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Report No.: SZEM120800437601 Page: 1 of 66

FCC REPORT

Application No:	SZEM1208004376RF
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 720B
Add Model No.:	RVND 7720B, RVND 7715B
FCC ID:	A4C-10001C
Standards:	47 CFR Part 15, Subpart C (2011)
Date of Receipt:	2012-08-03
Date of Test:	2012-08-09 to 2012-08-25
Date of Issue:	2012-09-05
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.: SZEM120800437601 Page: 2 of 66

2 Test Summary

Test Item	Test Requirement	Test method	Result	
Antonno Doguizoment	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACO	
Antenna Requirement	15.203/15.247 (c)	ANSI C63.10 2009	PASS	
AC Power Line	17 OED Dart 15, Outpart O Castian			
Conducted	47 CFR Part 15, Subpart C Section	ANSI C63.10 2009	PASS	
Emission	15.207			
Conducted Peak Output	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Power	15.247 (b)(3)	ANSI C63.10 2009	PA22	
6dB Occupied	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Bandwidth	15.247 (a)(2)	ANSI C63.10 2009	radd	
Power Spectral Depaity	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Power Spectral Density	15.247 (e)	ANSI C63.10 2009	PA55	
Band-edge for RF	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Conducted Emissions	15.247(d)	ANSI C63.10 2009	FA00	
RF Conducted Spurious	47 CFR Part 15, Subpart C Section	KDB558074 D01		
Emissions	15.247(d)	ANSI C63.10 2009	PASS	
Radiated Spurious	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Emissions	15.205/15.209	ANSI C63.10 2009	PASS	
Band Edge (Radiated	47 CFR Part 15, Subpart C Section	KDB558074 D01	DACC	
Emission)	15.205/15.209 ANSI C63.10 200		LA22	

Remark:

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

Only the model TND 720B 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.: SZEM120800437601 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	7
	4.7	DEVIATION FROM STANDARDS	7
	4.8	ABNORMALITIES FROM STANDARD CONDITIONS	
	4.9	UTHER INFORMATION REQUESTED BY THE CUSTOMER	7
	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	KADIATED SPURIOUS EMISSIONS	
	5.8.	I Hadiated emission below 1GHZ	
	5.8.2	2 ITANSITIILEI EITIISSIOTI ADOVE IGHZ	
	0.9	DANU EUGE (NAVIATEU EMISSIUN)	



Report No.: SZEM120800437601 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	GPS		
Model No.:	TND 720B, RVND 7720B, RVND 7715B			
Operation Frequency:	IEEE 802.11b/g: 24	12MHz 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 productior	1		
Test Power Grade:	15dBm (manufactu	rer declare)		
Test Software of EUT:	Labtool (manufactu	irer 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:	AC120V 60Hz			



Report No.: SZEM120800437601 Page: 5 of 66

Operation F	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.: SZEM120800437601 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.: SZEM120800437601 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.: SZEM120800437601 Page: 8 of 66

4.10 Test Instruments List

RE i	RE in Chamber						
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		

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Report No.: SZEM120800437601 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						
ltem	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		



Report No.: SZEM120800437601 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.: SZEM120800437601 Page: 11 of 66

Test Requirement:	47 CFR Part 15C Section 15.2	207		
Test Method:	ANSI C63.10: 2009			
Test Frequency Range:	150kHz to 30MHz			
Limit:		Limit (d	lBuV)	
	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	
	* Decreases with the logarithm	of the frequency.		I
Test Procedure:	 The mains terminal distur room. The EUT was connected to Impedance Stabilization Ne impedance. The power cal connected to a second LIS plane in the same way as t multiple socket outlet strip single LISN provided the ra The tabletop EUT was place ground reference plane. Ar placed on the horizontal gr The test was performed wit of the EUT shall be 0.4 m f vertical ground reference p reference plane. The LISN unit under test and bonded mounted on top of the grou between the closest points the EUT and associated ec In order to find the maximu equipment and all of the in ANSI C63.10: 2009 on con 	bance voltage test wa bance voltage test wa bance voltage test wa be AC power source thro etwork) which provides oles of all other units of N 2, which was bonded he LISN 1 for the unit b was used to connect m ating of the LISN was n ating of the LISN was n bound reference plane, th a vertical ground reference lane was bonded to the 1 was placed 0.8 m fro to a ground reference and reference plane. The of the LISN 1 and the puipment was at least 0 m emission, the relativite terface cables must be ducted measurement.	s conducted in a shough a LISN 1 (Line a $50\Omega/50\mu$ H + 5Ω lint the EUT were d to the ground reference being measured. A nultiple power cables ot exceeded. table 0.8m above the rangement, the EUT erence plane. The re d reference plane. The re d reference plane. The horizontal ground om the boundary of the plane for LISNs his distance was EUT. All other units of 0.8 m from the LISN 2 re positions of changed according	iielded iear ence to a ie was ar ie ne of 2.

5.2 Conducted Emissions

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Report No.: SZEM120800437601 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.: SZEM120800437601 Page: 13 of 66

Live Line:





Report No.: SZEM120800437601 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.: SZEM120800437601 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		
	Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.		
Test Instruments:	Refer to section 4.10 for details		
Exploratory Test 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	all rate at	lowest cha	annel 1					
Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps			\sim	
Power (dBm)	14.98	14.30	15.44	18.02				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power (dBm)	14.55	14.67	14.88	15.09	15.15	15.22	15.33	15.43

Through Pre-scan, 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g.



Report No.: SZEM120800437601 Page: 16 of 66

Measurement Data					
	802.11b mo	de			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result		
Lowest	14.98	30.00	Pass		
Middle	12.38	30.00	Pass		
Highest	15.15	30.00	Pass		
802.11g mode					
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result		
Lowest	15.43	30.00	Pass		
Middle	16.02	30.00	Pass		
Highest	16.44	30.00	Pass		



Report No.: SZEM120800437601 Page: 17 of 66





Report No.: SZEM120800437601 Page: 18 of 66



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Report No.: SZEM120800437601 Page: 19 of 66





Report No.: SZEM120800437601 Page: 20 of 66





Report No.: SZEM120800437601 Page: 21 of 66





Report No.: SZEM120800437601 Page: 22 of 66



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Report No.: SZEM120800437601 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	9.66	≥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	16.62	≥500	Pass		
Highest	16.68 ≥500 F		Pass		



Report No.: SZEM120800437601 Page: 24 of 66





Report No.: SZEM120800437601 Page: 25 of 66





Report No.: SZEM120800437601 Page: 26 of 66





Report No.: SZEM120800437601 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	-14.17	≤8.00	Pass		
Middle	-14.03	≤8.00	Pass		
Highest	-14.23	≤8.00	Pass		
802.11g mode					
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result		
Lowest	-13.80	≤8.00	Pass		
Middle	-14.42	≤8.00	Pass		
Highest	-14.26 ≤8.00 P		Pass		



Report No.: SZEM120800437601 Page: 28 of 66







Report No.: SZEM120800437601 Page: 29 of 66





Report No.: SZEM120800437601 Page: 30 of 66



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Report No.: SZEM120800437601 Page: 31 of 66

5.6 Band-edge for RF Conducted Emissions

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 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		
	100 kHz bandwidth within the band that contains the highest level of the		
	desired power, based on either an BE conducted or a radiated		
	measurement.		
Instruments Used:	Refer to section 4.10 for details		
Test Results:	Pass		

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Report No.: SZEM120800437601 Page: 32 of 66





Report No.: SZEM120800437601 Page: 33 of 66





Report No.: SZEM120800437601 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 E.U.T Non-Conducted Table Ground Reference Plane Remark:		
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.: SZEM120800437601 Page: 35 of 66





Report No.: SZEM120800437601 Page: 36 of 66





Report No.: SZEM120800437601 Page: 37 of 66





Report No.: SZEM120800437601 Page: 38 of 66

5.8 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205					
Test Method:	ANSI C63.10 2009 and KDB558074 D01					
Test Site:	Measurement Distance:	3m (Semi-Anechoi	ic 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	30MHz-1GHz Quasi-peak 100 kHz 300kHz Quasi-peak				
		Peak	1MHz	3MHz	Peak	
	Above TGHZ	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	1
	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					

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Report No.: SZEM120800437601 Page: 39 of 66





Report No.: SZEM120800437601 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.: SZEM120800437601 Page: 41 of 66

5.8.1 Radiated emission below 1GHz

30MHz~1GHz (QP)		
Test mode:	AC Charge + transmitting	Vertical



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

Mode : Transmitting+AC Charge

	0	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	
10	86.260	1.10	8.36	27.22	52.52	34.76	40.00	-5.24	QP
2	89.170	1.10	8.64	27.22	55.38	37.90	43.50	-5.60	QP
3	121.180	1.26	7.87	27.06	52.31	34.37	43.50	-9.13	QP
4	149.310	1.32	8.91	26.91	50.79	34.10	43.50	-9.40	QP
5	163.860	1.34	9.56	26.84	52.54	36.60	43.50	-6.90	QP
6	187.140	1.38	10.05	26.74	49.75	34.43	43.50	-9.07	QP

Job No. : 4376RF



Report No.: SZEM120800437601 Page: 42 of 66





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

: Transmitting+AC Charge

		Cablei	Antenna	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
		-10			-ID-II	-IDeald (au	-IDestI /m		
	MHZ	ав	ab/m	ab	abuv	abuv/m	abuv/m	ab	
1	40.670	0.62	10.93	27.32	45.50	29.73	40.00	-10.27	QP
20	86.260	1.10	8.36	27.22	53.53	35.77	40.00	-4.23	QP
3	94.990	1.15	8.91	27.21	55.39	38.24	43.50	-5.26	QP
40	105.660	1.22	8.81	27.16	55.45	38.32	43.50	-5.18	QP
50	111.480	1.23	8.51	27.12	56.46	39.08	43.50	-4.42	QP
60	117.300	1.25	8.08	27.09	57.05	39.29	43.50	-4.21	QP

Job No. : 4376RF Mode : Transm



Report No.: SZEM120800437601 Page: 43 of 66

Test mode:		802	.11b	Test ch	annel:	Lowest	R	emark		Peak
Frequency (MHz)	Ca Lo (d	ble ss B)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit (dBu	Line V/m)	Over Limit (dB)	Polarization
4547.561	7.	14	35.12	41.44	49.73	50.55	7	4	-23.45	Vertical
6032.401	7.9	99	35.74	40.89	50.21	53.05	7	4	-20.95	Vertical
7547.013	9.	14	36.00	39.57	49.43	55.00	7	4	-19.00	Vertical
9370.083	9.	65	37.03	37.99	47.82	56.51	7	4	-17.49	Vertical
11027.980	10	.59	38.49	37.88	46.84	58.04	7	'4	-15.96	Vertical
11963.890	11.	.26	38.87	38.26	48.37	60.24	7	4	-13.76	Vertical
4629.319	7.	22	35.01	41.50	50.15	50.88	7	' 4	-23.12	Horizontal
6974.358	8.4	43	35.83	40.08	51.00	55.18	7	4	-18.82	Horizontal
7702.278	9.:	24	36.00	39.44	49.76	55.56	7	' 4	-18.44	Horizontal
9441.913	9.	66	37.14	37.94	47.66	56.52	7	4	-17.48	Horizontal
11112.520	10	.64	38.48	37.91	48.00	59.21	7	'4	-14.79	Horizontal
12556.750	11.	.51	39.43	38.50	48.73	61.17	7	4	-12.83	Horizontal

5.8.2 Transmitter emission above 1GHz

Test mode:	802	.11b	Test ch	annel:	Lowest	Remark	c:	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	7.14	35.12	41.44	36.02	36.84	54	-17.16	Vertical
6032.401	7.99	35.74	40.89	37.17	40.01	54	-13.99	Vertical
7547.013	9.14	36.00	39.57	36.31	41.88	54	-12.12	Vertical
9370.083	9.65	37.03	37.99	34.47	43.16	54	-10.84	Vertical
11027.980	10.59	38.49	37.88	34.29	45.49	54	-8.51	Vertical
11963.890	11.26	38.87	38.26	34.86	46.73	54	-7.27	Vertical
4629.319	7.22	35.01	41.50	37.21	37.94	54	-16.06	Horizontal
6974.358	8.43	35.83	40.08	36.26	40.44	54	-13.56	Horizontal
7702.278	9.24	36.00	39.44	36.57	42.37	54	-11.63	Horizontal
9441.913	9.66	37.14	37.94	33.86	42.72	54	-11.28	Horizontal
11112.520	10.64	38.48	37.91	33.89	45.10	54	-8.90	Horizontal
12556.750	11.51	39.43	38.50	33.94	46.38	54	-7.62	Horizontal



Report No.: SZEM120800437601 Page: 44 of 66

Test mode:	802	.11b	Test ch	annel:	Middle	Remar	k:	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
4594.102	7.18	35.06	41.47	49.63	50.40	74	-23.60	Vertical
6494.564	8.15	36.28	40.50	49.94	53.87	74	-20.13	Vertical
7643.683	9.23	36.00	39.49	49.52	55.26	74	-18.74	Vertical
8725.477	9.55	36.37	38.55	48.83	56.20	74	-17.80	Vertical
10480.590	10.19	38.28	37.65	46.74	57.56	74	-16.44	Vertical
11963.890	11.26	38.87	38.26	48.99	60.86	74	-13.14	Vertical
4629.319	7.22	35.01	41.50	49.60	50.33	74	-23.67	Horizontal
6428.771	8.12	36.20	40.55	50.14	53.91	74	-20.09	Horizontal
7566.249	9.17	36.00	39.56	49.61	55.22	74	-18.78	Horizontal
9538.543	9.67	37.23	37.86	47.43	56.47	74	-17.53	Horizontal
10560.940	10.25	38.32	37.68	47.04	57.93	74	-16.07	Horizontal
11963.890	11.26	38.87	38.26	48.37	60.24	74	-13.76	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
4594.102	7.18	35.06	41.47	36.06	36.83	54	-17.17	Vertical
6494.564	8.15	36.28	40.50	36.75	40.68	54	-13.32	Vertical
7643.683	9.23	36.00	39.49	36.08	41.82	54	-12.18	Vertical
8725.477	9.55	36.37	38.55	34.13	41.50	54	-12.50	Vertical
10480.590	10.19	38.28	37.65	33.46	44.28	54	-9.72	Vertical
11963.890	11.26	38.87	38.26	34.53	46.40	54	-7.60	Vertical
4629.319	7.22	35.01	41.50	36.06	36.79	54	-17.21	Horizontal
6428.771	8.12	36.20	40.55	36.55	40.32	54	-13.68	Horizontal
7566.249	9.17	36.00	39.56	36.28	41.89	54	-12.11	Horizontal
9538.543	9.67	37.23	37.86	33.74	42.78	54	-11.22	Horizontal
10560.940	10.25	38.32	37.68	33.35	44.24	54	-9.76	Horizontal
11963.890	11.26	38.87	38.26	34.49	46.36	54	-7.64	Horizontal



Report No.: SZEM120800437601 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
4444.562	7.01	35.06	41.36	49.78	50.49	74	-23.51	Vertical
6544.350	8.16	36.27	40.45	49.60	53.58	74	-20.42	Vertical
7547.013	9.14	36.00	39.57	49.06	54.63	74	-19.37	Vertical
9441.913	9.66	37.14	37.94	47.14	56.00	74	-18.00	Vertical
10480.590	10.19	38.28	37.65	46.65	57.47	74	-16.53	Vertical
12086.330	11.32	38.99	38.31	48.57	60.57	74	-13.43	Vertical
4821.757	7.45	34.68	41.64	50.11	50.60	74	-23.40	Horizontal
6764.538	8.24	36.04	40.27	50.05	54.06	74	-19.94	Horizontal
7721.909	9.25	36.00	39.43	49.00	54.82	74	-19.18	Horizontal
9370.083	9.65	37.03	37.99	48.18	56.87	74	-17.13	Horizontal
10453.950	10.17	38.24	37.64	47.45	58.22	74	-15.78	Horizontal
12429.540	11.46	39.33	38.46	48.45	60.78	74	-13.22	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
4444.562	7.01	35.06	41.36	35.78	36.49	54	-17.51	Vertical
6544.350	8.16	36.27	40.45	35.14	39.12	54	-14.88	Vertical
7547.013	9.14	36.00	39.57	36.03	41.60	54	-12.40	Vertical
9441.913	9.66	37.14	37.94	33.50	42.36	54	-11.64	Vertical
10480.590	10.19	38.28	37.65	33.52	44.34	54	-9.66	Vertical
12086.330	11.32	38.99	38.31	34.72	46.72	54	-7.28	Vertical
4821.757	7.45	34.68	41.64	35.96	36.45	54	-17.55	Horizontal
6764.538	8.24	36.04	40.27	35.49	39.50	54	-14.50	Horizontal
7721.909	9.25	36.00	39.43	35.53	41.35	54	-12.65	Horizontal
9370.083	9.65	37.03	37.99	34.00	42.69	54	-11.31	Horizontal
10453.950	10.17	38.24	37.64	33.58	44.35	54	-9.65	Horizontal
12429.540	11.46	39.33	38.46	34.86	47.19	54	-6.81	Horizontal



Report No.: SZEM120800437601 Page: 46 of 66

Test mode:	80	2.11g	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
4582.422	7.18	35.06	41.47	49.51	50.28	74	-23.72	Vertical
6494.564	8.15	36.28	40.50	50.24	54.17	74	-19.83	Vertical
7624.250	9.22	36.00	39.51	48.81	54.52	74	-19.48	Vertical
9441.913	9.66	37.14	37.94	47.06	55.92	74	-18.08	Vertical
10669.020	10.33	38.37	37.73	46.33	57.30	74	-16.70	Vertical
12461.220	11.47	39.37	38.47	47.92	60.29	74	-13.71	Vertical
4594.102	7.18	35.06	41.47	48.89	49.66	74	-24.34	Horizontal
6494.564	8.15	36.28	40.50	49.81	53.74	74	-20.26	Horizontal
7547.013	9.14	36.00	39.57	49.61	55.18	74	-18.82	Horizontal
9346.262	9.65	37.01	38.03	47.19	55.82	74	-18.18	Horizontal
11027.980	10.59	38.49	37.88	47.68	58.88	74	-15.12	Horizontal
12588.750	11.52	39.44	38.52	48.49	60.93	74	-13.07	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
4582.422	7.18	35.06	41.47	35.82	36.59	54	-17.41	Vertical
6494.564	8.15	36.28	40.50	36.63	40.56	54	-13.44	Vertical
7624.250	9.22	36.00	39.51	35.61	41.32	54	-12.68	Vertical
9441.913	9.66	37.14	37.94	33.50	42.36	54	-11.64	Vertical
10669.020	10.33	38.37	37.73	32.88	43.85	54	-10.15	Vertical
12461.220	11.47	39.37	38.47	34.57	46.94	54	-7.06	Vertical
4594.102	7.18	35.06	41.47	35.66	36.43	54	-17.57	Horizontal
6494.564	8.15	36.28	40.50	36.44	40.37	54	-13.63	Horizontal
7547.013	9.14	36.00	39.57	35.84	41.41	54	-12.59	Horizontal
9346.262	9.65	37.01	38.03	33.75	42.38	54	-11.62	Horizontal
11027.980	10.59	38.49	37.88	33.85	45.05	54	-8.95	Horizontal
12588.750	11.52	39.44	38.52	34.03	46.47	54	-7.53	Horizontal



Report No.: SZEM120800437601 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
4536.000	7.12	35.14	41.43	48.96	49.79	74	-24.21	Vertical
6109.670	8.01	35.84	40.83	50.65	53.67	74	-20.33	Vertical
6956.627	8.41	35.85	40.08	50.19	54.37	74	-19.63	Vertical
8973.250	9.62	36.57	38.34	48.04	55.89	74	-18.11	Vertical
10587.850	10.27	38.33	37.69	47.00	57.91	74	-16.09	Vertical
12461.220	11.47	39.37	38.47	47.85	60.22	74	-13.78	Vertical
4547.561	7.14	35.12	41.44	49.19	50.01	74	-23.99	Horizontal
6347.466	8.10	36.12	40.63	50.41	54.00	74	-20.00	Horizontal
7721.909	9.25	36.00	39.43	48.67	54.49	74	-19.51	Horizontal
9465.979	9.66	37.16	37.91	47.23	56.14	74	-17.86	Horizontal
10916.260	10.50	38.47	37.83	46.54	57.68	74	-16.32	Horizontal
12055.600	11.31	38.95	38.30	47.77	59.73	74	-14.27	Horizontal

Test mode:	802	.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
4536.000	7.12	35.14	41.43	36.54	37.37	54	-16.63	Vertical
6109.670	8.01	35.84	40.83	37.09	40.11	54	-13.89	Vertical
6956.627	8.41	35.85	40.08	36.11	40.29	54	-13.71	Vertical
8973.250	9.62	36.57	38.34	34.24	42.09	54	-11.91	Vertical
10587.850	10.27	38.33	37.69	33.69	44.60	54	-9.40	Vertical
12461.220	11.47	39.37	38.47	34.68	47.05	54	-6.95	Vertical
4547.561	7.14	35.12	41.44	35.77	36.59	54	-17.41	Horizontal
6347.466	8.10	36.12	40.63	36.08	39.67	54	-14.33	Horizontal
7721.909	9.25	36.00	39.43	35.76	41.58	54	-12.42	Horizontal
9465.979	9.66	37.16	37.91	33.71	42.62	54	-11.38	Horizontal
10916.260	10.50	38.47	37.83	33.53	44.67	54	-9.33	Horizontal
12055.600	11.31	38.95	38.30	34.61	46.57	54	-7.43	Horizontal



Report No.: SZEM120800437601 Page: 48 of 66

Test mode:	802	.11g	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
4594.102	7.18	35.06	41.47	49.98	50.75	74	-23.25	Vertical
6478.053	8.14	36.26	40.51	49.73	53.62	74	-20.38	Vertical
7566.249	9.17	36.00	39.56	48.98	54.59	74	-19.41	Vertical
9562.854	9.67	37.27	37.83	47.05	56.16	74	-17.84	Vertical
10999.950	10.56	38.50	37.86	47.42	58.62	74	-15.38	Vertical
12556.750	11.51	39.43	38.50	48.00	60.44	74	-13.56	Vertical
4547.561	7.14	35.12	41.44	50.80	51.62	74	-22.38	Horizontal
6283.164	8.07	36.04	40.68	49.65	53.08	74	-20.92	Horizontal
7394.878	8.96	35.96	39.71	49.59	54.80	74	-19.20	Horizontal
8462.975	9.47	36.19	38.78	48.78	55.66	74	-18.34	Horizontal
10269.320	10.04	38.02	37.56	46.75	57.25	74	-16.75	Horizontal
11963.890	11.26	38.87	38.26	48.58	60.45	74	-13.55	Horizontal
Test mode:	802	.11g	Test ch	Test channel:		Remark	Remark:	
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
4594.102	7.18	35.06	41.47	36.05	36.82	54	-17.18	Vertical
6478.053	8.14	36.26	40.51	36.28	40.17	54	-13.83	Vertical
7566.249	9.17	36.00	39.56	36.34	41.95	54	-12.05	Vertical
9562.854	9.67	37.27	37.83	33.93	43.04	54	-10.96	Vertical
10999.950	10.56	38.50	37.86	33.64	44.84	54	-9.16	Vertical
12556.750	11.51	39.43	38.50	34.62	47.06	54	-6.94	Vertical
4547.561	7.14	35.12	41.44	35.60	36.42	54	-17.58	Horizontal
6283.164	8.07	36.04	40.68	36.98	40.41	54	-13.59	Horizontal
7394.878	8.96	35.96	39.71	36.76	41.97	54	-12.03	Horizontal
8462.975	9.47	36.19	38.78	34.85	41.73	54	-12.27	Horizontal
10269.320	10.04	38.02	37.56	33.38	43.88	54	-10.12	Horizontal

Remark:

1) 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

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



Report No.: SZEM120800437601 Page: 49 of 66

5.9 Band Edge (Radiated Emission)

ANSI C63.10 2009 and KDI Measurement Distance: 3m Frequency 30MHz-88MHz	B558074 D01 I (Semi-Anechoic Chamber Limit (dBuV/m @3m)) Bemark
Measurement Distance: 3m Frequency 30MHz-88MHz	I (Semi-Anechoic Chamber Limit (dBuV/m @3m)) Bemark
Frequency 30MHz-88MHz	Limit (dBuV/m @3m)	Bemark
30MHz-88MHz		i tomant
	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
Abovo 1CHz	54.0	Average Value
Above TGH2	74.0	Peak Value
Antenna Tower	AE EUT (Turntable) Ground Reference Pla Test Receiver	Horn Antenna Tower
	960MHz-1GHz Above 1GHz	960MHz-1GHz 54.0 Above 1GHz 54.0 74.0





Report No.: SZEM120800437601 Page: 50 of 66

Test Procedure:	 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 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
	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.
	 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 Results:	Pass

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Report No.: SZEM120800437601 Page: 51 of 66



	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 2413.290	2.98 2.98 2.99	32.51 32.51 32.54	39.85 39.86 39.86	53.46 62.76 108.44	49.11 58.39 104.11	74.00 74.00 74.00	-24.89 -15.61 30.11	Peak Peak Peak



Report No.: SZEM120800437601 Page: 52 of 66

Horizontal:





Report No.: SZEM120800437601 Page: 53 of 66

Test mode:	802.11b	Test channel:	Lowest	Remark:	average

Vertical:



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

Job No. : 4376RF

Mode	: b 2412 Bandedge AV	
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	Freq	Cable <i>i</i> Loss	Intenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over 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 2.98 2.99	32.51 32.51 32.54	39.85 39.86 39.86	39.75 50.49 98.55	35.40 46.12 94.23	54.00 54.00 54.00	-18.60 -7.88 40.23	lverage lverage lverage



Report No.: SZEM120800437601 Page: 54 of 66

Horizontal:



Condition : FCC PART15(>1G) AV 3m HORIZONTAL

Mode : b 2412 Bandedge AV

	Cable	CableAntenna		Preamp Read		Limit			
Fr	eq Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
м	Hz dE	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 2390.0	2.98	32.51	39.85	40.04	35.68	54.00	-18.32	Average	
2 2400.0	2.98	32.51	39.86	53.10	48.74	54.00	-5.26	Average	
3 0 2413.1	30 2.99	32.54	39.86	100.16	95.83	54.00	41.83	Average	

Job No. : 4376RF



Report No.: SZEM120800437601 Page: 55 of 66

Test mode:	802.11b	Test channel:	Highest	Remark:	Peak

Vertical:



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

Job No. : 4376RF

Mode : b 2462 Bandedge PK

	Freq	CableA Loss	ntenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz -	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
10 24 2 24	63.235 83.500	3.02 3.03	32.64 32.67	39.91 39.92	110.80 56.94	106.55 52.72	74.00 74.00	32.55 -21.28	Peak Peak



Report No.: SZEM120800437601 Page: 56 of 66

Horizontal:



10

2

 MHz
 dB
 dB/m
 dB
 dBuV
 dBuV/m
 dBuV/m
 dB

 2463.235
 3.02
 32.64
 39.91
 110.48
 106.24
 74.00
 32.24
 Peak

 2483.500
 3.03
 32.67
 39.92
 56.27
 52.05
 74.00
 -21.95
 Peak



Report No.: SZEM120800437601 Page: 57 of 66

Test mode:	802.11b	Test channel:	Highest	Remark:	average

Vertical:



Condition : FCC PART15(>1G) AV 3m VERTICAL Job No. : 4376RF Mode : b 2462 Bandedge AV CableAntenna Preamp

	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
10	2463.235	3.02	32.64	39.91	99.95	95.70	54.00	41.70	Average	
2	2483.500	3.03	32.67	39.92	43.56	39.34	54.00	-14.66	Average	

Read

Limit

Over



Report No.: SZEM120800437601 Page: 58 of 66

Horizontal:



Job No.	: 4376RF
Mode	: b 2462 Bandedge AV

	Freq	Cablei Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
10 2	2463.235 2483.500	3.02 3.03	32.64 32.67	39.91 39.92	100.83 44.60	96.58 40.38	54.00 54.00	42.58 -13.62	Average Average	



Report No.: SZEM120800437601 Page: 59 of 66

Test mode: 802.11g Test channel: Lowest Remark: Peak
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Vertical:



Condition : FCC PART15(>1G) PK 3m VERTICAL Job No. : 4376RF Mode : g 2412 Bandedge PK

-	-	CableA	Intenna	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
-		ab			- AD. W	dDatt/m	dBut/m		
	MHZ	uь	α <i>Б</i> / m	ab	abuv	abuv/m	abuv/m	uь	
1	2390.000	2.98	32.51	39.85	59.83	55.47	74.00	-18.53	Peak
2	2400.000	2.98	32.51	39.86	76.97	72.60	74.00	-1.40	Peak
3 X	2413.730	2.99	32.54	39.86	105.24	100.91	74.00	26.91	Peak



Report No.: SZEM120800437601 Page: 60 of 66

Horizontal:





Report No.: SZEM120800437601 Page: 61 of 66

Test mode:	802.11g	Test channel:	Lowest	Remark:	average

Vertical:



Condition : FCC PART15(>1G) AV 3m VERTICAL Job No. : 4376RF

Mode : g 2412 Bandedge AV

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 2 3 0	2390.000 2400.000 2415.490	2.98 2.98 2.99	32.51 32.51 32.54	39.85 39.86 39.86	41.53 53.82 92.33	37.18 49.45 88.01	54.00 54.00 54.00	-16.82 -4.55 34.01	lverage lverage lverage



Report No.: SZEM120800437601 Page: 62 of 66

Horizontal:



Job No. Mode : g 2412 Bandedge AV

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 2 3 0	2390.000 2400.000 2415.490	2.98 2.98 2.99	32.51 32.51 32.54	39.85 39.86 39.86	43.66 56.18 93.80	39.30 51.81 89.47	54.00 54.00 54.00	-14.70 -2.19 35.47	lverage lverage lverage	



Report No.: SZEM120800437601 Page: 63 of 66

Test mode:	802.11g	Test channel:	Highest	Remark:	Peak

Vertical:



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

Job No. : 4376RF

Mode : g 2462 Bandedge PK

	. 62.02	Freq	Cablei	Antenna Factor	Preamp Factor	Read	Level	Limit	Over Limit	Demert	
		rieq	1035	ractor	ractor					Kemal K	
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	0	2463.730	3.02	32.64	39.91	106.57	102.33	74.00	28.33	Peak	
2		2483.500	3.03	32.67	39.92	65.69	61.47	74.00	-12.53	Peak	



Report No.: SZEM120800437601 Page: 64 of 66

Horizontal:



Condition : FCC PART15(>1G) PK 3m HORIZONTAL Job No. : 4376RF Mode : g 2462 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 X	2463.775	3.02	32.64	39.91	106.06	101.82	74.00	27.82	Peak
2	2483.500	3.03	32.67	39.92	65.01	60.79	74.00	-13.21	Peak



Report No.: SZEM120800437601 Page: 65 of 66

Test mode:	802.11g	Test channel:	Highest	Remark:	average

Vertical:



Frequency (MHz)

Condition : FCC PART15(>1G) AV 3m VERTICAL Job No. : 4376RF

Mode : g 2462 Bandedge AV

0	Freq	Cable. Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
10 2	2465.530 2483.500	3.02 3.03	32.64 32.67	39.91 39.92	93.07 46.82	88.83 42.60	54.00 54.00	34.83 -11.40	Average Average



Report No.: SZEM120800437601 Page: 66 of 66

Horizontal:



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