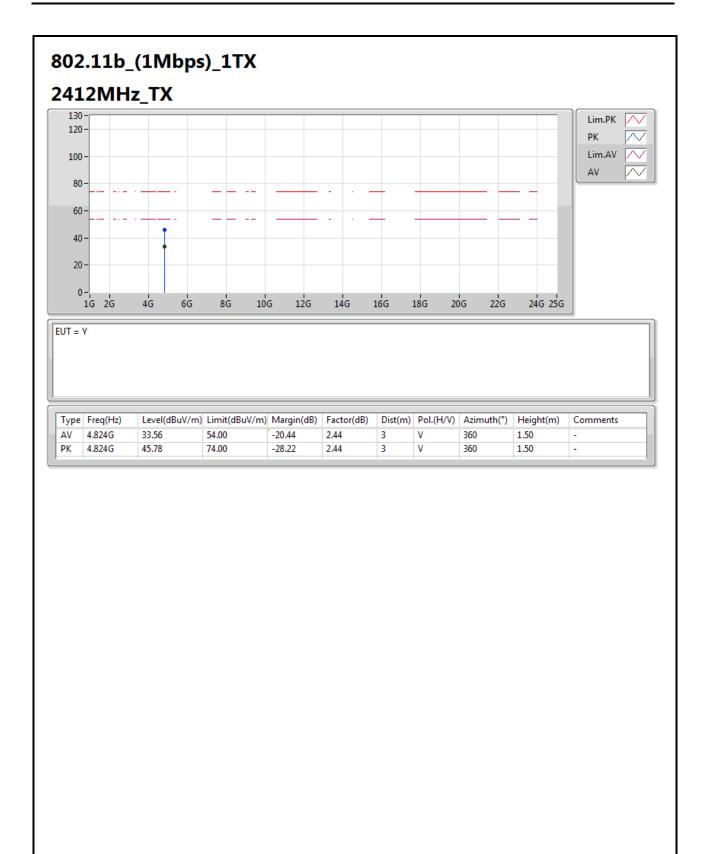
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F12 of F59





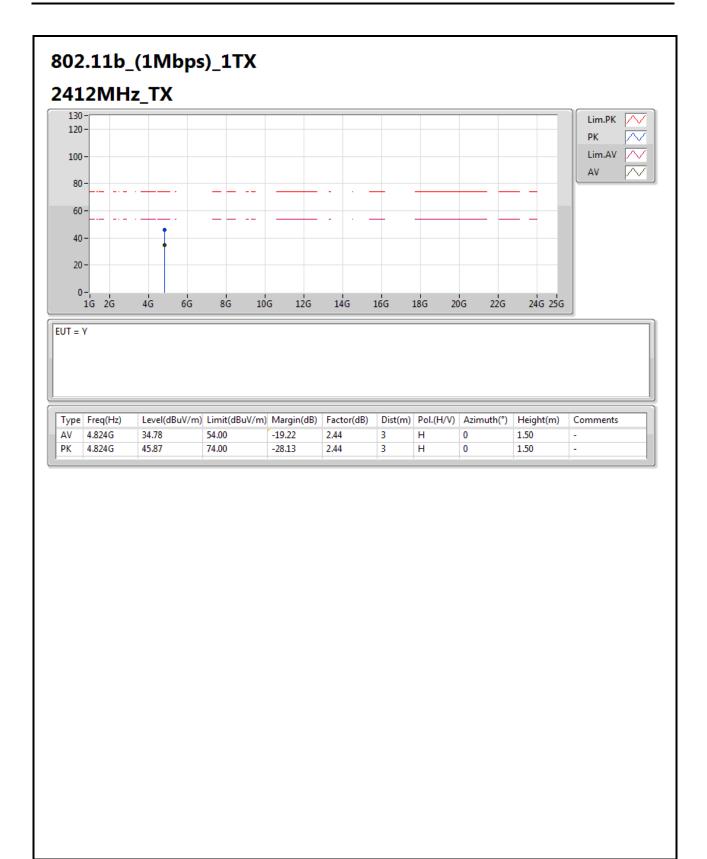
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F13 of F59



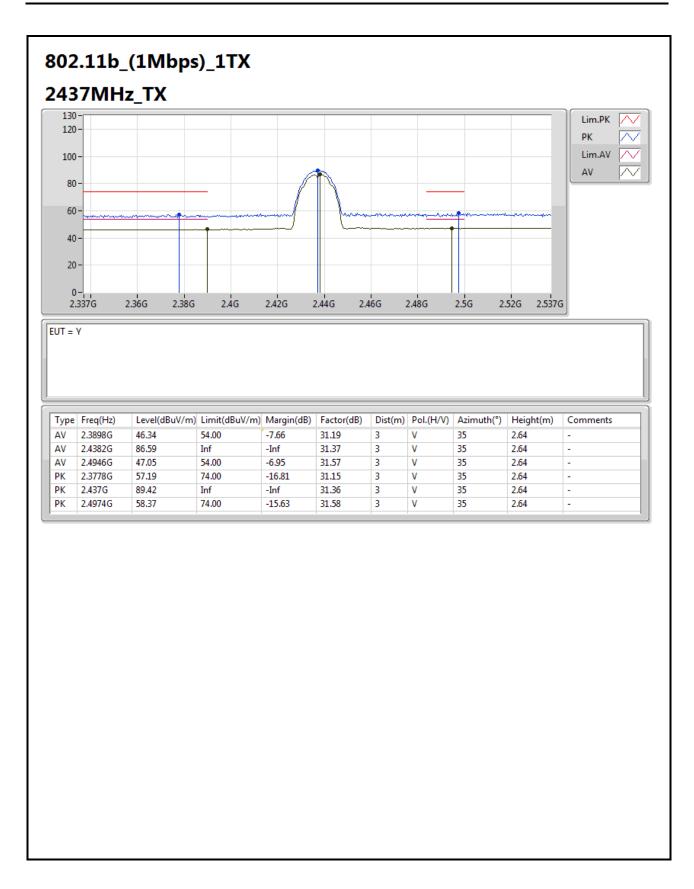


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F14 of F59

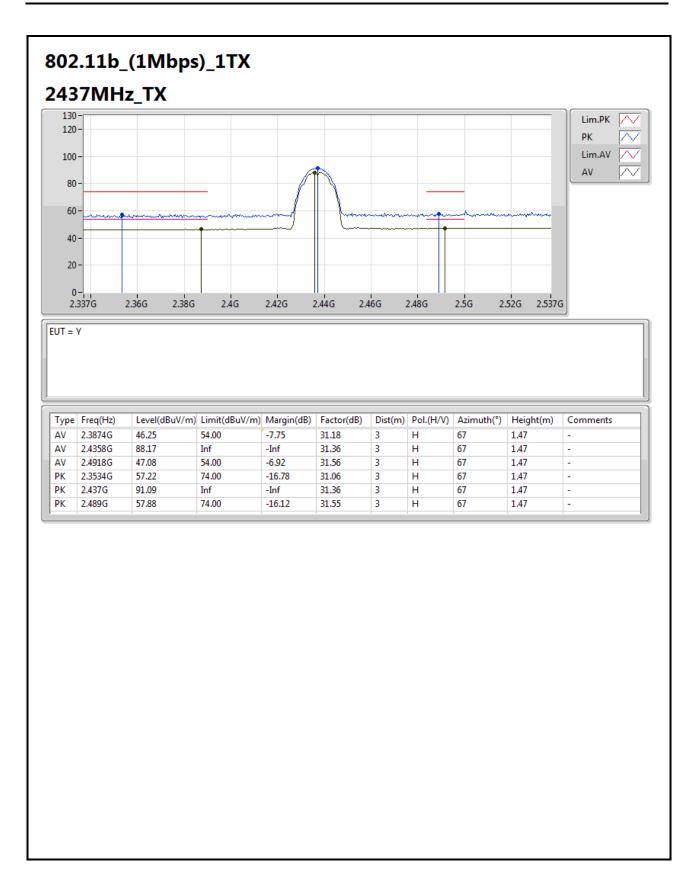




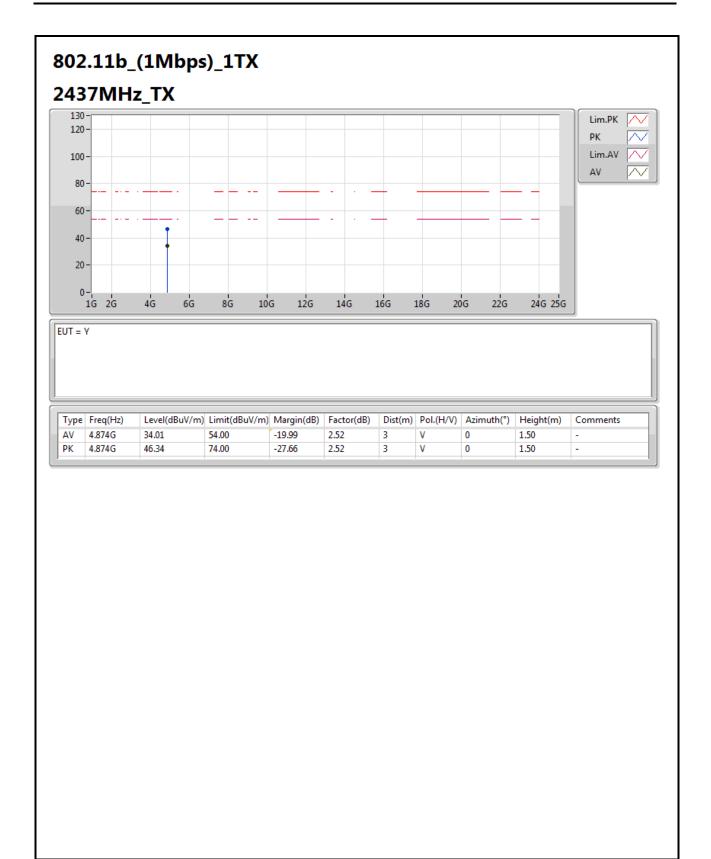




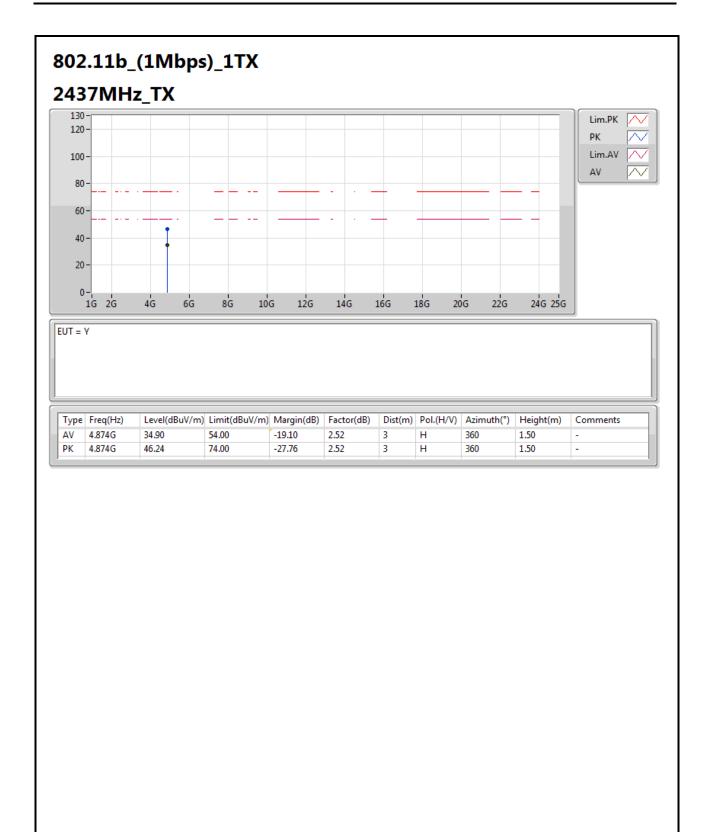


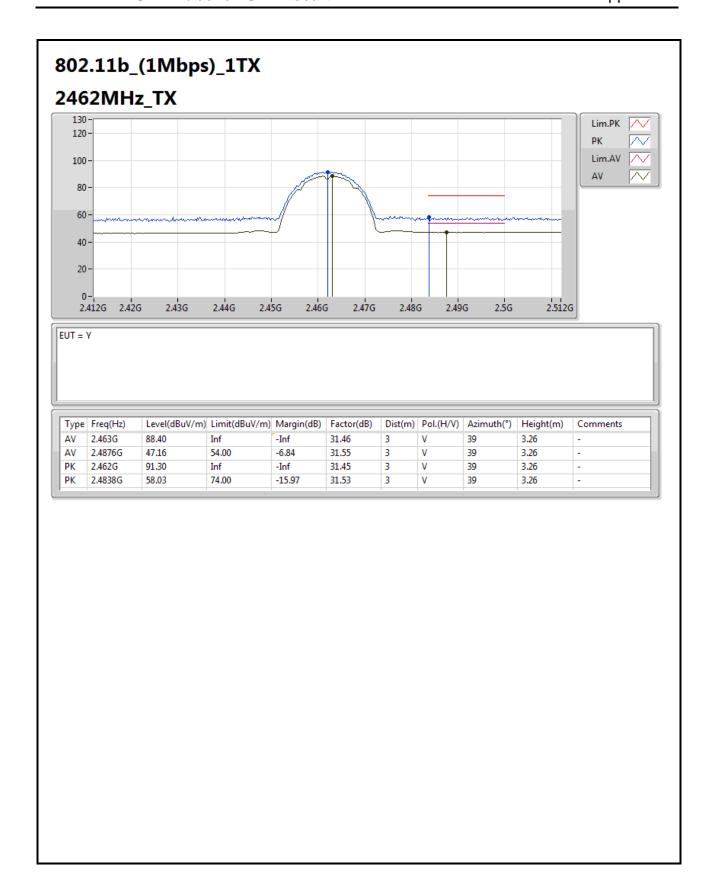






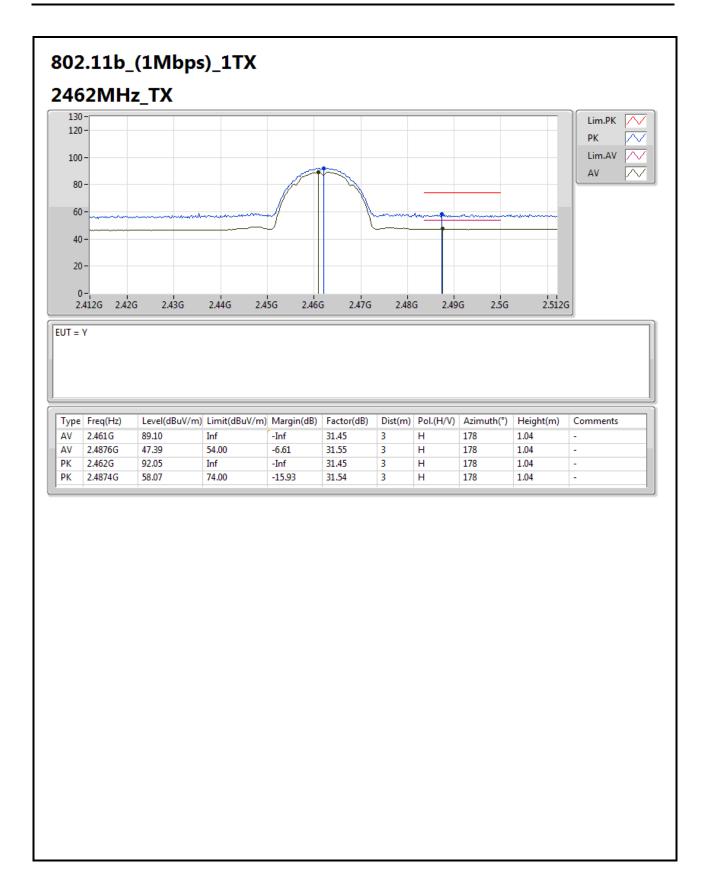






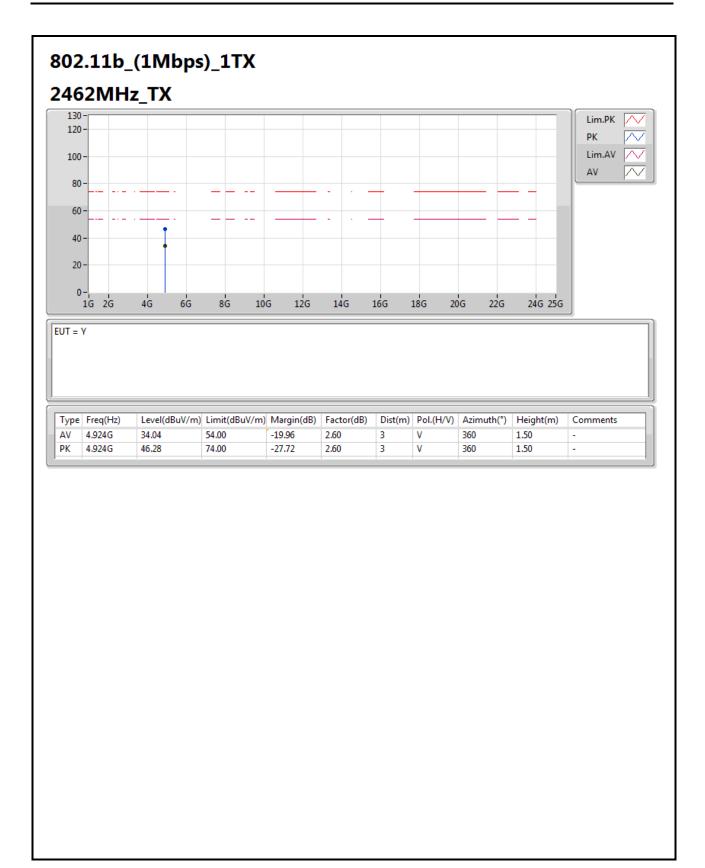
SPORTON INTERNATIONAL INC.



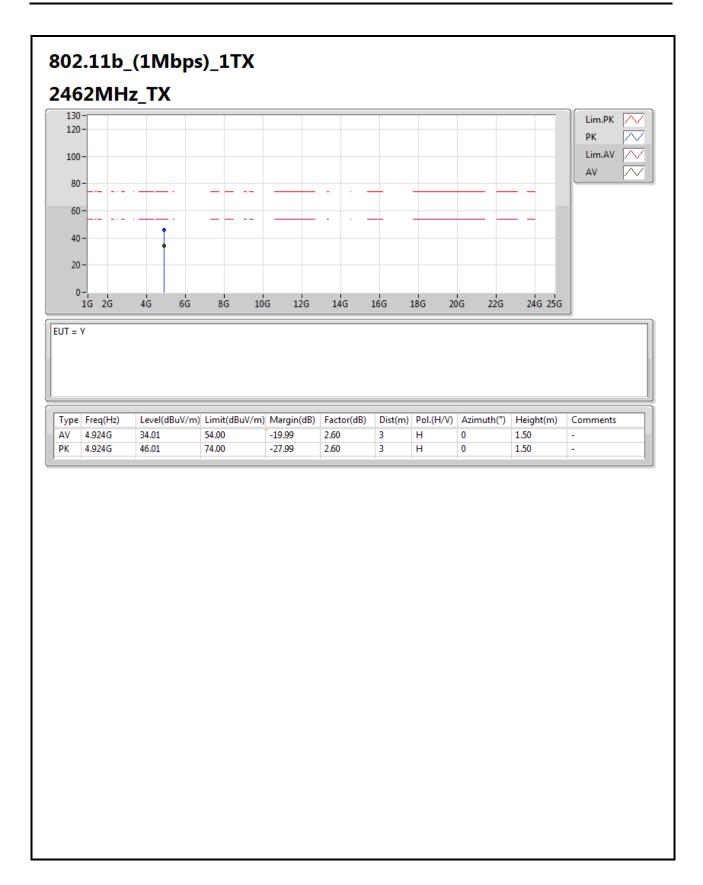


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F21 of F59

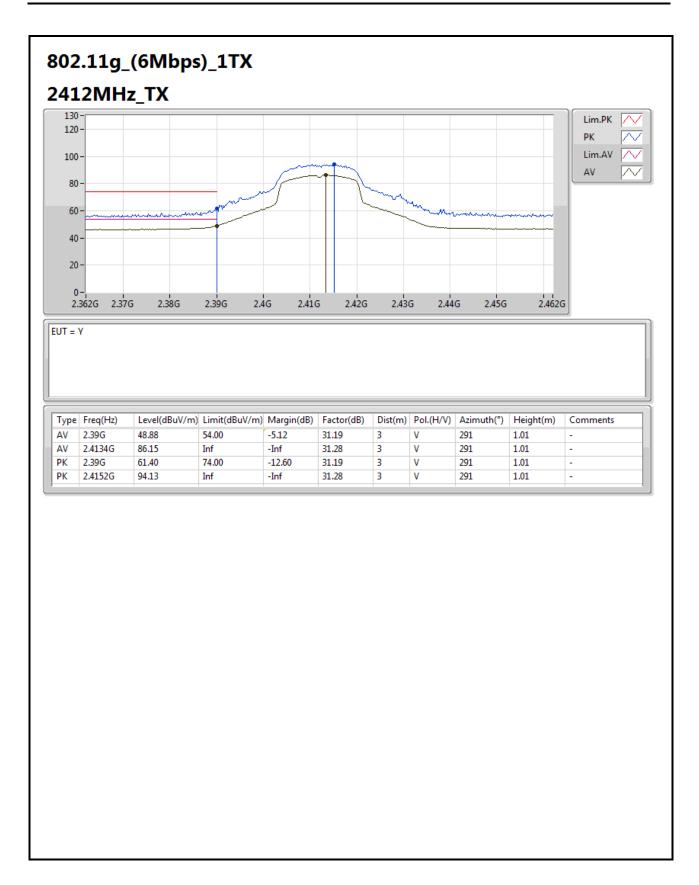




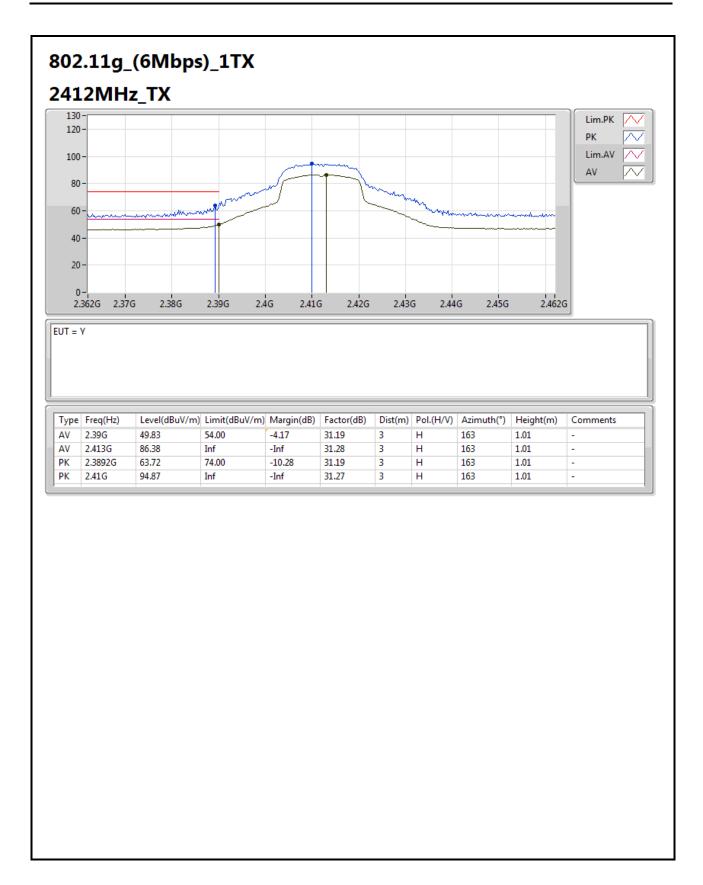






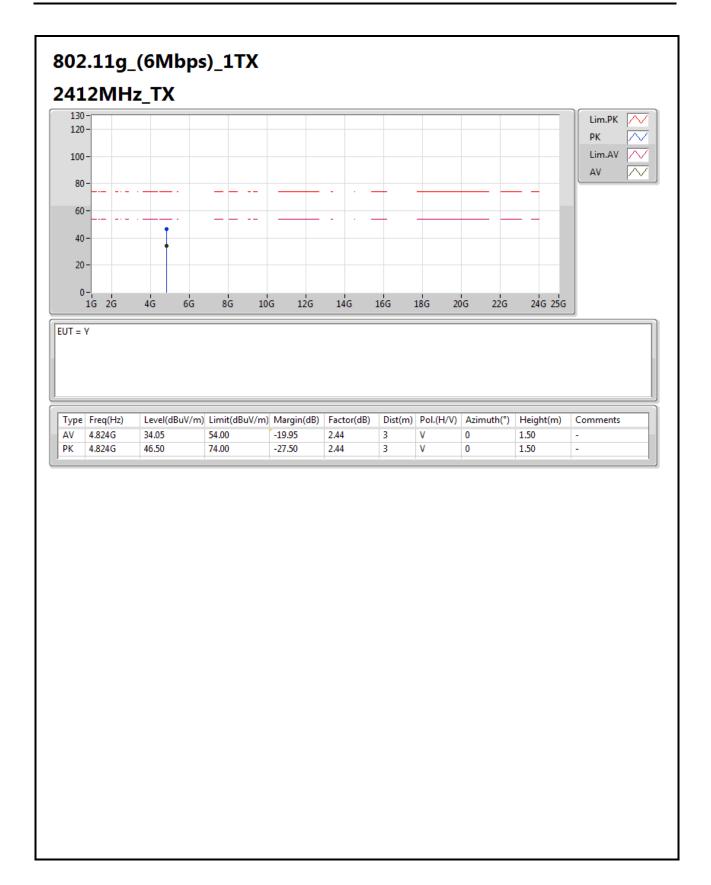




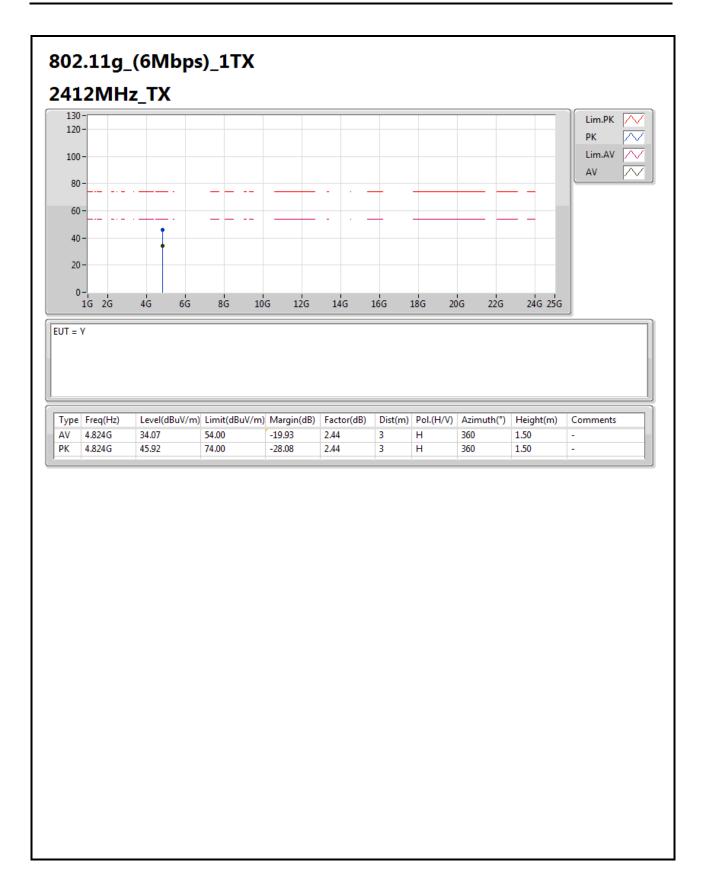


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F25 of F59

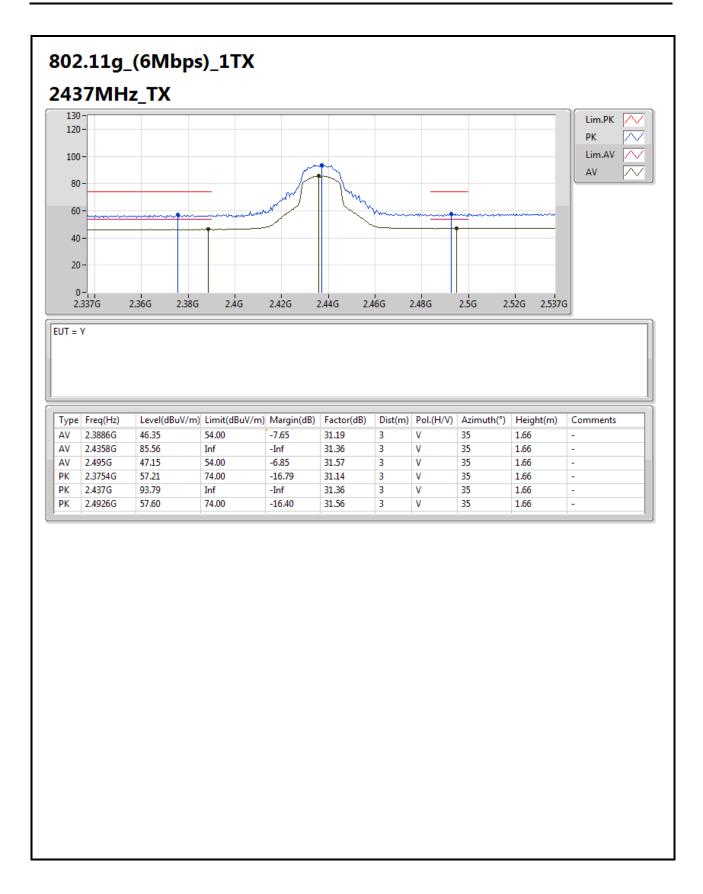






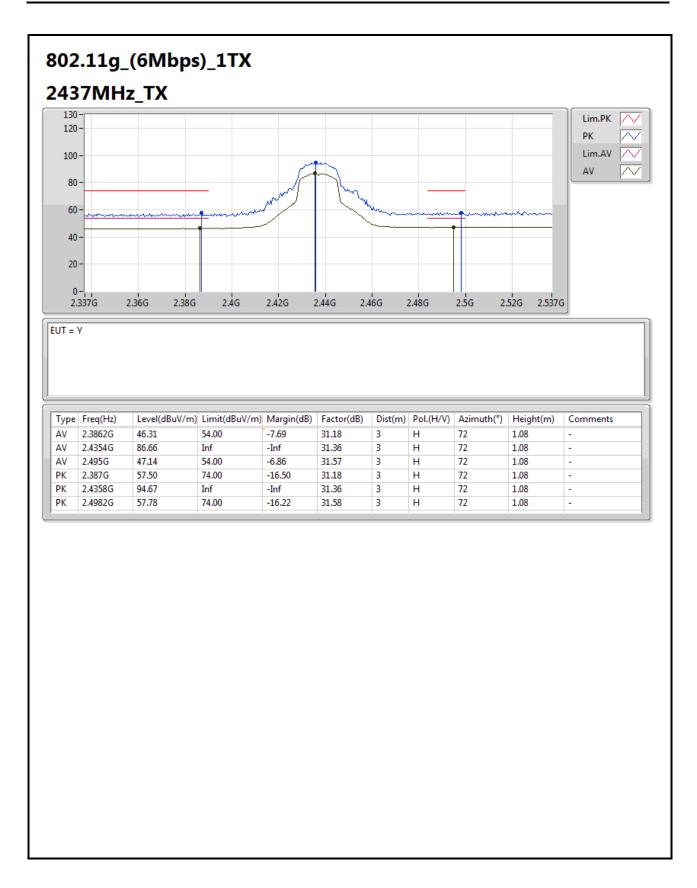






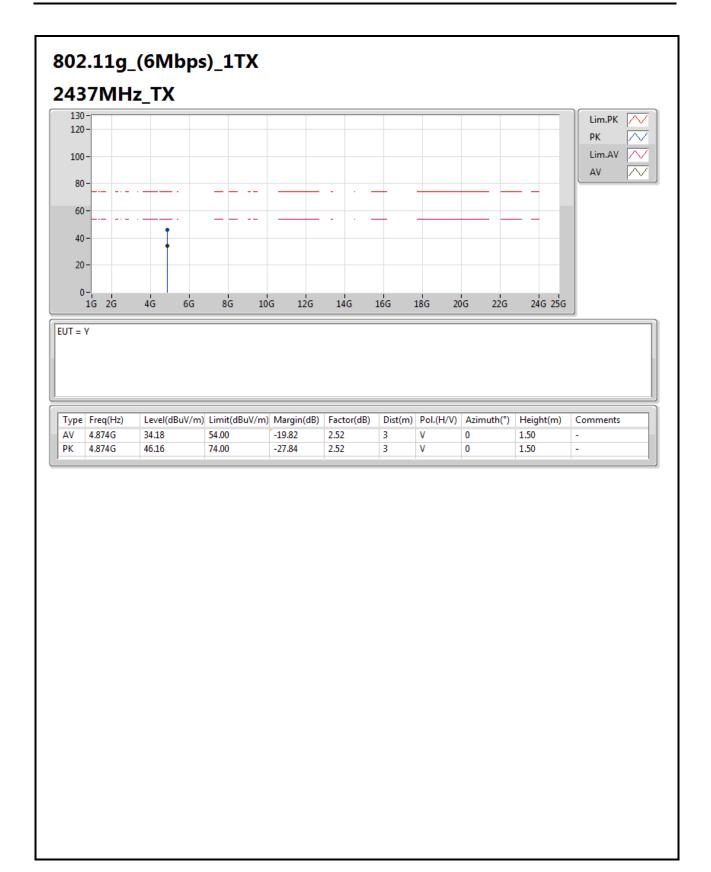
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F28 of F59





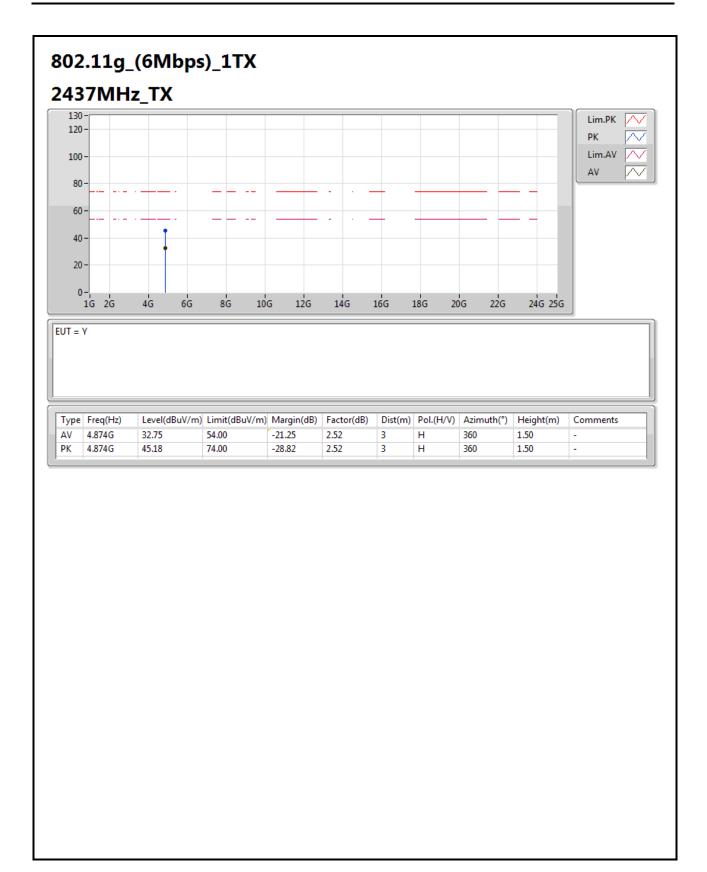
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F29 of F59



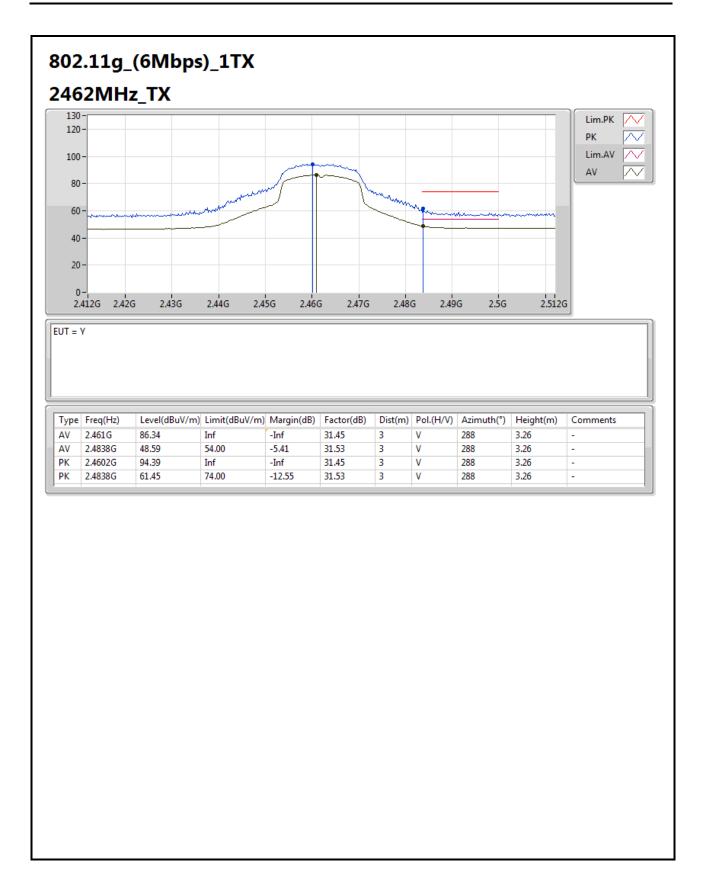


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F30 of F59



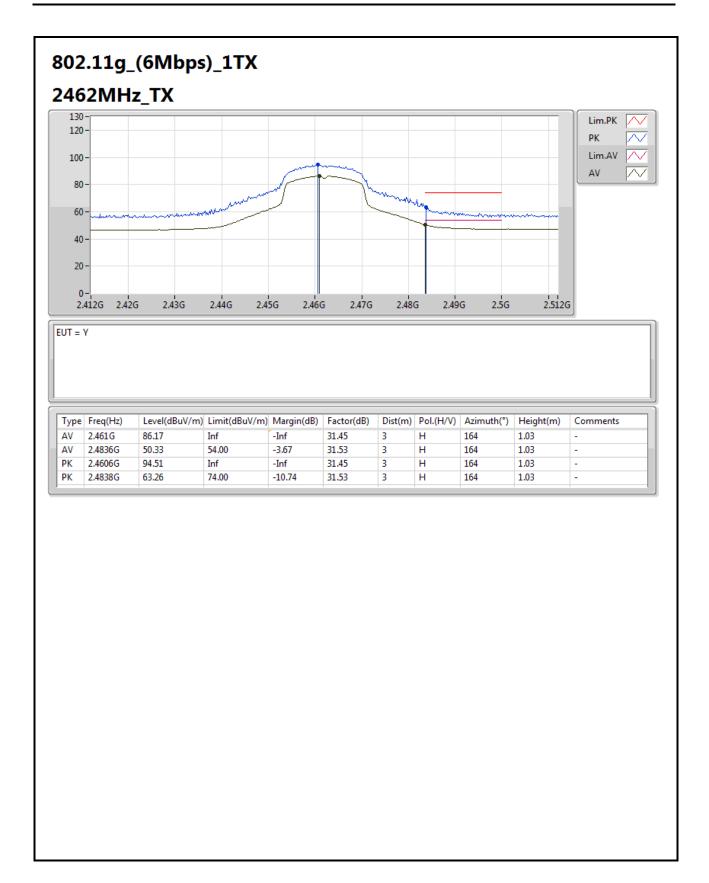






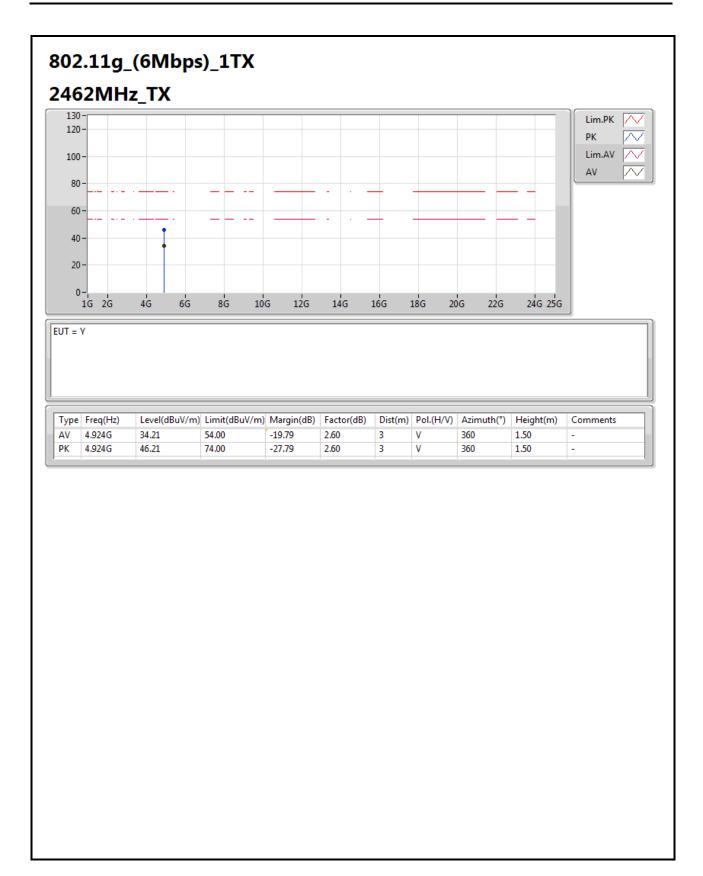
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F32 of F59



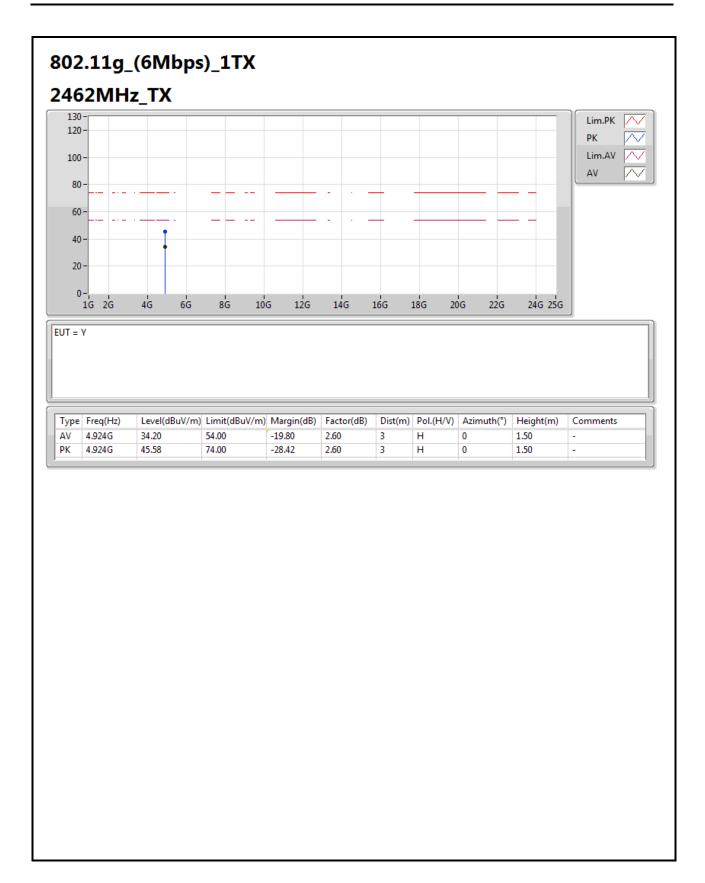


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F33 of F59



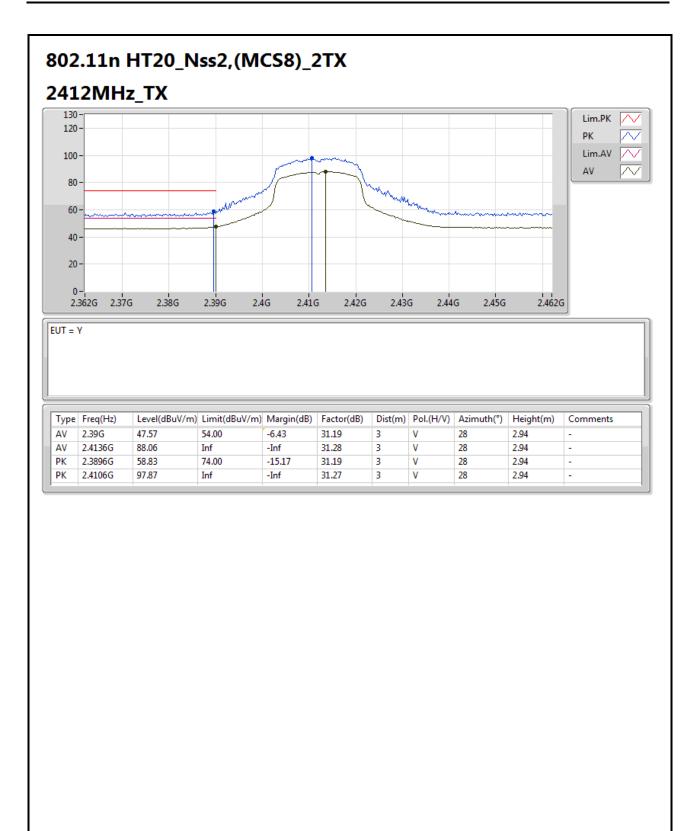




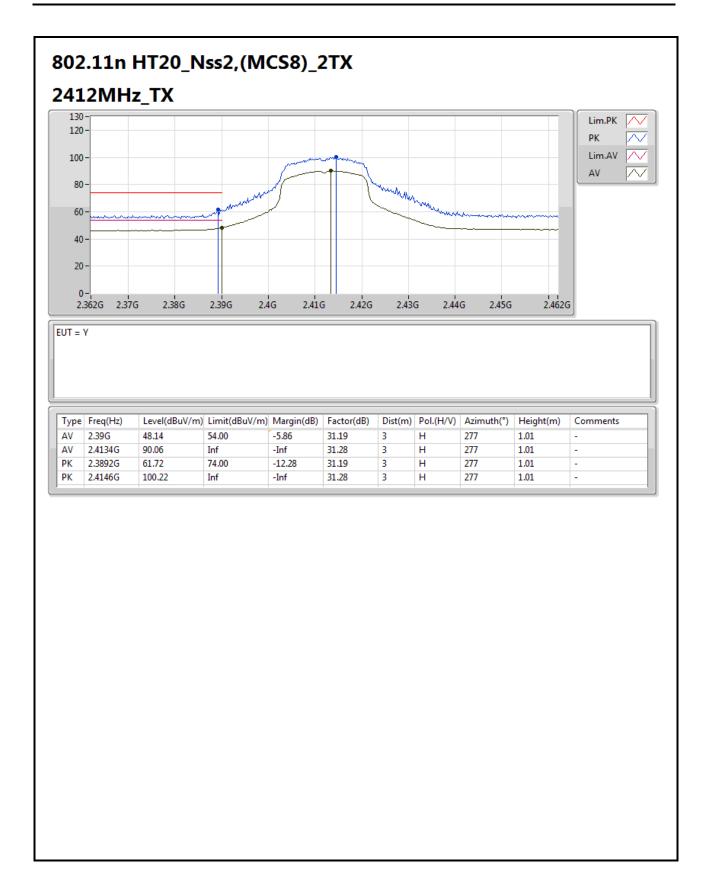


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F35 of F59





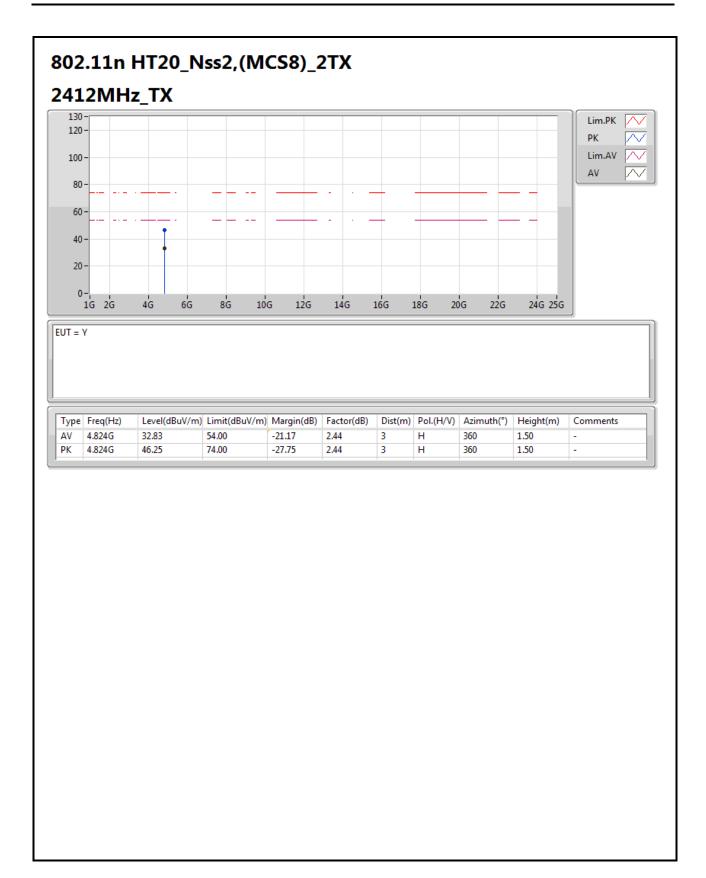




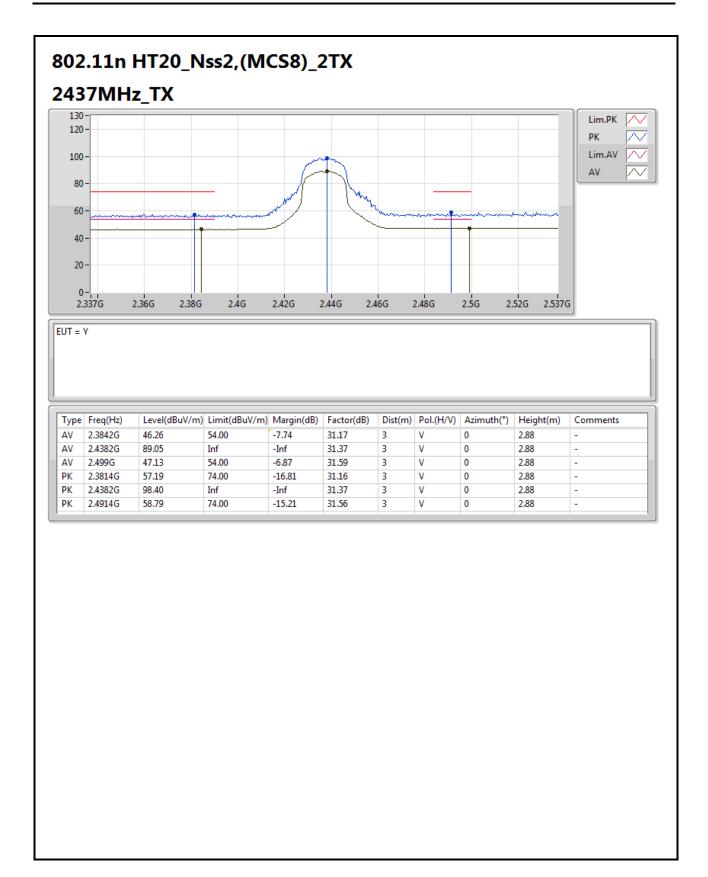






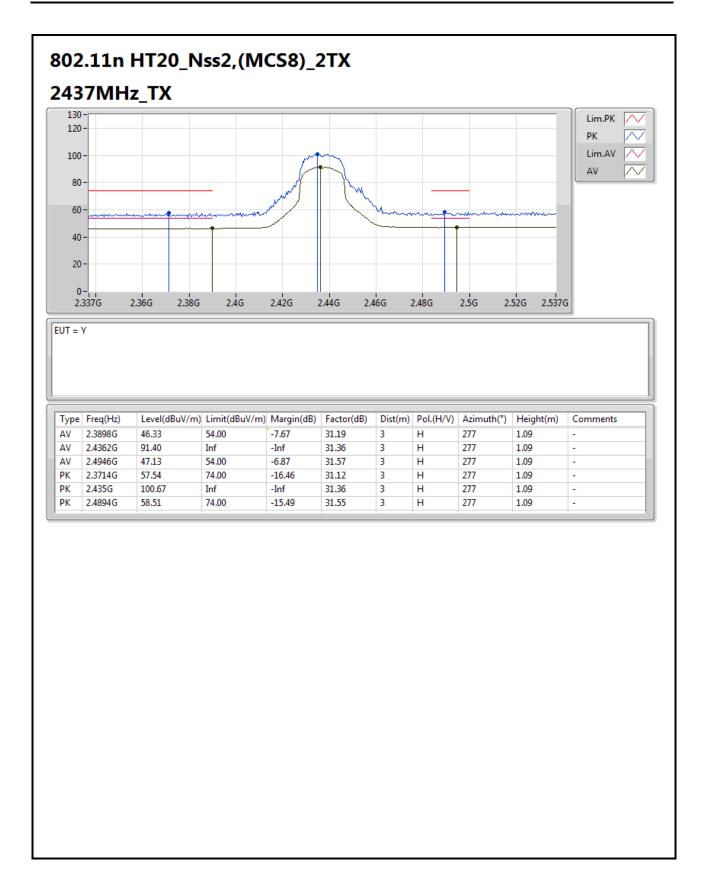






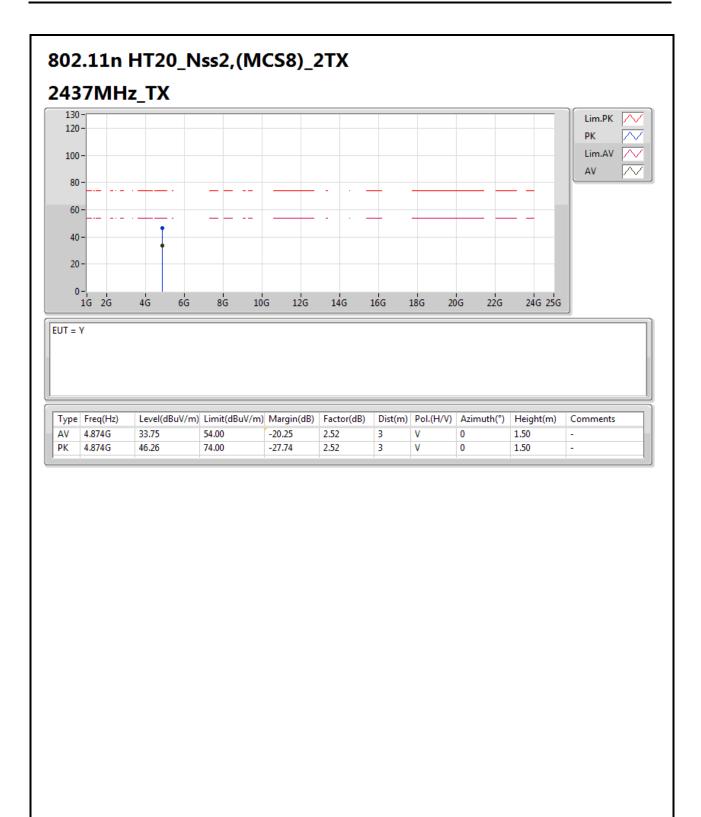
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F40 of F59



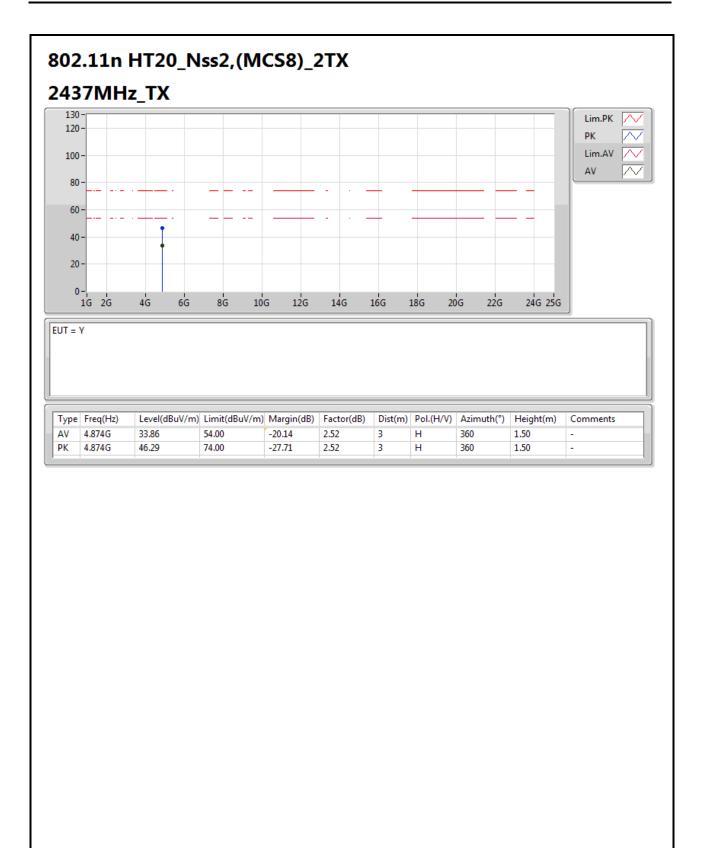


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F41 of F59

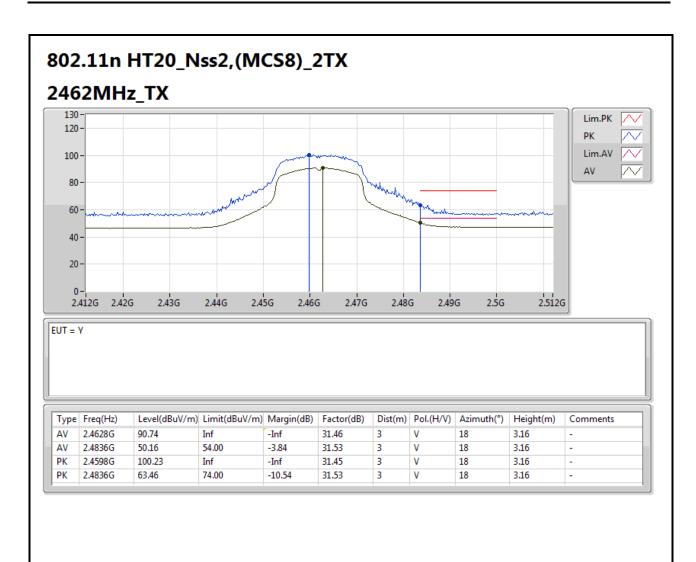




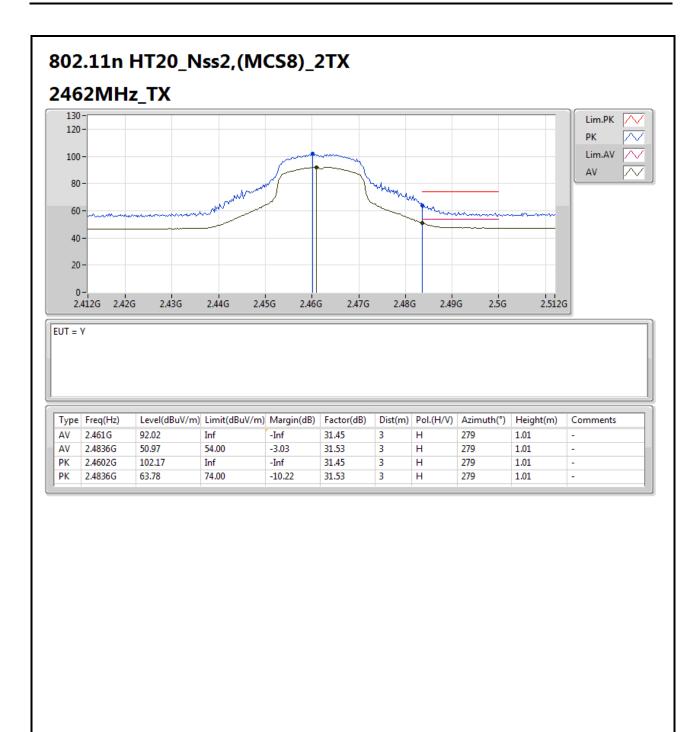






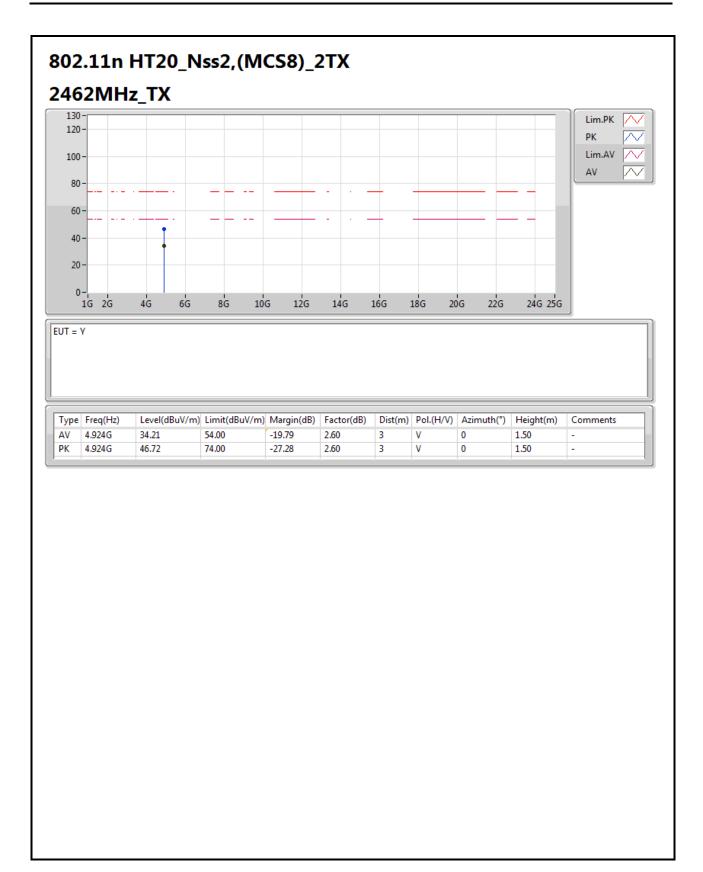




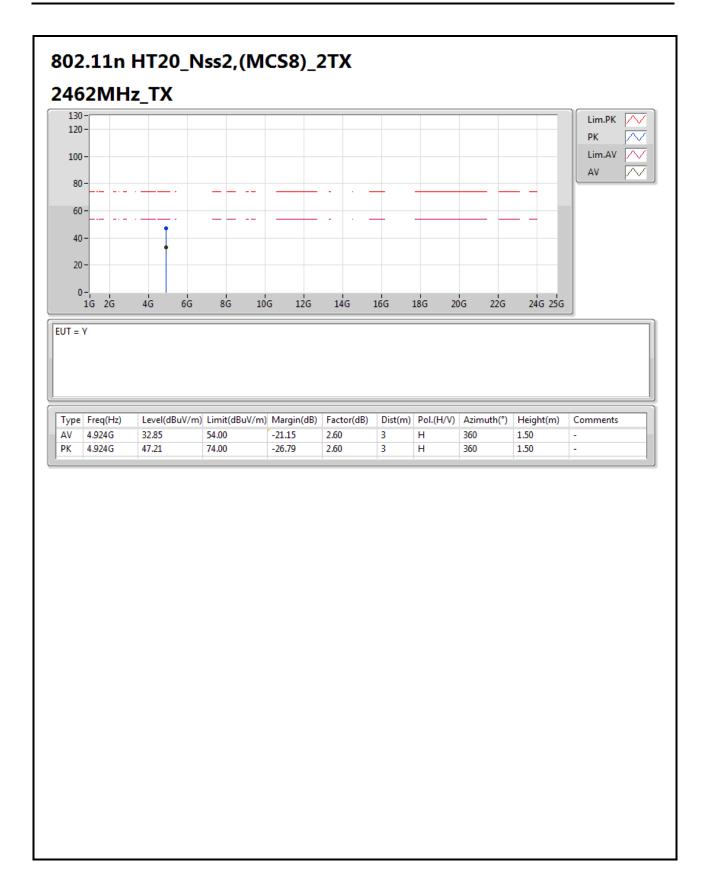


TEL: 886-3-327-3456 FAX: 886-3-327-0973



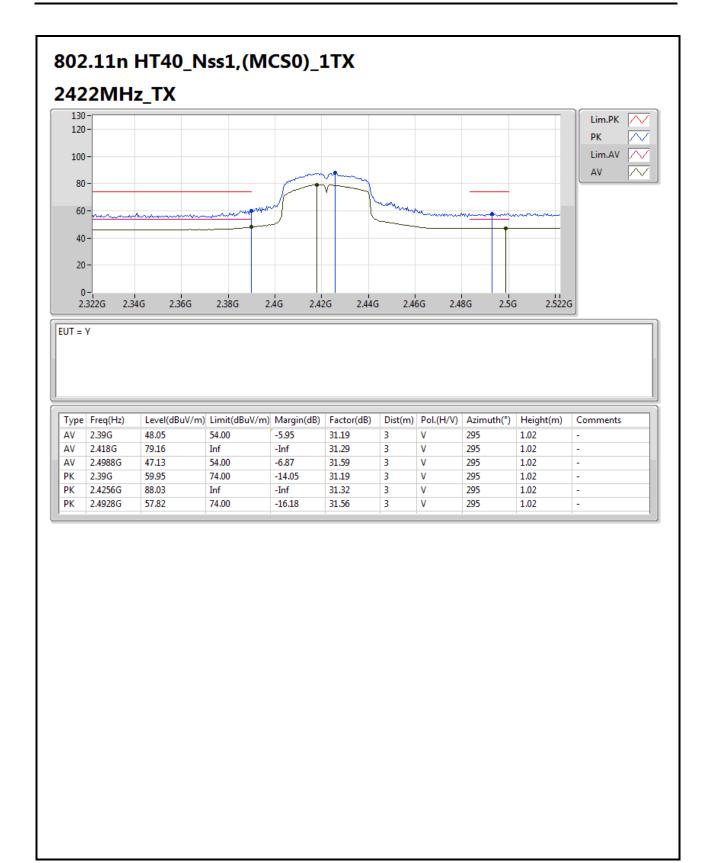






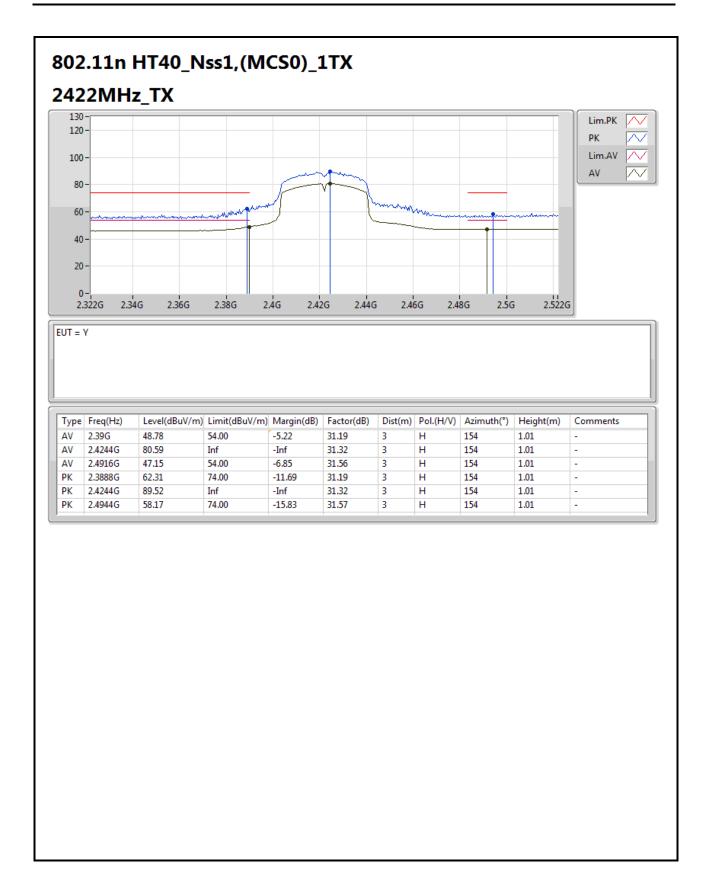
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F47 of F59



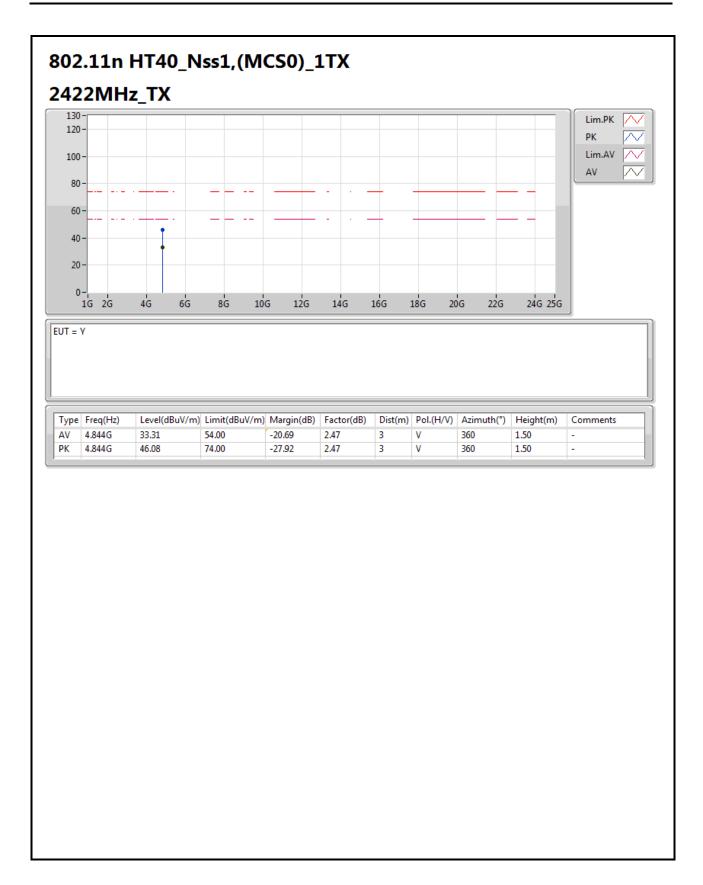


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F48 of F59

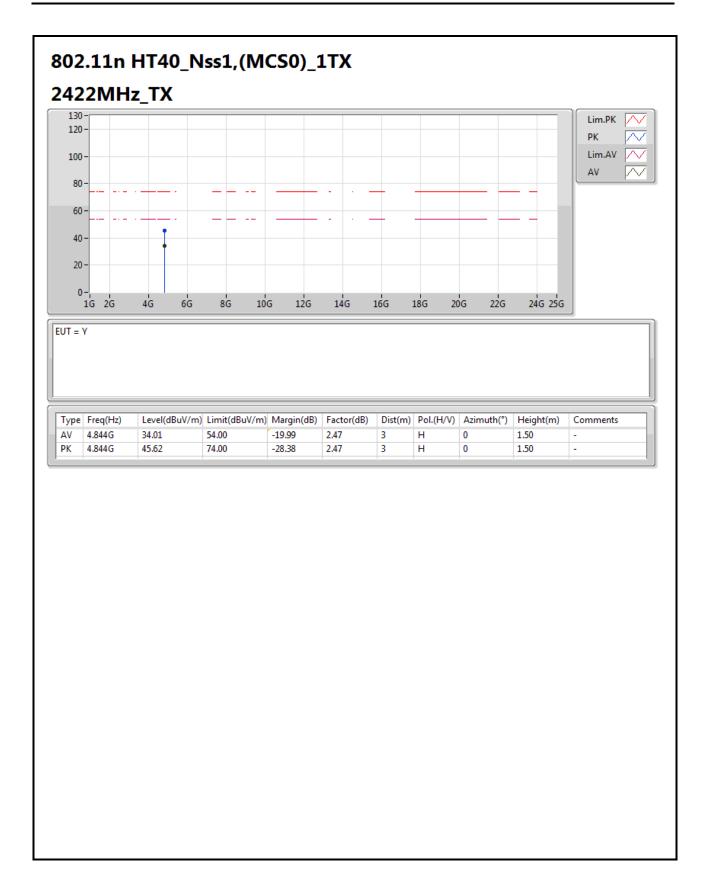




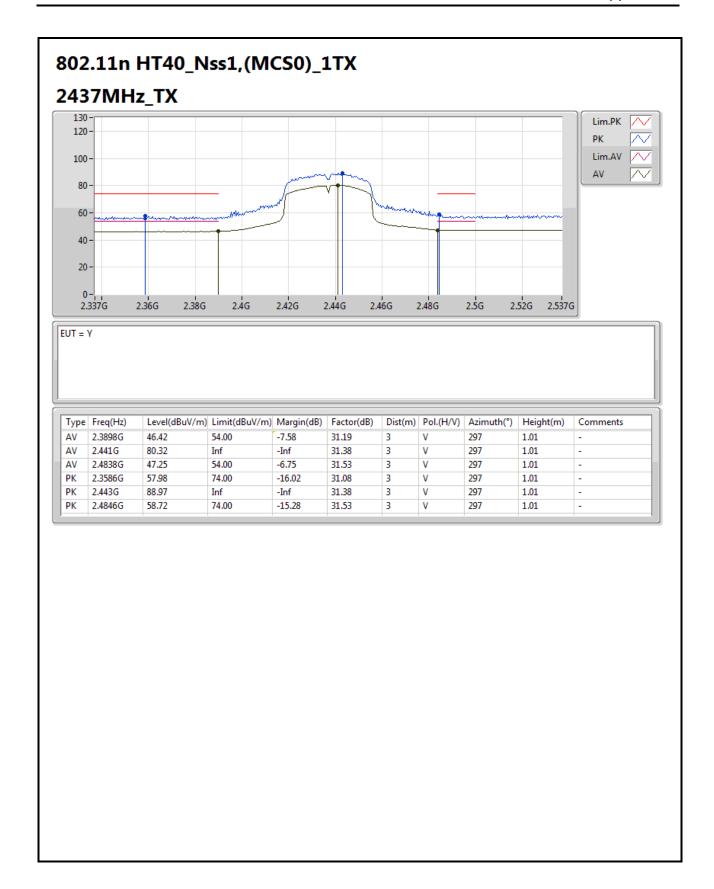






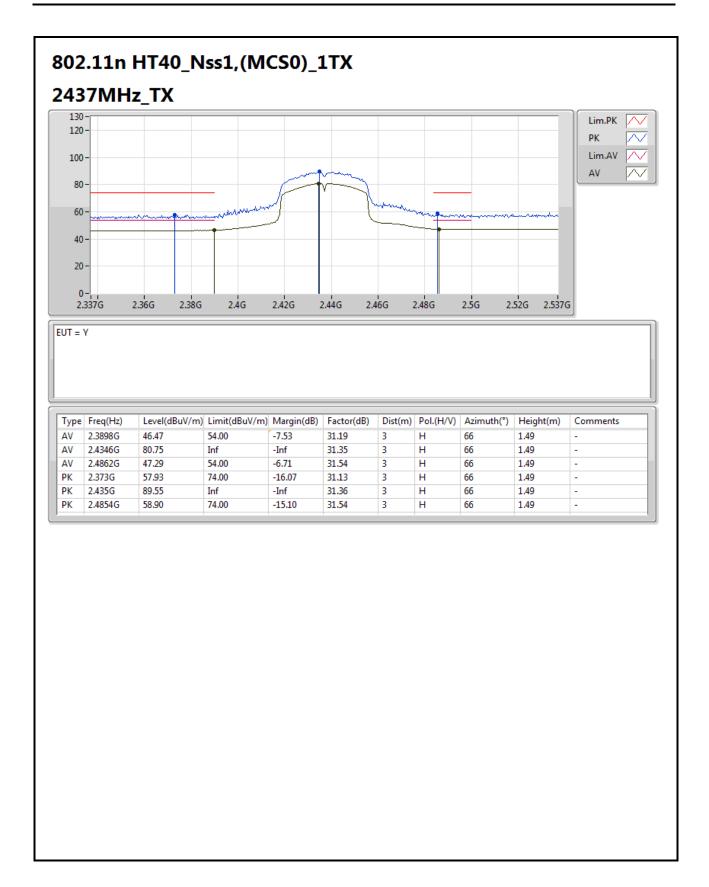




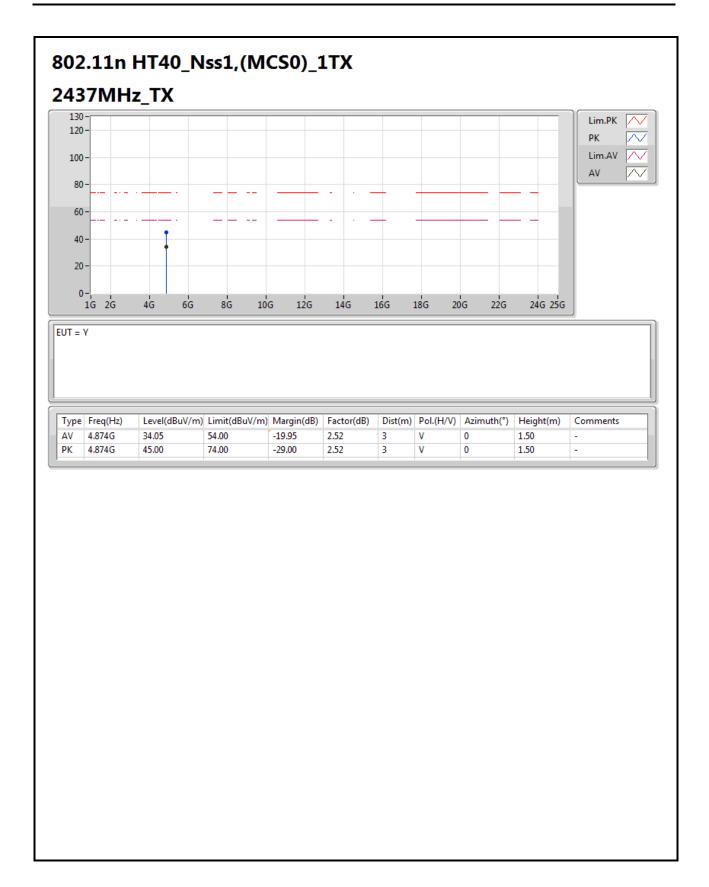


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F52 of F59



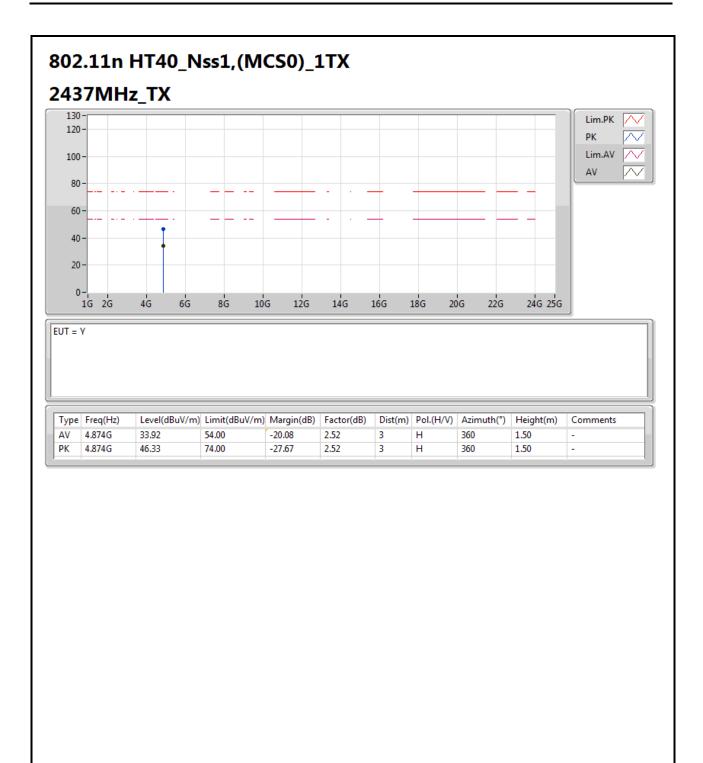






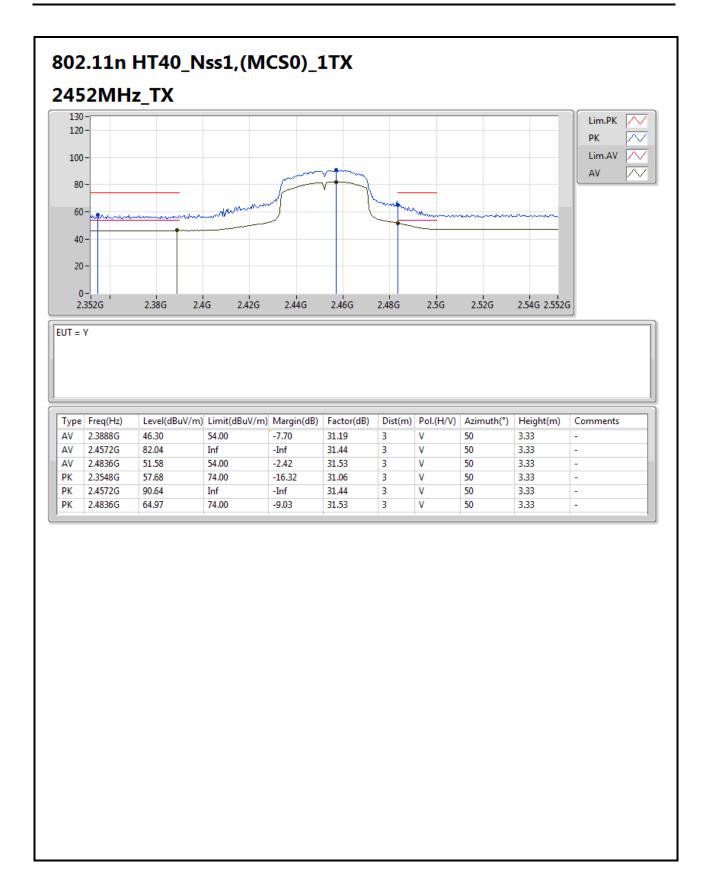
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F54 of F59





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F55 of F59





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : F56 of F59



