# SGS

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Report No.: SZEM120700424501 Page: 1 of 66

# **FCC REPORT**

<b>Application No:</b>	SZEM1207004245RF
Applicant:	RM Acquisition LLC
Manufacturer:	ELECTRONICS TECHNOLOGY (DONG GUAN) COMPANY LIMITED
Factory:	ELECTRONICS TECHNOLOGY (DONG GUAN) COMPANY LIMITED
Product Name:	GPS
Model No.(EUT):	TND 720A
Add Model No.:	RVND 7720A, RVND 7715A
FCC ID:	A4C-10001B
Standards:	47 CFR Part 15, Subpart C (2011)
Date of Receipt:	2012-07-30
Date of Test:	2012-08-02 to 2012-08-20
Date of Issue:	2012-08-24
Test Result:	PASS *

.\* In the configuration tested, the EUT complied with the standards specified above.

#### Authorized Signature:



Jack Zhang EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.



Report No.: SZEM120700424501 Page: 2 of 66

# 2 Test Summary

Test Item	Test Requirement	Test method	Result
Antonno Poquiromont	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Antenna Requirement	15.203/15.247 (c)	ANSI C63.10 2009	PASS
AC Power Line	47 CED Dart 15, Subpart C Section		
Conducted	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2009	PASS
Emission	15.207		
Conducted Peak Output	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Power	15.247 (b)(3)	ANSI C63.10 2009	PASS
6dB Occupied	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Bandwidth	15.247 (a)(2)	ANSI C63.10 2009	PASS
Power Spectral Depaity	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Power Spectral Density	15.247 (e)	ANSI C63.10 2009	PA33
Band-edge for RF	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Conducted Emissions	15.247(d)	ANSI C63.10 2009	FA00
RF Conducted Spurious	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Emissions	15.247(d)	ANSI C63.10 2009	FA33
Radiated Spurious	47 CFR Part 15, Subpart C Section	KDB558074 D01	PASS
Emissions	15.205/15.209	ANSI C63.10 2009	PA99
Band Edge (Radiated	47 CFR Part 15, Subpart C Section	KDB558074 D01	DASS
Emission)	15.205/15.209	ANSI C63.10 2009	PASS

Remark:

Model No.: TND 720A, RVND 7720A, RVND 7715A

Only the model TND 720A was tested, since the electrical circuit design, layout, components used and internal wiring were identical for all above models. Only different on model name and appearance.



Report No.: SZEM120700424501 Page: 3 of 66

# 3 Contents

			Page
1	COV	/ER PAGE	
2	TES	T SUMMARY	
3	CON	ITENTS	
4	GEN	IERAL INFORMATION	
	4.1	CLIENT INFORMATION	
	4.2	GENERAL DESCRIPTION OF EUT	
	4.3	TEST ENVIRONMENT AND MODE	
	4.4	DESCRIPTION OF SUPPORT UNITS	
	4.5	TEST LOCATION	
	4.6	TEST FACILITY	
	4.7	DEVIATION FROM STANDARDS	
	4.8	ABNORMALITIES FROM STANDARD CONDITIONS	
	4.9	OTHER INFORMATION REQUESTED BY THE CUSTOMER	
	4.10	TEST INSTRUMENTS LIST	8
5	TES	T RESULTS AND MEASUREMENT DATA	
	5.1	ANTENNA REQUIREMENT	
	5.2	CONDUCTED EMISSIONS	
	5.3	CONDUCTED PEAK OUTPUT POWER	
	5.4	6DB OCCUPY BANDWIDTH	
	5.5	Power Spectral Density	
	5.6	BAND-EDGE FOR RF CONDUCTED EMISSIONS	
	5.7	RF CONDUCTED SPURIOUS EMISSIONS	
	5.8	RADIATED SPURIOUS EMISSIONS	
	5.8.1 5.8.2		
	5.8.2 5.9	2 Transmitter emission above 1GHz BAND EDGE (RADIATED EMISSION)	
	0.9	DANU EUGE (NAVIATEU EMISSIUN)	



Report No.: SZEM120700424501 Page: 4 of 66

# 4 General Information

#### 4.1 Client Information

Applicant:	RM Acquisition LLC
Address of Applicant:	9855 Woods Drive Skokie. IL 60077 U.S.A
Manufacturer:	ELECTRONICS TECHNOLOGY (DONG GUAN) COMPANY LIMITED
Address of Manufacturer:	No.161, Xin Min Road, Tong Luo Wei Industrial Zone, Jin Xia, Chang An Town, Dong Guan City, Guang Dong Province, China
Factory:	ELECTRONICS TECHNOLOGY (DONG GUAN) COMPANY LIMITED
Address of Factory:	No.161, Xin Min Road, Tong Luo Wei Industrial Zone, Jin Xia, Chang An Town, Dong Guan City, Guang Dong Province, China

#### 4.2 General Description of EUT

Product Name:	GPS				
Model No.:	TND 720A, RVND	TND 720A, RVND 7720A, RVND 7715A			
Operation Frequency:	IEEE 802.11b/g: 2412MHz to 2462MHz				
Channel Numbers:	IEEE 802.11b/g: 11	Channels			
Channel Separation:	5MHz				
Type of Modulation:	IEEE for 802.11b:	DSSS(CCK,DQPSK,DBPSK)			
	IEEE for 802.11g:	OFDM(64QAM, 16QAM, QPSK, BPSK)			
Sample Type:	Portable production	1			
Test Power Grade:	15dBm (manufactu	rer declare)			
Test Software of EUT:	Labtool (manufacturer declare)				
Antenna Type:	Integral				
Antenna Gain:	0dBi				
Power Supply:	AC/DC adapter:	Model: SW013UH-0500200US			
		Input: AC100-240V 50/60Hz 0.4A Max			
		Output: DC5V 2A			
	Vehicle adapter:	Model: SW-87180500200A AW11			
		Input: DC12-24V 2.5A			
		Output: DC5V/2A			
	Battery:	GSP 684057 1600mAh 3.7V			
	USB charge				
AC/DC Adapter:	138 cm, shielding				
Vehicle Adapter:	236 cm, shielding				
USB Charging Cable:	100 cm				
AV Cable:	106 cm				
Test Voltage:	Input: AC120V 60	-lz			



Report No.: SZEM120700424501 Page: 5 of 66

Operation Frequency each of channel(802.11b/g)									
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency		
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz		
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz		
3	2422MHz	6	2437MHz	9	2452MHz				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11b/g:

Channel	Frequency
The Lowest channel	2412MHz
The Middle channel	2437MHz
The Highest channel	2462MHz

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Report No.: SZEM120700424501 Page: 6 of 66

#### **Operating Environment:** Temperature: 27.0 °C Humidity: 57 % RH Atmospheric Pressure: 1002 mbar Test mode: Transmitting Keep the EUT transmitting with modulation. PC Charge + Transmitting Keep the EUT charging by PC and transmitting with modulation AC Charge + Transmitting Keep the EUT charging by AC adapter and transmitting with modulation. Vehicle Charge + Transmitting Keep the EUT charging by Vehicle adapter and transmitting with modulation.

#### 4.3 Test Environment and Mode

#### 4.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
Earphone	N/A	N/A
iPad 2	Apple	A1219
DC Power	ZHAOXIN	RXN-305D
PC	DELL	DCSM
LCD-displaying	DELL	SP2208WFPt
KEYBOARD	DELL	SK-8115
MOUSE	Lenovo	MO28UOL
PC	IBM	8172
LCD-displaying	Lenovo	L1711pC
KEYBOARD	IBM	SK-8115
MOUSE	Lenovo	MO28UOA
Coder	HengTong ELECTRON	HT4000
Printer	Canon	BJC-1000SP

#### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

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Report No.: SZEM120700424501 Page: 7 of 66

# 4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### • CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

#### • VCCI

The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.

#### • FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

#### Industry Canada (IC)

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

#### 4.7 Deviation from Standards

None.

#### 4.8 Abnormalities from Standard Conditions

None.

#### 4.9 Other Information Requested by the Customer

None.



Report No.: SZEM120700424501 Page: 8 of 66

# 4.10 Test Instruments List

ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2013-06-10
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2013-05-17
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2012-10-29
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2012-10-29
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2012-10-29
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2013-05-17
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2012-11-26
9	Coaxial cable	SGS	N/A	SEL0027	2013-05-59
10	Coaxial cable	SGS	N/A	SEL0189	2013-05-29
11	Coaxial cable	SGS	N/A	SEL0121	2013-05-29
12	Coaxial cable	SGS	N/A	SEL0178	2013-05-29
13	Band filter	Amindeon	82346	SEL0094	2013-05-17
14	Barometer	Chang Chun	DYM3	SEL0088	2013-05-24
15	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2012-10-23
16	Humidity/ Temperature Indicator	Shanhai Qixiang	ZJ1-2B	SEL0103	2012-10-27
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2013-05-17
18	Signal Generator	Rohde & Schwarz	SMY01	SEL0155	2012-10-23
19	Loop Antenna	Beijing Daze	ZN30401	SEL0203	2013-06-04



Report No.: SZEM120700424501 Page: 9 of 66

	Conducted Emission								
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)				
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	2013-06-10				
2	LISN	Rohde & Schwarz	ENV216	SEL0152	2012-10-23				
3	LISN	ETS-LINDGREN	3816/2	SEL0021	2013-5-17				
4	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	SEL0162	2012-11-11				
5	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	SEL0163	2012-11-11				
6	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	SEL0164	2012-11-11				
7	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2013-5-17				
8	Coaxial Cable	SGS	N/A	SEL0025	2013-05-29				
9	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2012-10-23				
10	Humidity/ Temperature Indicator	Shanhai Qixiang	ZJ1-2B	SEL0103	2012-10-27				
11	Barometer	Chang Chun	DYM3	SEL0088	2013-05-24				

RF c	RF connected test									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd))					
1	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2012-10-23					
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2012-10-27					
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2012-10-23					
4	Coaxial cable	SGS	N/A	SEL0178	2013-05-29					
5	Coaxial cable	SGS	N/A	SEL0179	2013-05-29					
6	Barometer	ChangChun	DYM3	SEL0088	2013-05-24					
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2013-05-17					
8	Band filter	amideon	82346	SEL0094	2013-05-17					
9	POWER METER	R & S	NRVS	SEL0144	2012-10-23					
10	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2013-05-17					
11	Power Divider(splitter)	Agilent Technologies	11636B	SEL0130	2012-11-29					

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Report No.: SZEM120700424501 Page: 10 of 66

# 5 Test results and Measurement Data

#### 5.1 Antenna Requirement

Standard requirement: 47 CFR Part 15C Section 15.203 /247(c)

#### 15.203 requirement:

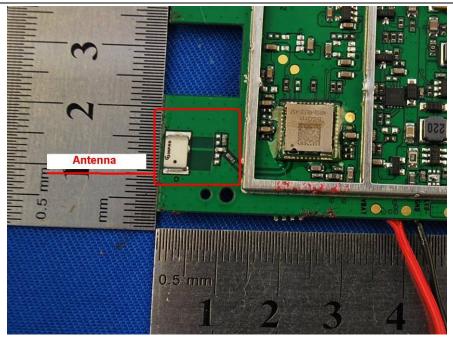
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **EUT Antenna:**

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.





Report No.: SZEM120700424501 Page: 11 of 66

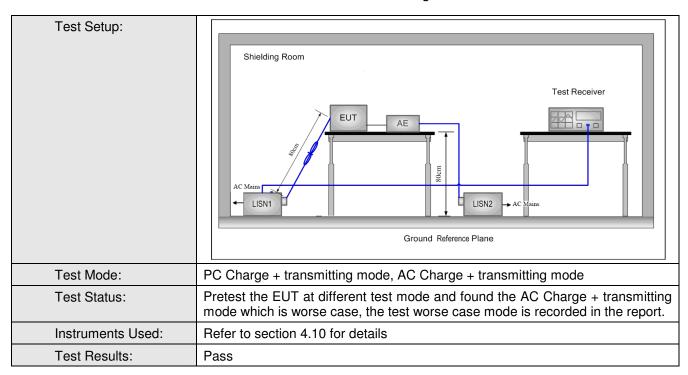
	501					
Test Requirement:	47	47 CFR Part 15C Section 15.207				
Test Method:	AN	ANSI C63.10: 2009				
Test Frequency Range:	15	150kHz to 30MHz				
Limit:		Frequency range (MLI=)	Limit (d	IBuV)		
		Frequency range (MHz)	Quasi-peak	Average		
		0.15-0.5	66 to 56*	56 to 46*		
		0.5-5	56	46		
		5-30	60	50		
	* C	Decreases with the logarithm	of the frequency.		-	
Test Procedure:	1) 2) 3)	<ul> <li>* Decreases with the logarithm of the frequency.</li> <li>1) The mains terminal disturbance voltage test was conducted in a shielded room.</li> <li>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50µH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</li> <li>3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the</li> </ul>				
<ul> <li>unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.</li> <li>5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.</li> </ul>				2.		

#### 5.2 Conducted Emissions

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Report No.: SZEM120700424501 Page: 12 of 66



#### Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

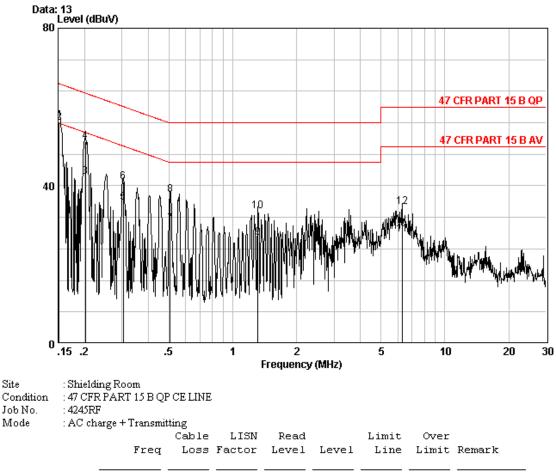
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.



Report No.: SZEM120700424501 Page: 13 of 66

Live Line:

Site

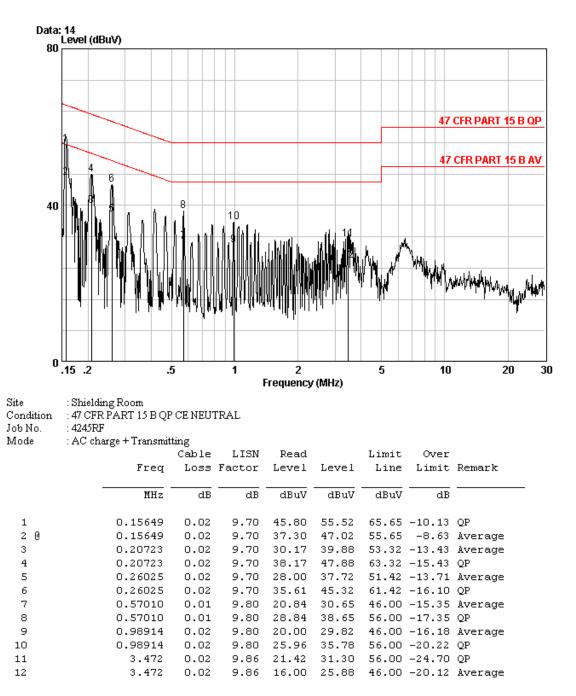


	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
10	0.15160	0.02	9.70	39.00	48.72	55.91	-7.19	Average
2	0.15160	0.02	9.70	46.28	56.00	65.91	-9.91	QP
3	0.20181	0.02	9.70	32.60	42.32	53.54	-11.22	Average
4	0.20181	0.02	9.70	41.47	51.19	63.54	-12.34	QP
5	0.30509	0.01	9.71	26.00	35.72	50.10	-14.39	Average
6	0.30509	0.01	9.71	31.25	40.97	60.10	-19.14	QP
7	0.50737	0.01	9.80	20.50	30.31	46.00	-15.69	Average
8	0.50737	0.01	9.80	28.00	37.81	56.00	-18.19	QP
9	1.317	0.02	9.80	17.00	26.82	46.00	-19.18	Average
10	1.317	0.02	9.80	23.74	33.56	56.00	-22.44	QP
11	6.285	0.01	9.90	17.68	27.59	50.00	-22.41	Average
12	6.285	0.01	9.90	24.68	34.59	60.00	-25.41	QP



Report No.: SZEM120700424501 Page: 14 of 66

Neutral Line:



Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.



Report No.: SZEM120700424501 Page: 15 of 66

#### 5.3 Conducted Peak Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)		
Test Method:	ANSI C63.10 2009 and KDB558074 D01		
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane Remark:		
	Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.		
Test Instruments:	Refer to section 4.10 for details		
Exploratory Test Mode:	Transmitting mode		
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;		
	54Mbps of rate is the worst case of 802.11g.		
Limit:	30dBm		
Test Results:	Pass		

Pre-scan under a	all rate at lo	west chan	nel 1					
Mode	802.11b							
Data Rate	1Mbps 2Mbps 5.5Mbps 11Mbps					<		
Power (dBm)	14.15	14.96	16.16	17.49				
Mode				80	)2.11g			
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
								•
Through Pre-sca	n, 11Mbps	of rate is t	he worst cas	se of 802.1	1b; 54Mbps	of rate is th	e worst case	of 802.11g.

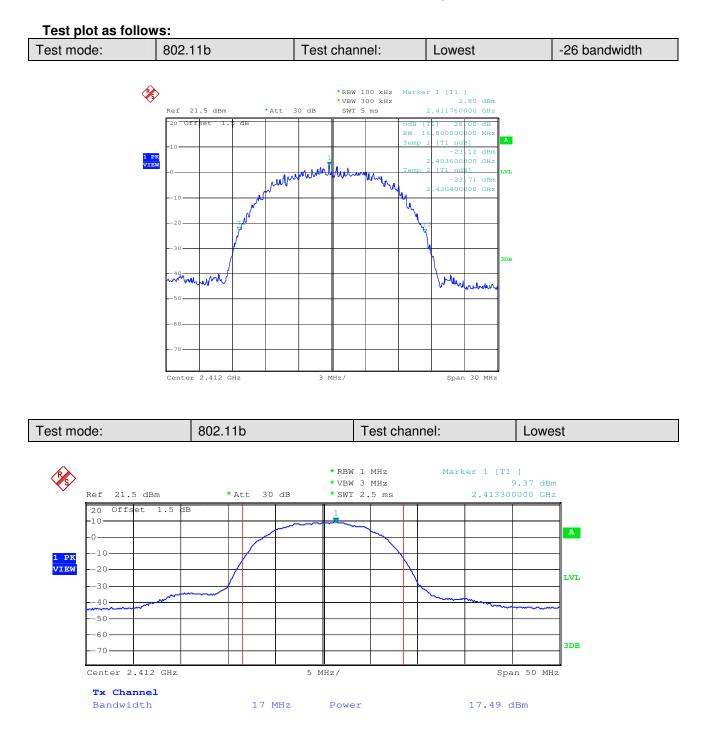


Report No.: SZEM120700424501 Page: 16 of 66

Measurement Data			
	802.11b mo	de	
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	17.49	30.00	Pass
Middle	17.83	30.00	Pass
Highest	17.74	30.00	Pass
	802.11g mo	de	
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	15.81	30.00	Pass
Middle	16.28	30.00	Pass
Highest	16.78	30.00	Pass

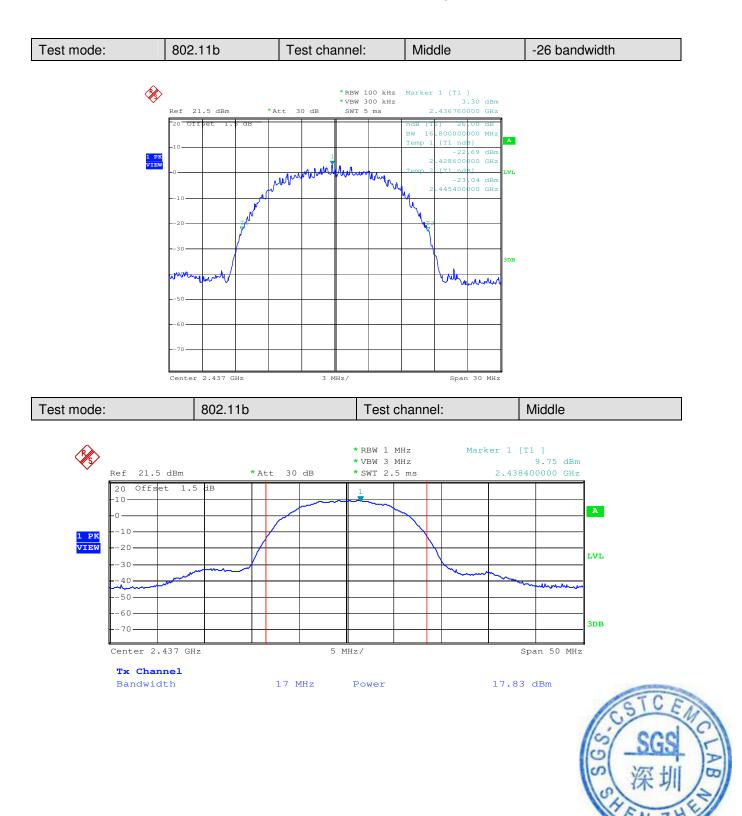


Report No.: SZEM120700424501 Page: 17 of 66



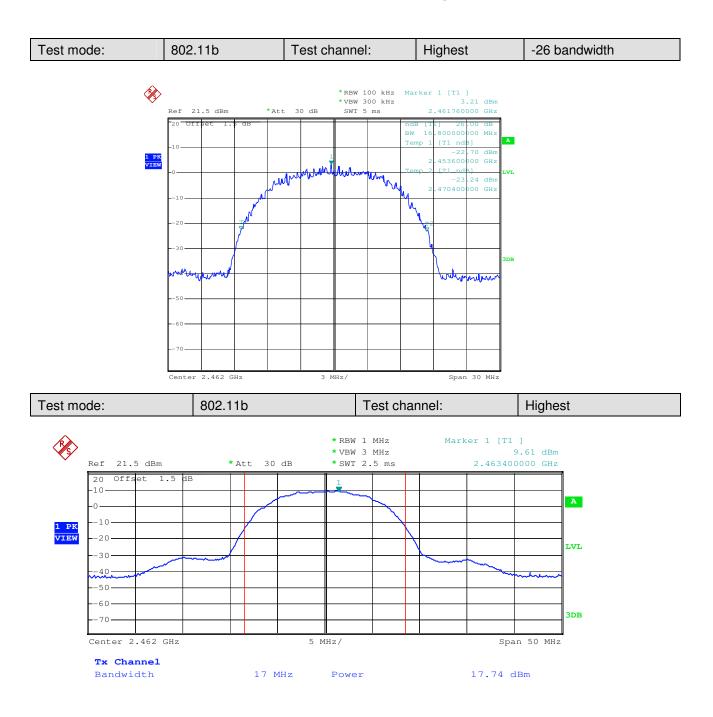


Report No.: SZEM120700424501 Page: 18 of 66



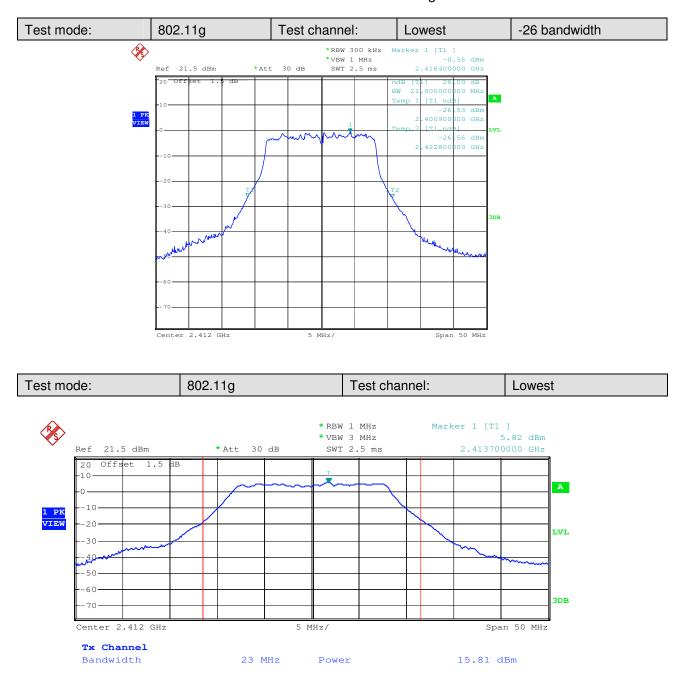


Report No.: SZEM120700424501 Page: 19 of 66



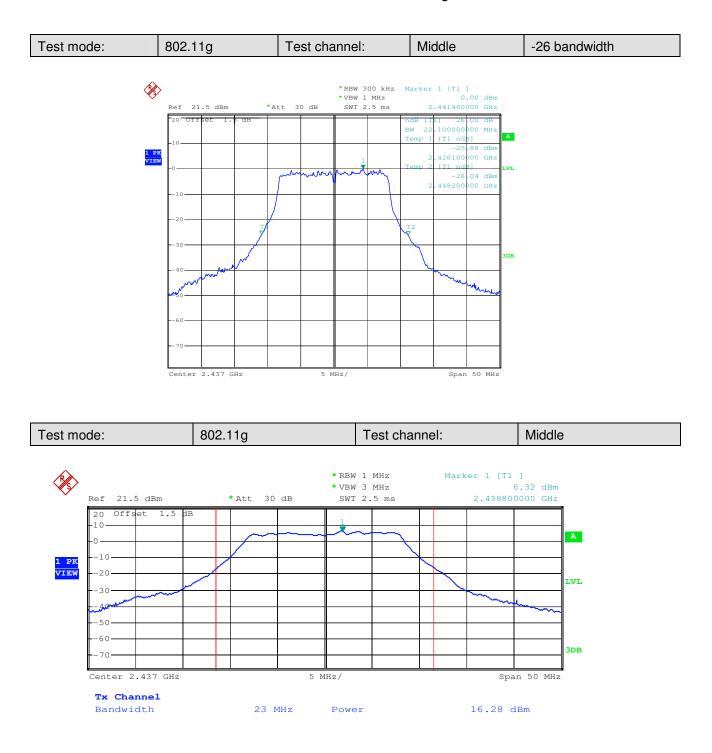


Report No.: SZEM120700424501 Page: 20 of 66



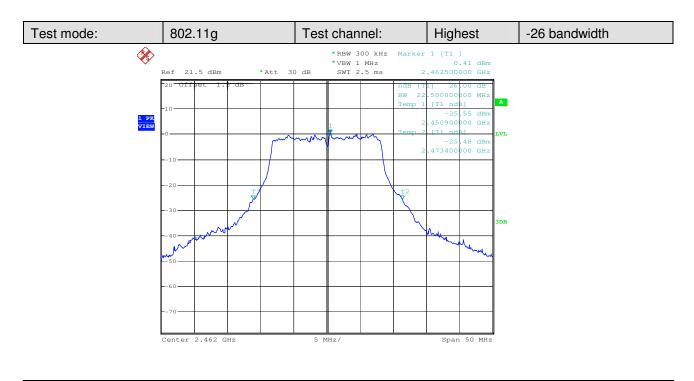


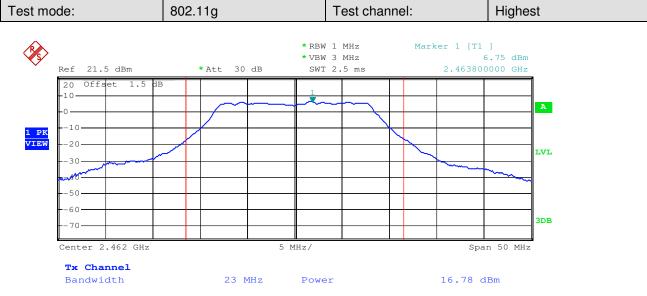
Report No.: SZEM120700424501 Page: 21 of 66





Report No.: SZEM120700424501 Page: 22 of 66







Report No.: SZEM120700424501 Page: 23 of 66

#### 5.4 6dB Occupy Bandwidth

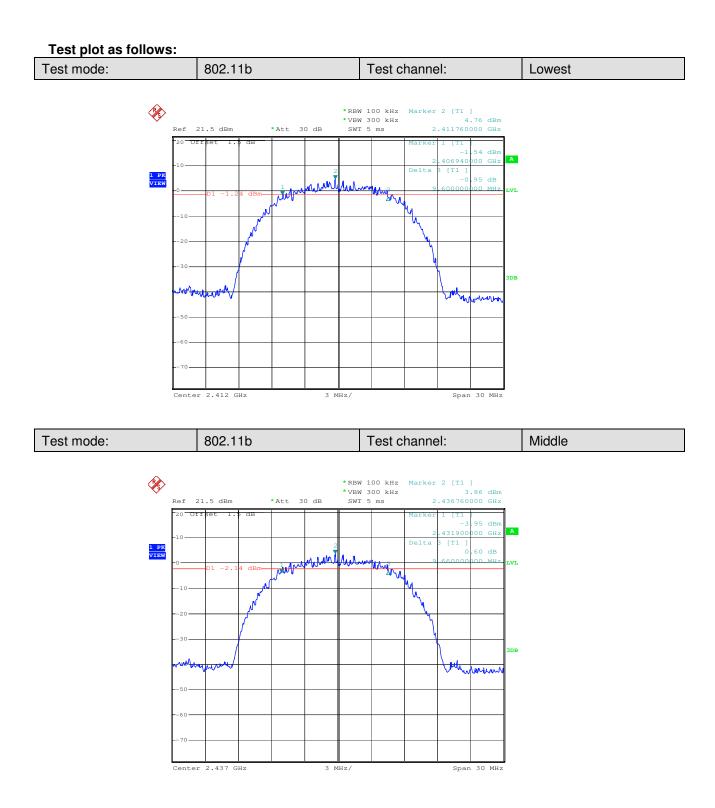
Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)		
Test Method:	ANSI C63.10 2009 and KDB558074 D01		
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Instruments Used:	Refer to section 4.10 for details		
Exploratory Test Mode:	Transmitting mode		
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;		
	54Mbps of rate is the worst case of 802.11g.		
Limit:	≥ 500 kHz		
Test Results:	Pass		

#### **Measurement Data**

	802.11b mode		
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	9.60	≥500	Pass
Middle	9.66	≥500	Pass
Highest	9.66	≥500	Pass
	802.11g mode		
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	16.68	≥500	Pass
Middle	16.68	≥500	Pass
Highest	16.62	≥500	Pass



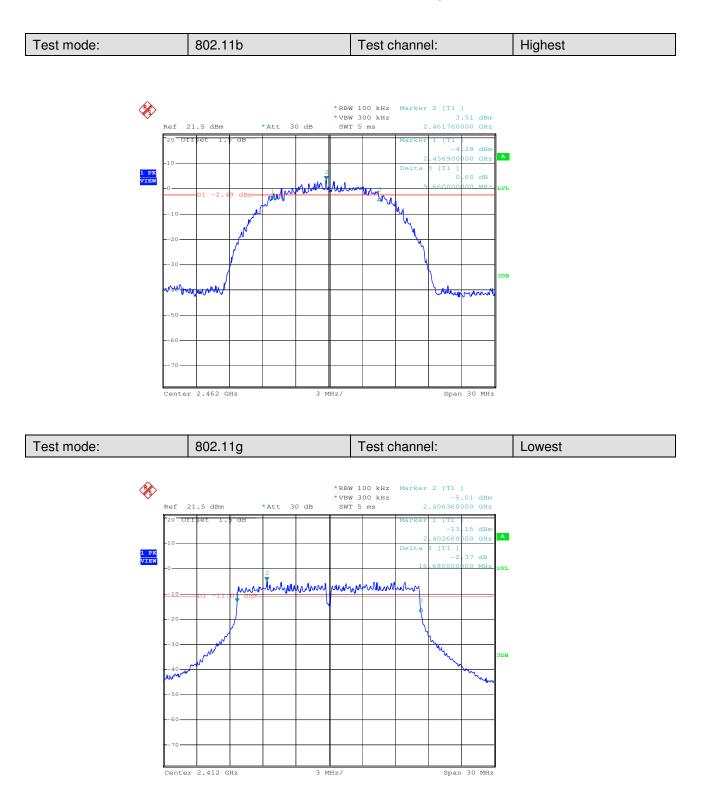
Report No.: SZEM120700424501 Page: 24 of 66



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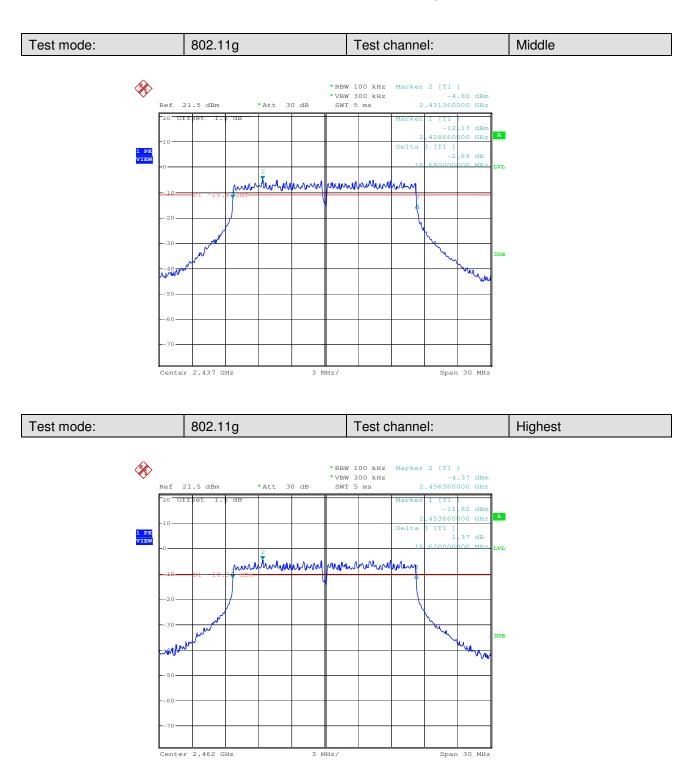


Report No.: SZEM120700424501 Page: 25 of 66





Report No.: SZEM120700424501 Page: 26 of 66



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Report No.: SZEM120700424501 Page: 27 of 66

#### 5.5 Power Spectral Density

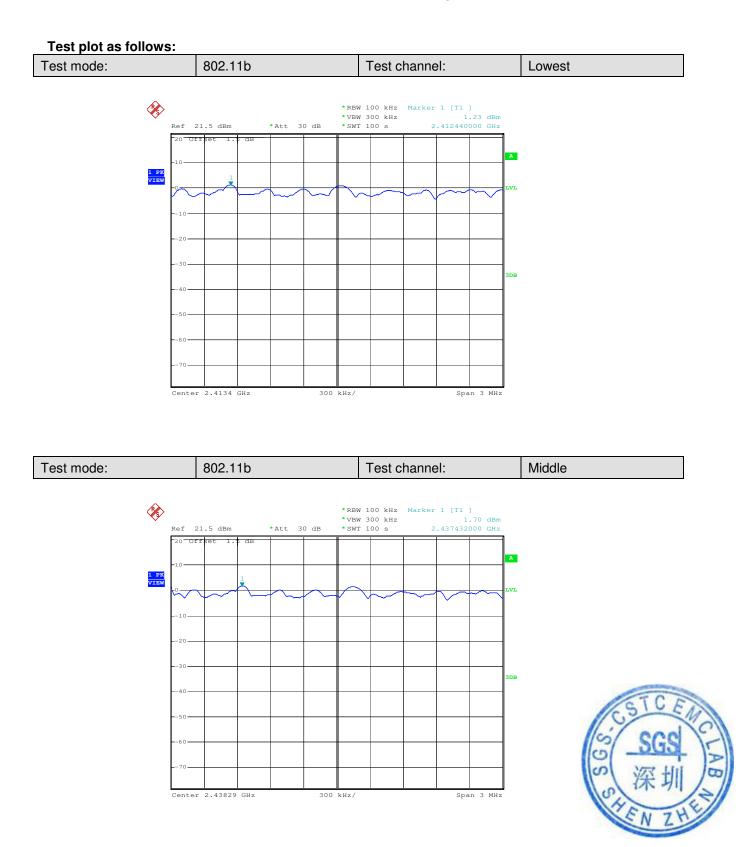
Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 2009 and KDB558074 D01
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
	Remark:
	Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Test Instruments:	Refer to section 4.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b;
	6Mbps of rate is the worst case of 802.11g ; 6Mbps of rate is the worst case
	of 802.11n (HT20); 6Mbps of rate is the worst case of 802.11n (HT40)
	Scale the observed power level to an equivalent level in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where: $BWCF = 10\log (3kHz/100 \text{ kHz} = -15.2 \text{ dB}).$
Limit:	≤8.00dBm
Test Results:	Pass

#### **Measurement Data**

	802.11b mode		
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-13.97	≤8.00	Pass
Middle	-13.50	≤8.00	Pass
Highest	-12.83	≤8.00	Pass
	802.11g mode		
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-21.51	≤8.00	Pass
Middle	-21.04	≤8.00	Pass
Highest	-20.23	≤8.00	Pass

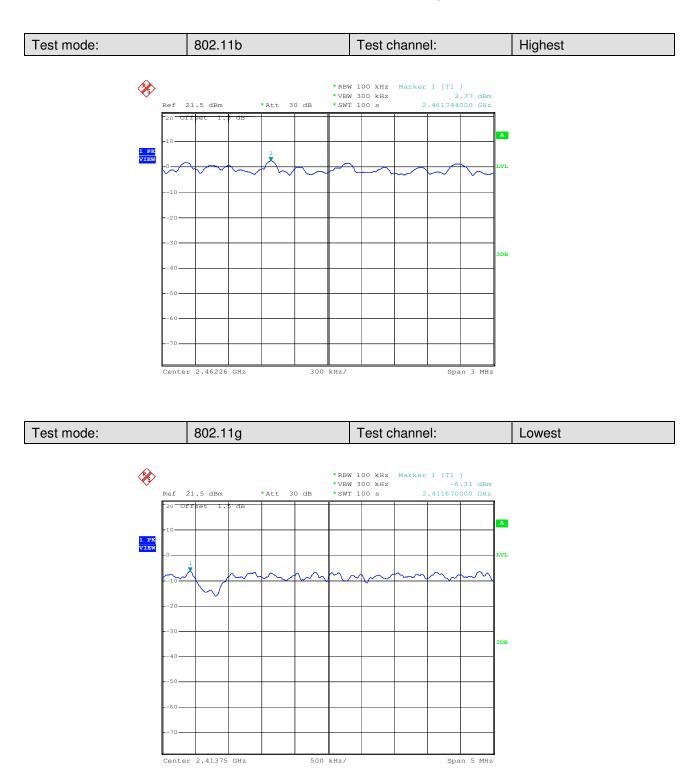


Report No.: SZEM120700424501 Page: 28 of 66



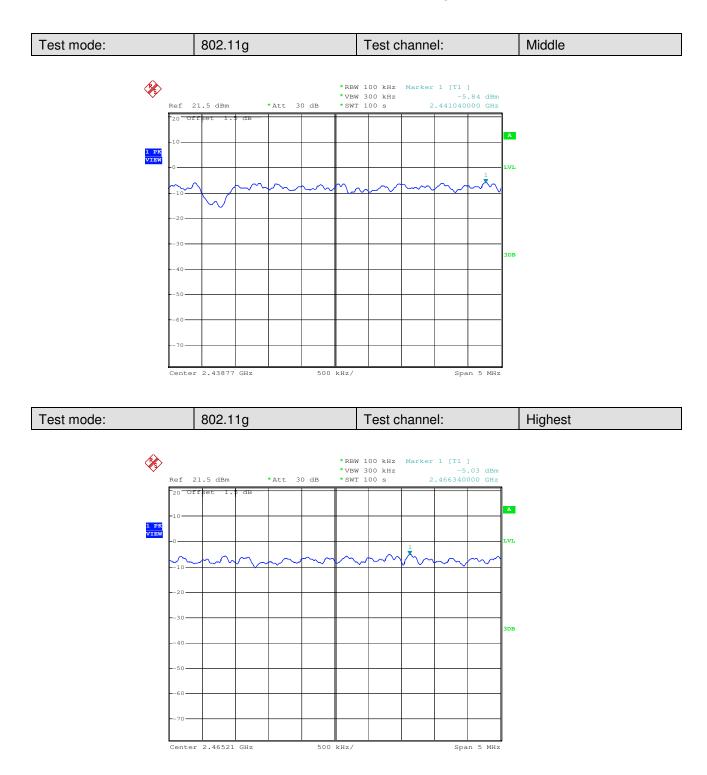


Report No.: SZEM120700424501 Page: 29 of 66





Report No.: SZEM120700424501 Page: 30 of 66



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**Test Results:** 

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Report No.: SZEM120700424501 Page: 31 of 66

#### **Test Requirement:** 47 CFR Part 15C Section 15.247 (d) Test Method: ANSI C63.10 2009 and KDB558074 D01 Test Setup: Spectrum Analyzer E.U.T G Non-Conducted Table **Ground Reference Plane** Remark: Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer. Exploratory Test Mode: Transmitting mode Final Test Mode: Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g. In any 100 kHz bandwidth outside the frequency band in which the spread Limit: spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Instruments Used: Refer to section 4.10 for details

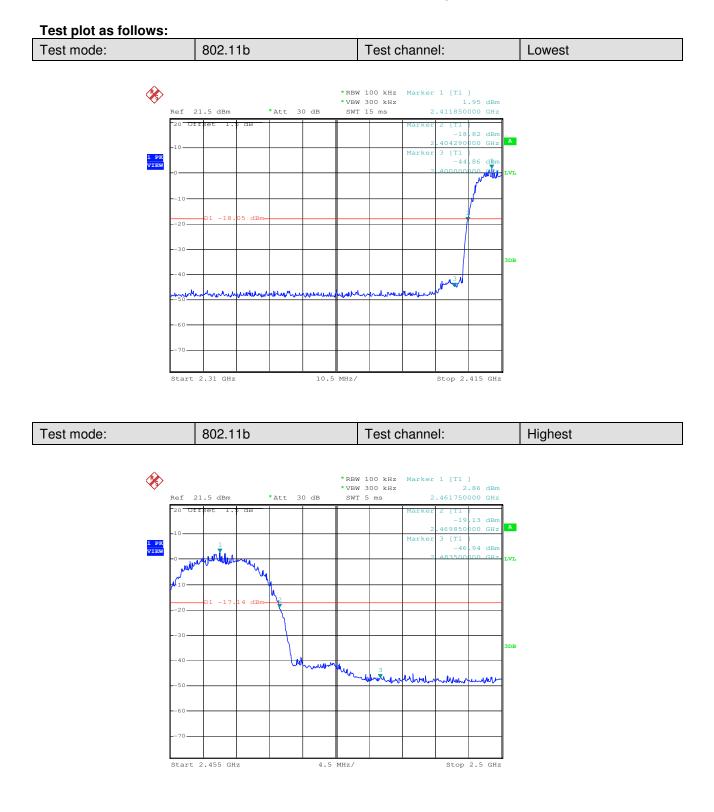
#### 5.6 Band-edge for RF Conducted Emissions

Pass

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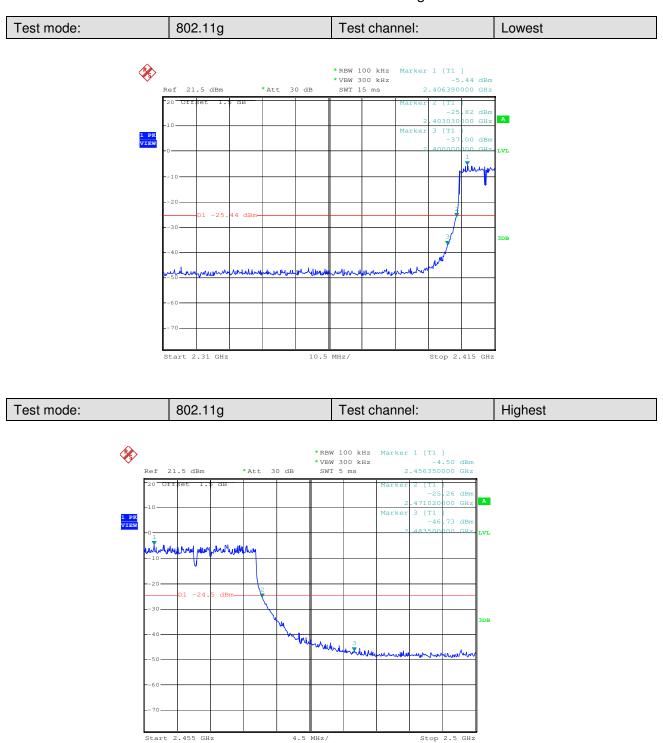


Report No.: SZEM120700424501 Page: 32 of 66





Report No.: SZEM120700424501 Page: 33 of 66





Report No.: SZEM120700424501 Page: 34 of 66

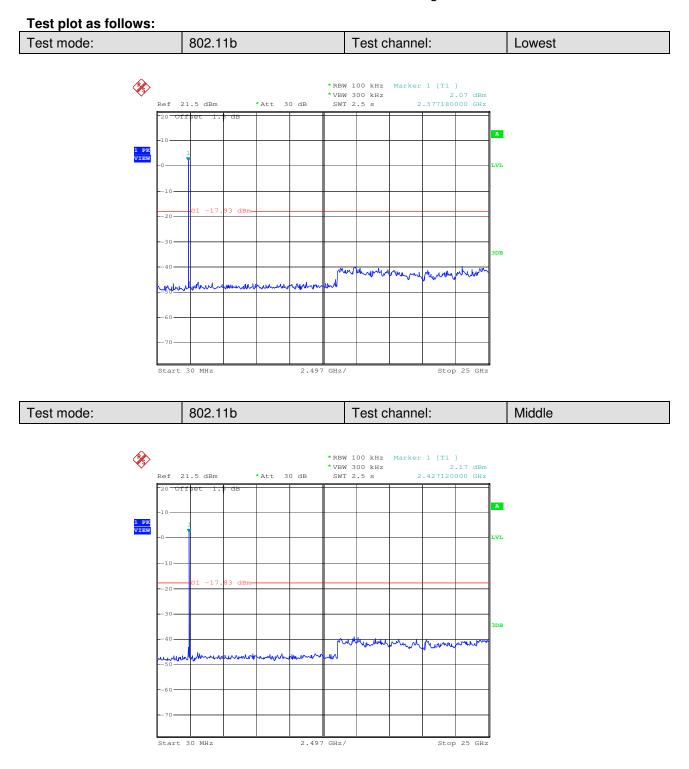
#### 5.7 RF Conducted Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2009 and KDB558074 D01
Test Setup:	Spectrum Analyzer F.U.T Non-Conducted Table Ground Reference Plane Remark: Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;
	54Mbps of rate is the worst case of 802.11g.
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

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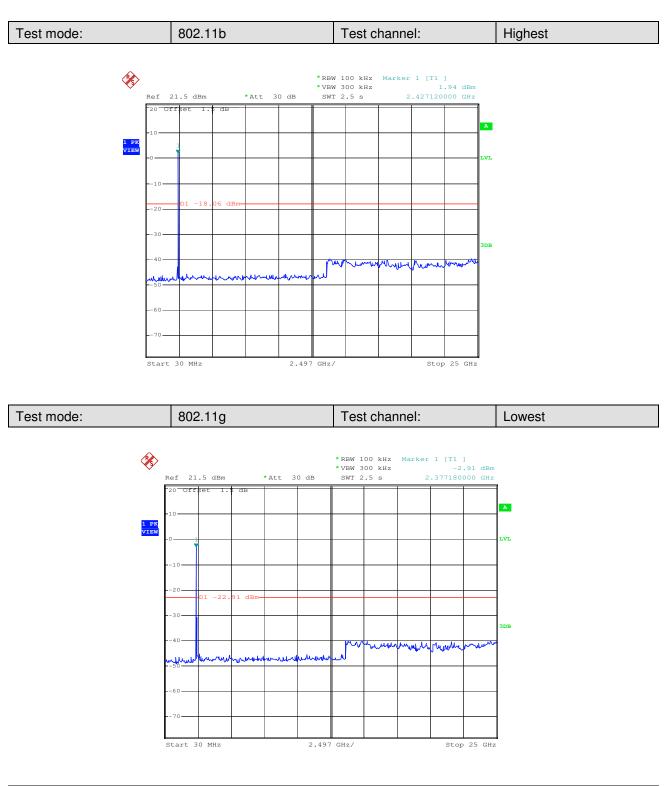
Report No.: SZEM120700424501 Page: 35 of 66



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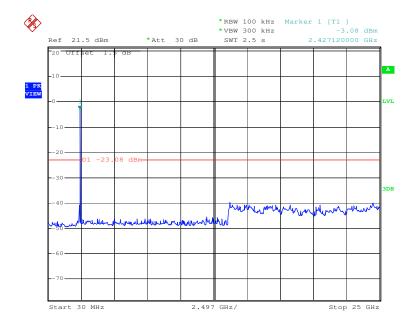
Report No.: SZEM120700424501 Page: 36 of 66

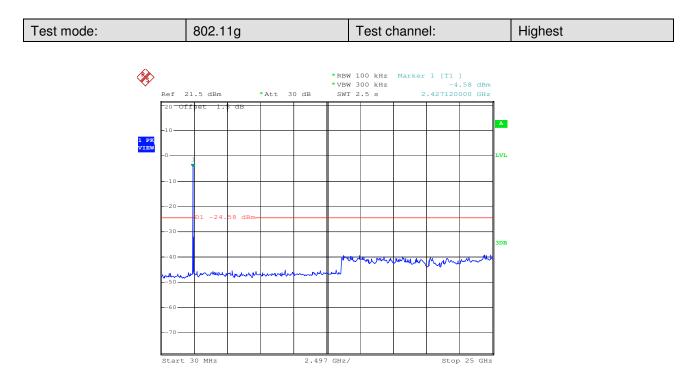


Test mode: 802.11g Test channel: Middle
---



Report No.: SZEM120700424501 Page: 37 of 66







Report No.: SZEM120700424501 Page: 38 of 66

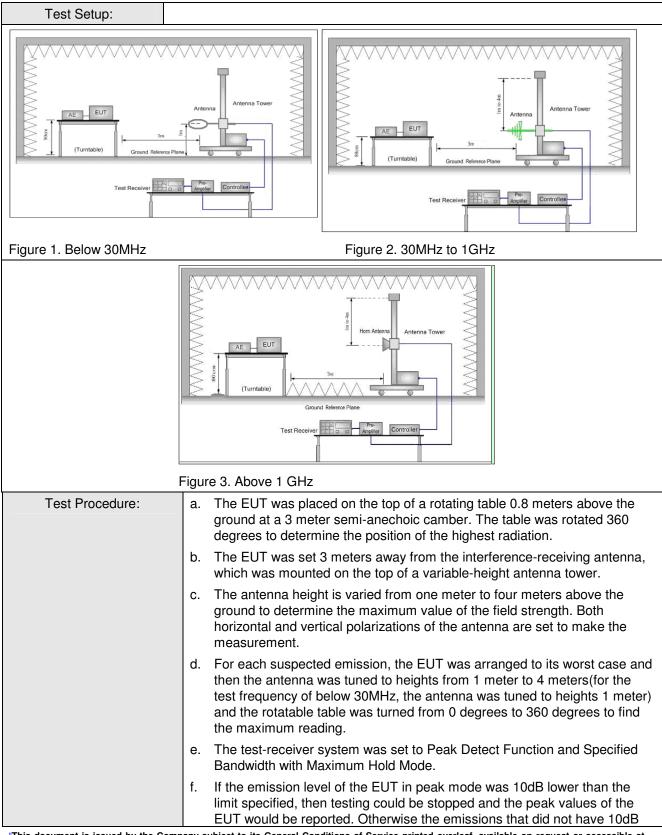
# 5.8 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Sectior	15.209 and 15.20	)5							
Test Method:	ANSI C63.10 2009 and K	DB558074 D01								
Test Site:	Measurement Distance:	3m (Semi-Anechoi	c Chamber)							
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark					
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak					
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average					
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak					
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak					
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average					
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak					
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak					
	Above 1GHz	Peak	1MHz	3MHz	Peak					
	Above IGH2	Peak	1MHz	10Hz	Average					
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)					
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300					
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30					
	1.705MHz-30MHz	30	-	-	30					
	30MHz-88MHz	100	40.0	Quasi-peak	3					
	88MHz-216MHz	150	43.5	Quasi-peak	3					
	216MHz-960MHz	200	46.0	Quasi-peak	3					
	960MHz-1GHz	500	54.0	Quasi-peak	3					
	Above 1GHz	500	54.0	Average	3					
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.									





Report No.: SZEM120700424501 Page: 39 of 66





Report No.: SZEM120700424501 Page: 40 of 66

	margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
	g. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
	h. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, Only the test worst case mode is recorded in the report.
	i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting mode, PC Charge + Transmitting mode, AC Charge + Transmitting mode, Vehicle Charge + Transmitting mode.
Test Status:	Pretest the EUT at different test mode and found the AC Charge + transmitting mode which is worst case, the test worst case mode is recorded in the report.
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

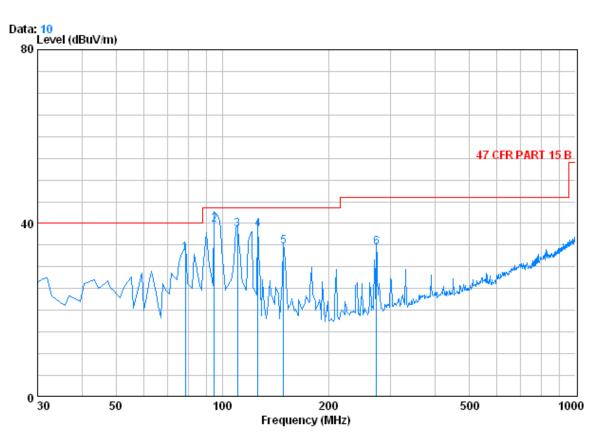
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Report No.: SZEM120700424501 Page: 41 of 66

#### 5.8.1 Radiated emission below 1GHz

30MHz~1GHz (QP)						
Test mode:	Transmitting	Vertical				



Condition : 47 CFR PART 15 B 3m 3142C VERTICAL

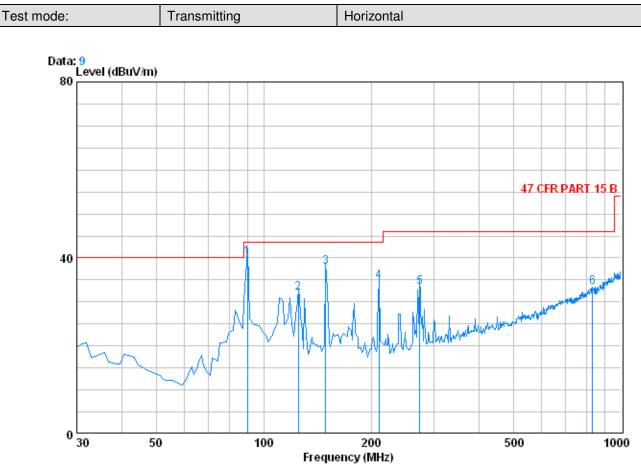
Mode : Transmitting+AC Charge

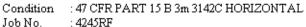
	Freq		Intenna Factor	-	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 2 3 4	110.510 126.030	1.05 1.15 1.23 1.27	7.59 8.91 8.57 7.77	27.23 27.21 27.13 27.03	55.97 56.50	33.24 39.64 38.65 38.50	43.50 43.50	-6.76 -3.86 -4.85 -5.00
5 6	149.310 273.470	1.32 1.78	8.91 12.78	26.91 26.47	51.24 46.39	34.56 34.49	43.50 46.00	-8.94 -11.51

Job No. : 4245RF



Report No.: SZEM120700424501 Page: 42 of 66





Job No. : 42 Mode : Tr

: Transmitting+AC Charge

	0	CableA	Intenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
10	90.140	1.10	8.71	27.21	57.55	40.15	43.50	-3.35
2	125.060	1.26	7.80	27.04	50.02	32.04	43.50	-11.46
3	149.310	1.32	8.91	26.91	54.66	37.97	43.50	-5.53
4	210.420	1.46	10.73	26.66	49.19	34.72	43.50	-8.78
5	273.470	1.78	12.78	26.47	45.21	33.31	46.00	-12.69
6	832.190	3.34	22.40	27.13	34.78	33.40	46.00	-12.60



Report No.: SZEM120700424501 Page: 43 of 66

Test mode:	802	.11b	Test ch	annel:	Lowest	Remark	:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4821.757	4.70	34.68	41.64	52.89	50.63	74	-23.37	Vertical
6428.771	5.24	36.20	40.55	51.65	52.54	74	-21.46	Vertical
7624.250	6.23	36.00	39.51	50.83	53.55	74	-20.45	Vertical
8725.477	6.17	36.37	38.55	49.47	53.46	74	-20.54	Vertical
10139.450	6.01	37.88	37.51	49.22	55.60	74	-18.40	Vertical
12429.540	6.58	39.33	38.46	49.93	57.38	74	-16.62	Vertical
4821.757	4.70	34.68	41.64	52.62	50.36	74	-23.64	Horizontal
6412.427	5.23	36.18	40.56	51.70	52.55	74	-21.45	Horizontal
7470.558	6.08	35.99	39.64	51.59	54.02	74	-19.98	Horizontal
9538.543	6.00	37.23	37.86	48.64	54.01	74	-19.99	Horizontal
10696.210	6.14	38.38	37.73	48.44	55.23	74	-18.77	Horizontal
11963.890	6.46	38.87	38.26	49.69	56.76	74	-17.24	Horizontal

#### 5.8.2 Transmitter emission above 1GHz

Test mode:	802	.11b	Test ch	annel:	Lowest	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4821.757	4.70	34.68	41.64	38.72	36.46	54	-17.54	Vertical
6428.771	5.24	36.20	40.55	37.91	38.80	54	-15.20	Vertical
7624.250	6.23	36.00	39.51	38.81	41.53	54	-12.47	Vertical
8725.477	6.17	36.37	38.55	36.35	40.34	54	-13.66	Vertical
10139.450	6.01	37.88	37.51	34.92	41.30	54	-12.70	Vertical
12429.540	6.58	39.33	38.46	36.13	43.58	54	-10.42	Vertical
4821.757	4.70	34.68	41.64	41.71	39.45	54	-14.55	Horizontal
6412.427	5.23	36.18	40.56	37.73	38.58	54	-15.42	Horizontal
7470.558	6.08	35.99	39.64	39.54	41.97	54	-12.03	Horizontal
9538.543	6.00	37.23	37.86	35.29	40.66	54	-13.34	Horizontal
10696.210	6.14	38.38	37.73	34.53	41.32	54	-12.68	Horizontal
11963.890	6.46	38.87	38.26	36.08	43.15	54	-10.85	Horizontal



Report No.: SZEM120700424501 Page: 44 of 66

Test mode:	802	.11b	Test ch	annel:	Middle	Remark	:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4871.103	4.72	34.59	41.68	51.00	48.63	74	-25.37	Vertical
6494.564	5.26	36.28	40.50	51.22	52.26	74	-21.74	Vertical
7800.936	6.22	36.00	39.36	50.38	53.24	74	-20.76	Vertical
9370.083	6.05	37.03	37.99	49.00	54.09	74	-19.91	Vertical
10480.590	6.09	38.28	37.65	48.07	54.79	74	-19.21	Vertical
12461.220	6.59	39.37	38.47	49.51	57.00	74	-17.00	Vertical
4871.103	4.72	34.59	41.68	52.45	50.08	74	-23.92	Horizontal
5910.798	5.09	35.56	41.01	51.42	51.06	74	-22.94	Horizontal
7319.964	5.92	35.93	39.77	52.81	54.89	74	-19.11	Horizontal
9441.913	6.03	37.14	37.94	48.65	53.88	74	-20.12	Horizontal
10453.950	6.09	38.24	37.64	48.22	54.91	74	-19.09	Horizontal
11722.720	6.40	38.62	38.16	49.27	56.13	74	-17.87	Horizontal

Test mode:	802	.11b	Test ch	annel:	Middle	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4871.103	4.72	34.59	41.68	38.91	36.54	54	-17.46	Vertical
6494.564	5.26	36.28	40.50	37.66	38.70	54	-15.30	Vertical
7800.936	6.22	36.00	39.36	38.21	41.07	54	-12.93	Vertical
9370.083	6.05	37.03	37.99	35.43	40.52	54	-13.48	Vertical
10480.590	6.09	38.28	37.65	34.95	41.67	54	-12.33	Vertical
12461.220	6.59	39.37	38.47	35.00	42.49	54	-11.51	Vertical
4871.103	4.72	34.59	41.68	41.56	39.19	54	-14.81	Horizontal
5910.798	5.09	35.56	41.01	37.73	37.37	54	-16.63	Horizontal
7319.964	5.92	35.93	39.77	39.97	42.05	54	-11.95	Horizontal
9441.913	6.03	37.14	37.94	35.08	40.31	54	-13.69	Horizontal
10453.950	6.09	38.24	37.64	34.88	41.57	54	-12.43	Horizontal
11722.720	6.40	38.62	38.16	35.18	42.04	54	-11.96	Horizontal



Report No.: SZEM120700424501 Page: 45 of 66

Test mode:	802	.11b	Test ch	annel:	Highest	Remark	:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4547.561	4.53	35.12	41.44	50.89	49.10	74	-24.90	Vertical
6561.030	5.27	36.25	40.43	50.39	51.48	74	-22.52	Vertical
7470.558	6.08	35.99	39.64	49.85	52.28	74	-21.72	Vertical
9465.979	6.02	37.16	37.91	47.94	53.21	74	-20.79	Vertical
10480.590	6.09	38.28	37.65	47.82	54.54	74	-19.46	Vertical
11933.470	6.45	38.83	38.24	49.10	56.14	74	-17.86	Vertical
4536.000	4.52	35.14	41.43	51.21	49.44	74	-24.56	Horizontal
6544.350	5.27	36.27	40.45	51.23	52.32	74	-21.68	Horizontal
7394.878	6.00	35.96	39.71	51.04	53.29	74	-20.71	Horizontal
8441.459	6.18	36.18	38.80	49.64	53.20	74	-20.80	Horizontal
10139.450	6.01	37.88	37.51	48.63	55.01	74	-18.99	Horizontal
11963.890	6.46	38.87	38.26	49.37	56.44	74	-17.56	Horizontal

Test mode:	802	.11b	Test ch	annel:	Highest	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4547.561	4.53	35.12	41.44	38.13	36.34	54	-17.66	Vertical
6561.030	5.27	36.25	40.43	37.42	38.51	54	-15.49	Vertical
7470.558	6.08	35.99	39.64	38.06	40.49	54	-13.51	Vertical
9465.979	6.02	37.16	37.91	35.03	40.30	54	-13.70	Vertical
10480.590	6.09	38.28	37.65	34.86	41.58	54	-12.42	Vertical
11933.470	6.45	38.83	38.24	35.92	42.96	54	-11.04	Vertical
4536.000	4.52	35.14	41.43	40.27	38.50	54	-15.50	Horizontal
6544.350	5.27	36.27	40.45	37.67	38.76	54	-15.24	Horizontal
7394.878	6.00	35.96	39.71	38.15	40.40	54	-13.60	Horizontal
8441.459	6.18	36.18	38.80	36.21	39.77	54	-14.23	Horizontal
10139.450	6.01	37.88	37.51	34.61	40.99	54	-13.01	Horizontal
11963.890	6.46	38.87	38.26	36.04	43.11	54	-10.89	Horizontal



Report No.: SZEM120700424501 Page: 46 of 66

Test mode:	802	.11g	Test ch	annel:	Lowest	Remark	:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4490.048	4.48	35.15	41.40	49.91	48.14	74	-25.86	Vertical
5865.832	5.08	35.48	41.04	51.18	50.70	74	-23.30	Vertical
7470.558	6.08	35.99	39.64	50.51	52.94	74	-21.06	Vertical
9346.262	6.06	37.01	38.03	48.39	53.43	74	-20.57	Vertical
11027.980	6.23	38.49	37.88	47.89	54.73	74	-19.27	Vertical
11963.890	6.46	38.87	38.26	49.55	56.62	74	-17.38	Vertical
4547.561	4.53	35.12	41.44	50.86	49.07	74	-24.93	Horizontal
5732.974	5.03	35.26	41.15	50.68	49.82	74	-24.18	Horizontal
7547.013	6.17	36.00	39.57	50.27	52.87	74	-21.13	Horizontal
9465.979	6.02	37.16	37.91	48.50	53.77	74	-20.23	Horizontal
11027.980	6.23	38.49	37.88	48.47	55.31	74	-18.69	Horizontal
12055.600	6.48	38.95	38.30	49.01	56.14	74	-17.86	Horizontal

Test mode:	802	.11g	Test ch	annel:	Lowest	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4490.048	4.48	35.15	41.40	37.23	35.46	54	-18.54	Vertical
5865.832	5.08	35.48	41.04	36.71	36.23	54	-17.77	Vertical
7470.558	6.08	35.99	39.64	38.17	40.60	54	-13.40	Vertical
9346.262	6.06	37.01	38.03	35.34	40.38	54	-13.62	Vertical
11027.980	6.23	38.49	37.88	34.94	41.78	54	-12.22	Vertical
11963.890	6.46	38.87	38.26	35.84	42.91	54	-11.09	Vertical
4547.561	4.53	35.12	41.44	38.88	37.09	54	-16.91	Horizontal
5732.974	5.03	35.26	41.15	37.13	36.27	54	-17.73	Horizontal
7547.013	6.17	36.00	39.57	37.83	40.43	54	-13.57	Horizontal
9465.979	6.02	37.16	37.91	34.39	39.66	54	-14.34	Horizontal
11027.980	6.23	38.49	37.88	34.25	41.09	54	-12.91	Horizontal
12055.600	6.48	38.95	38.30	35.56	42.69	54	-11.31	Horizontal



Report No.: SZEM120700424501 Page: 47 of 66

Test mode:	802	.11g	Test ch	annel:	Middle	Remark	:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4871.103	4.72	34.59	41.68	50.33	47.96	74	-26.04	Vertical
7319.964	5.92	35.93	39.77	55.29	57.37	74	-16.63	Vertical
8022.456	6.20	36.01	39.16	49.30	52.35	74	-21.65	Vertical
9935.053	5.98	37.65	37.52	46.86	52.97	74	-21.03	Vertical
11027.980	6.23	38.49	37.88	46.99	53.83	74	-20.17	Vertical
12055.600	6.48	38.95	38.30	47.94	55.07	74	-18.93	Vertical
4871.103	4.72	34.59	41.68	51.98	49.61	74	-24.39	Horizontal
5910.798	5.09	35.56	41.01	50.30	49.94	74	-24.06	Horizontal
7319.964	5.92	35.93	39.77	58.87	60.95	74	-13.05	Horizontal
9562.854	6.00	37.27	37.83	47.20	52.64	74	-21.36	Horizontal
11341.140	6.30	38.43	38.00	47.24	53.97	74	-20.03	Horizontal
12334.980	6.55	39.24	38.42	48.43	55.80	74	-18.20	Horizontal

Test mode:	802	2.11g	Test ch	annel:	Middle	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4871.103	4.72	34.59	41.68	37.91	35.54	54	-18.46	Vertical
7319.964	5.92	35.93	39.77	40.31	42.39	54	-11.61	Vertical
8022.456	6.20	36.01	39.16	37.51	40.56	54	-13.44	Vertical
9935.053	5.98	37.65	37.52	34.99	41.10	54	-12.90	Vertical
11027.980	6.23	38.49	37.88	35.54	42.38	54	-11.62	Vertical
12055.600	6.48	38.95	38.30	36.53	43.66	54	-10.34	Vertical
4871.103	4.72	34.59	41.68	37.66	35.29	54	-18.71	Horizontal
5910.798	5.09	35.56	41.01	36.78	36.42	54	-17.58	Horizontal
7319.964	5.92	35.93	39.77	41.11	43.19	54	-10.81	Horizontal
9562.854	6.00	37.27	37.83	34.06	39.50	54	-14.50	Horizontal
11341.140	6.30	38.43	38.00	33.85	40.58	54	-13.42	Horizontal
12334.980	6.55	39.24	38.42	34.92	42.29	54	-11.71	Horizontal



Report No.: SZEM120700424501 Page: 48 of 66

Test mode:	e: 802.11g Test channel: Highest Remark:				Peak			
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4920.955	4.74	34.51	41.71	52.34	49.88	74	-24.12	Vertical
6283.164	5.20	36.04	40.68	49.90	50.46	74	-23.54	Vertical
7394.878	6.00	35.96	39.71	60.09	62.34	74	-11.66	Vertical
9370.083	6.05	37.03	37.99	47.30	52.39	74	-21.61	Vertical
10453.950	3.950 6.09 38.		37.64	47.24	53.93	74	-20.07	Vertical
11486.410	0 6.34 38.40 38.06 48.96 55.64 74		74	-18.36	Vertical			
4920.955	4.74	34.51	41.71	51.25	48.79	74	-25.21	Horizontal
6494.564	5.26	36.28	40.50	50.13	51.17	74	-22.83	Horizontal
7394.878	6.00	35.96	39.71	58.38	60.63	74	-13.37	Horizontal
9157.857	6.11	36.79	38.19	47.63	52.34	74	-21.66	Horizontal
10453.950	6.09	38.24 37.64		46.89	53.58	74	-20.42	Horizontal
11963.890	6.46	38.87	38.26	47.35	54.42	64.42 74		Horizontal
Test mode:	802	.11g	Test ch	annel:	Highest	Remark	:	Average
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Polarization
4920.955	4.74	34.51	41.71	39.48	37.02	54	-16.98	Vertical
6283.164	5.20	36.04	40.68	36.75	37.31	54	-16.69	Vertical
7394.878	6.00	35.96	39.71	42.43	44.68	54	-9.32	Vertical
9370.083	6.05	37.03	37.99	34.27	39.36	54	-14.64	Vertical
10453.950	6.09	38.24	37.64	33.80	40.49	54	-13.51	Vertical
11486.410	6.34	38.40	38.06	34.32	41.00	54	-13.00	Vertical
4920.955	4.74	34.51	41.71	38.01	35.55	54	-18.45	Horizontal
6494.564	5.26	36.28	40.50	36.84	37.88	54	-16.12	Horizontal
7394.878	6.00	35.96	39.71	42.45	44.70	54	-9.30	Horizontal
9157.857			54	-15.31	Horizontal			
10453.950	6.09	38.24	37.64	33.86	40.55	54	-13.45	Horizontal
11963.890	63.890         6.46         38.87         38.26         34.89         41.96         54		-12.04	Horizontal				

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier The equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were highest point could be found when testing, so only the above harmonics had been displayed.



Report No.: SZEM120700424501 Page: 49 of 66

# 5.9 Band Edge (Radiated Emission)

Test Requirement:	Test Requirement:47 CFR Part 15C Section 15.209 and 15.205							
Test Method:	ANSI C63.10 2009 and KDB	8558074 D01						
Test Site:	Measurement Distance: 3m	(Semi-Anechoic Chamber	<i>·</i> )					
Limit:	Frequency	Limit (dBuV/m @3m)	Remark					
	30MHz-88MHz	40.0	Quasi-peak Value					
	88MHz-216MHz	43.5	Quasi-peak Value					
	216MHz-960MHz	46.0	Quasi-peak Value					
	960MHz-1GHz	54.0	Quasi-peak Value					
	Above 1GHz	54.0	Average Value					
	Above runz	74.0	Peak Value					
Test Setup:								
AE EUT Ground Reference Pla Test Receiver	Anplier Controlles	AE EUT (Turntable) Ground Reference Pic Test Receiver	Ampiler Controller					
Figure 1. 30MHz	to 1GHz	Figure 2. Above	e 1 GHz					



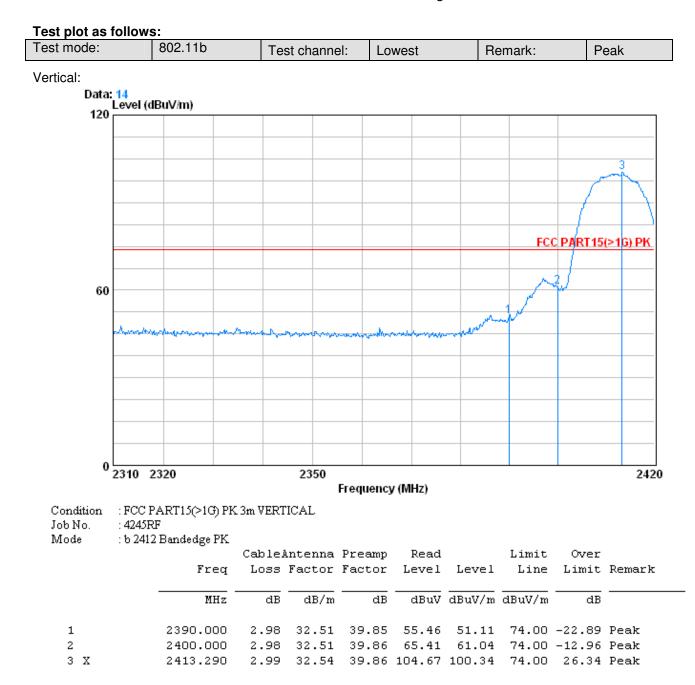
Report No.: SZEM120700424501 Page: 50 of 66

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 camber. The table was rotated 360 degrees to determine the position of the highest radiation.b.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.d.For each suspected emission, the EUT was arranged to its worst case and the notatable table was turned from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f.Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelh.The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i.Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for detailsTest Results:Pass		
antenna, which was mounted on the top of a variable-height antenna tower.         c.       The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.         d.       For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.         e.       The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.         f.       Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel         g.       Test the EUT in the lowest channel , the Highest channel         g.       Test the EUT in the lowest channel is worse case, only the test worst case mode is recorded in the report.         i.       Repeat above procedures until all frequencies measured was complete.         Exploratory Test Mode:       Transmitting mode         Final Test Mode:       Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.         Instruments Used:       Refer to section 4.10 for details	Test Procedure:	the ground at a 3 meter semi-anechoic camber. The table was rotated
ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f.Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelg.Test the EUT in the lowest channel , the Highest channelh.The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i.Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Transmitting modeFinal Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for details		antenna, which was mounted on the top of a variable-height antenna
and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelg. Test the EUT in the lowest channel , the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i. Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for details		ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the
Specified Bandwidth with Maximum Hold Mode.f.Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelg.Test the EUT in the lowest channel , the Highest channelh.The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i.Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Transmitting modeFinal Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for details		and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to
frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelg. Test the EUT in the lowest channel , the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning. 		
h.The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i.Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Transmitting modeFinal Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for details		frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each
And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.i. Repeat above procedures until all frequencies measured was complete.Exploratory Test Mode:Transmitting modeFinal Test Mode:Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.Instruments Used:Refer to section 4.10 for details		g. Test the EUT in the lowest channel , the Highest channel
complete.         Exploratory Test Mode:       Transmitting mode         Final Test Mode:       Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;         54Mbps of rate is the worst case of 802.11g.       Refer to section 4.10 for details		And found the X axis positioning which it is worse case, only the test
Final Test Mode:       Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;         54Mbps of rate is the worst case of 802.11g.         Instruments Used:       Refer to section 4.10 for details		
54Mbps of rate is the worst case of 802.11g.         Instruments Used:       Refer to section 4.10 for details	Exploratory Test Mode:	Transmitting mode
Instruments Used: Refer to section 4.10 for details	Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b;
		54Mbps of rate is the worst case of 802.11g.
Test Results: Pass	Instruments Used:	Refer to section 4.10 for details
	Test Results:	Pass

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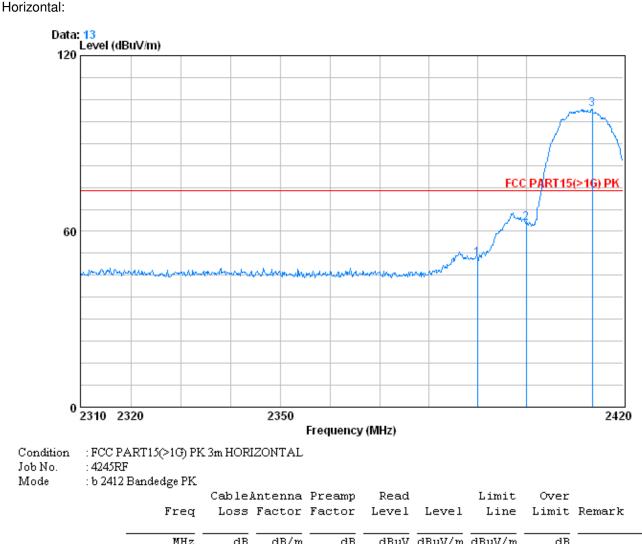


Report No.: SZEM120700424501 Page: 51 of 66





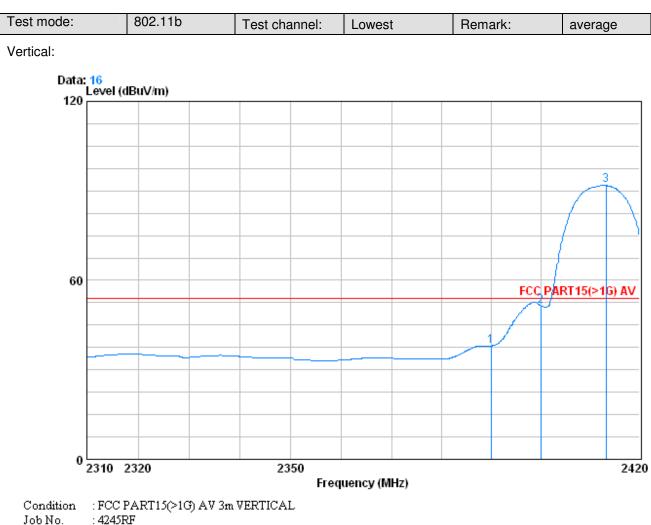
Report No.: SZEM120700424501 Page: 52 of 66



		1111 2	ub	ab/m	ub	ubuv	ubuv/m	ubuv/m	ub	
1	23	90.000	2.98	32.51	39.85	55.01	50.65	74.00	-23.35	Peak
2	24	00.000	2.98	32.51	39.86	67.01	62.64	74.00	-11.36	Peak
3 Х	K 24	13.620	2.99	32.54	39.86	106.16	101.83	74.00	27.83	Peak



Report No.: SZEM120700424501 Page: 53 of 66

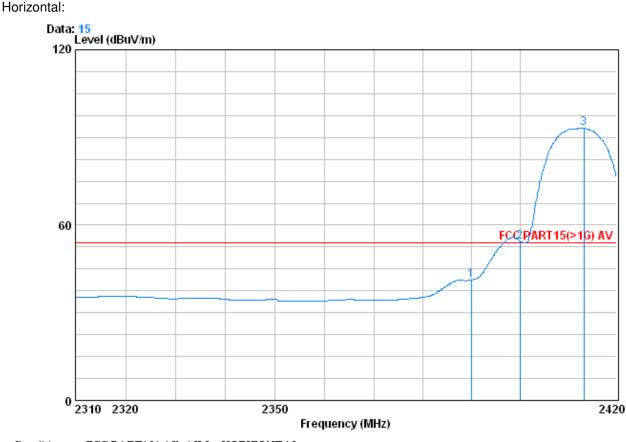


Mode : b 2412 Bandedge AV

	. 0 1411 Danoogo 111	Cablei	Intenna	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 2 3 0	2390.000 2400.000 2413.180	2.98	32.51	39.86	55.76	51.39	54.00	-2.61	Average Average Average



Report No.: SZEM120700424501 Page: 54 of 66



Condition : FCC PART15(>1G) AV 3m HORIZONTAL Job No. : 4245RF

Mode : b 2412 Bandedge AV

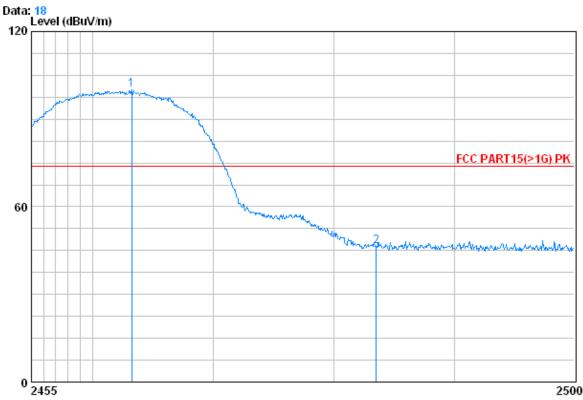
	Freq			Preamp Factor			Limit Line	Over Limit	Remark
	MHz	dB		dB	dBuV	dBuV/m	dBuV/m	dB	
1 2 X 3 Q	2390.000 2400.000 2413.180	2.98	32.51	39.86	58.78	54.41	54.00	0.41	Average Average Average



Report No.: SZEM120700424501 Page: 55 of 66

rest mode.   doz. 115   rest channel:   Highest   Remark:   Peak	Test mode:	802.11b	Test channel:	Highest	Remark:	Peak
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Frequency (MHz)

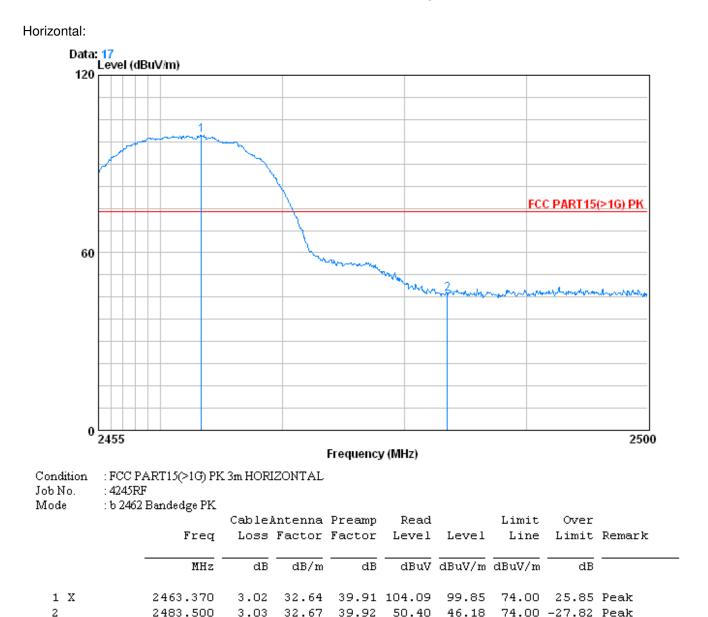
: FCC PART15(>1G) PK 3m VERTICAL Condition

Job No. : 4245RF

Mode		Bandedge PK									
			Cablei	Antenna	Preamp	Read		Limit	Over		
		Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 2	x	2463.235	3.02	32.64	39.91	104.36	100.11	74.00	26.11	Peak	
2		2483.500	3.03	32.67	39.92	50.55	46.33	74.00	-27.67	Peak	

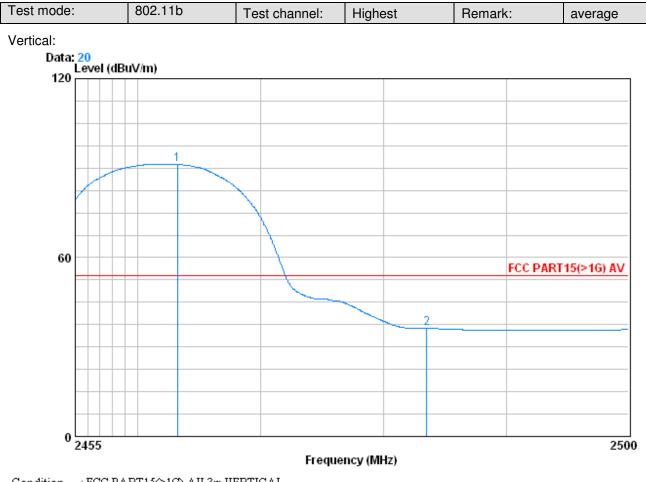


Report No.: SZEM120700424501 Page: 56 of 66





Report No.: SZEM120700424501 Page: 57 of 66



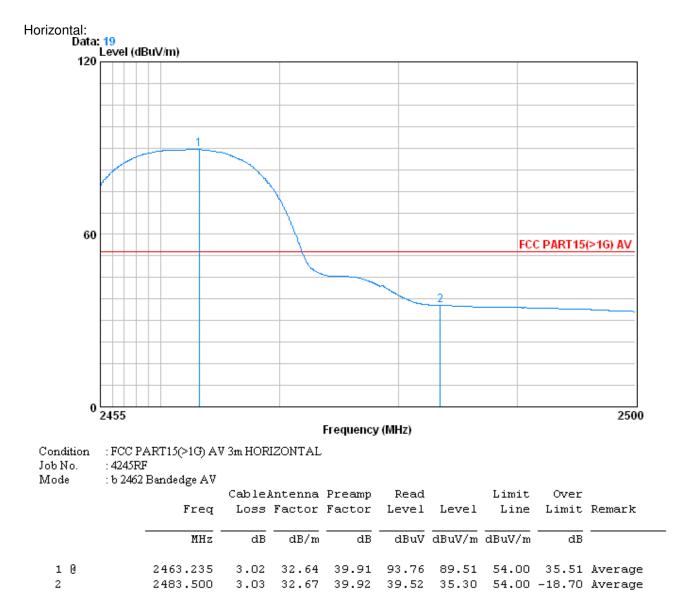
Condition : FCC PART15(>1G) AV 3m VERTICAL Job No. : 4245RF

Mode : b 2462 Bandedge AV

	Freq			Preamp Factor			Limit Line		Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
10 2									Average Average



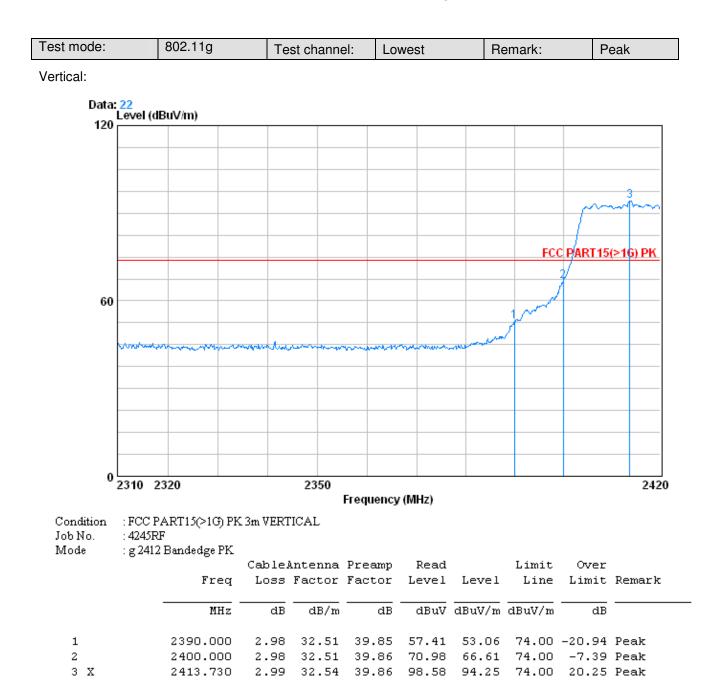
Report No.: SZEM120700424501 Page: 58 of 66





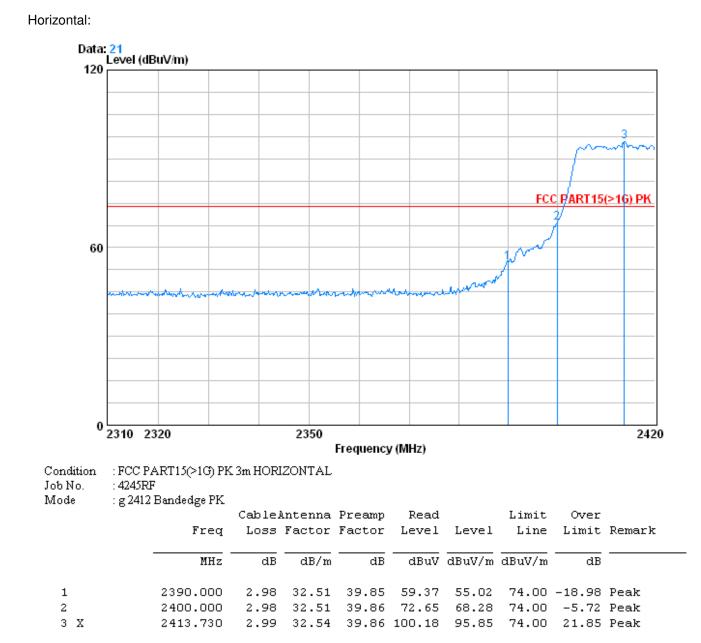


Report No.: SZEM120700424501 Page: 59 of 66



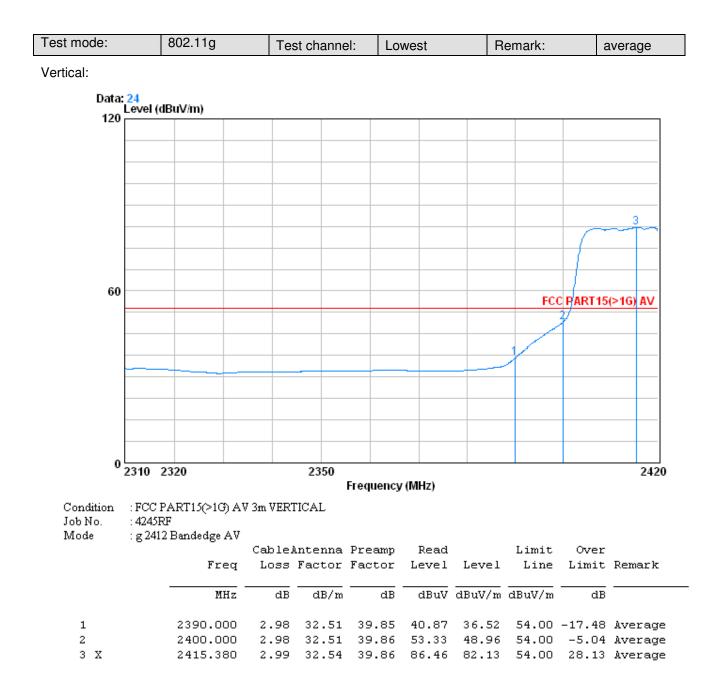


Report No.: SZEM120700424501 Page: 60 of 66



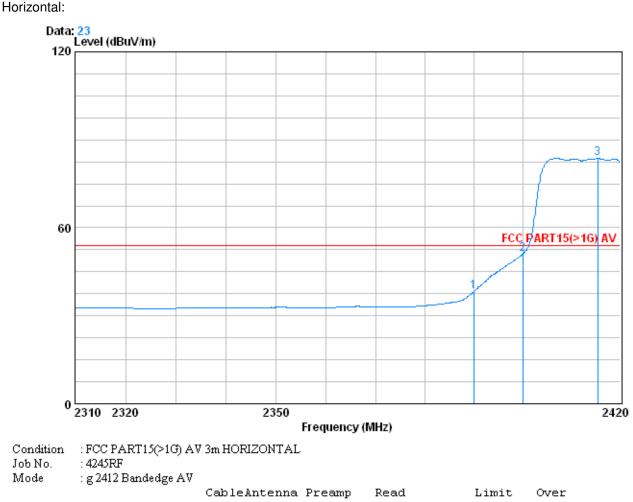


Report No.: SZEM120700424501 Page: 61 of 66





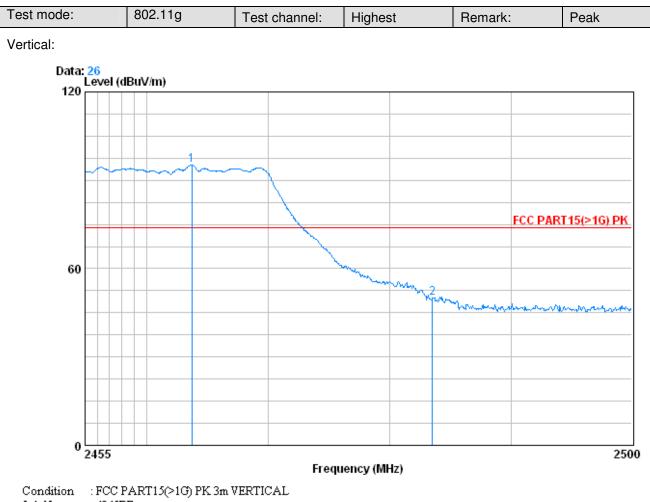
Report No.: SZEM120700424501 Page: 62 of 66



	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 2	2390.000 2400.000								Average Average
30	2415.380	2.99	32.54	39.86	87.95	83.62	54.00	29.62	Average



Report No.: SZEM120700424501 Page: 63 of 66

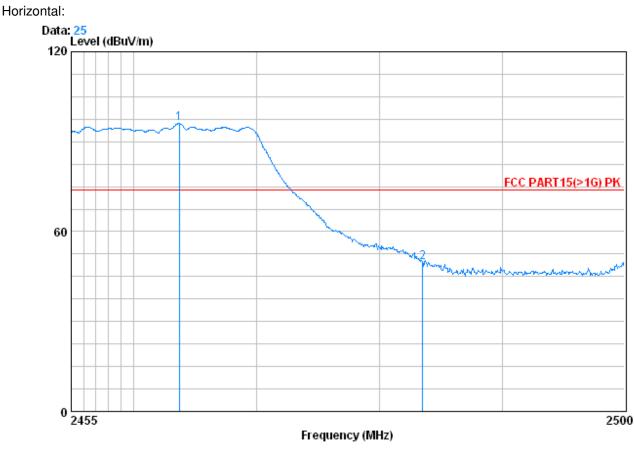


#### Job No. : 4245RF Mode : g 2462 Bandedge PK

IVIode	: g 2402 Bandedge PK.									
		Cable	Intenna	Preamp	Read		Limit	Over		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 X	2463.730	3.02	32.64	39.91	99.39	95.14	74.00	21.14	Peak	
2	2483.500	3.03	32.67	39.92	54.18	49.96	74.00	-24.04	Peak	



Report No.: SZEM120700424501 Page: 64 of 66



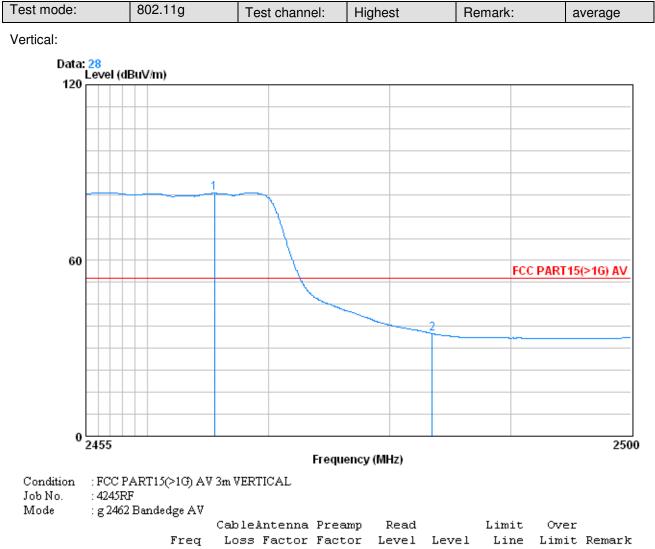
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Condition : FCC PART15(>1G) PK 3m HORIZONTAL
Job No. : 4245RF
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Mode : (	g 2462 Bandedge PK
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0	Euron			-	Read				Demonia
	Freq		Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 X	2463.730	3.02	32.64	39.91	100.29	96.05	74.00	22.05	Peak
2	2483.500	3.03	32.67	39.92	53.85	49.63	74.00	-24.37	Peak



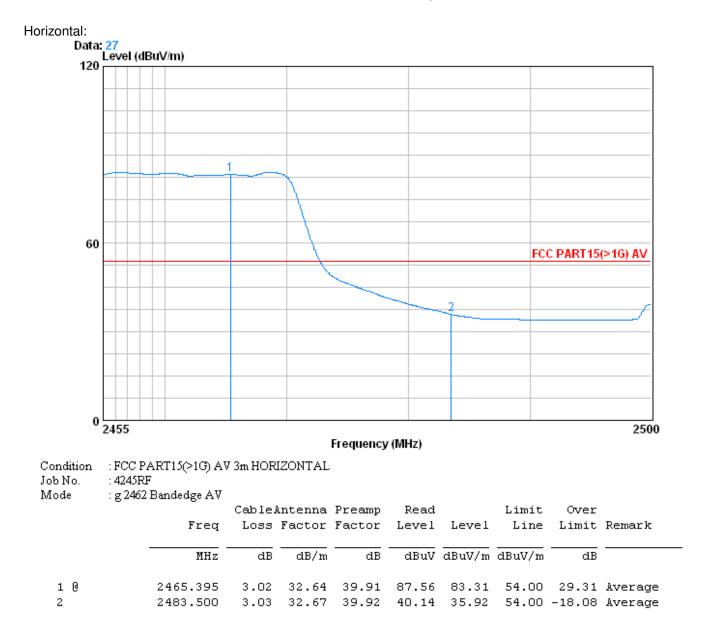
Report No.: SZEM120700424501 Page: 65 of 66



		CODICI	moenna	rrcomp	I.C.G.G.		DIMITO	O.CT	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
10	2465.530	3.02	32.64	39.91	87.16	82.91	54.00	28.91	Average
2	2483.500	3.03	32.67	39.92	39.28	35.06	54.00	-18.94	Average



Report No.: SZEM120700424501 Page: 66 of 66



Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor