

FCC TEST REPORT (15.247)

REPORT NO.: RF940629L08
MODEL NO.: A5020
RECEIVED: Jul. 14, 2005
TESTED: Jul. 14 ~ Aug. 20, 2005
ISSUED: Aug. 26, 2005

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0528
ILAC MRA



No. 2177-01

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1. CERTIFICATION

PRODUCT: AirMagnet SmartEdge Sensor

MODEL: A5020

BRAND: AirMagnet

APPLICANT: AirMagnet, Inc.

TESTED: Jul. 14 ~ Aug. 20, 2005

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Rennie Wang , **DATE:** Aug. 26, 2005
Rennie Wang

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Aug. 26, 2005
Responsible for RF Gary Chang

APPROVED BY : Cody Chang , **DATE:** Aug. 26, 2005
Cody Chang / Deputy Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	Test Type and Limit	Result	Remark
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -11.06dB at 18.488MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.03dB at 667.60MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

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

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz ~ 30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~ 1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	AirMagnet SmartEdge Sensor
MODEL NO.	A5020
POWER SUPPLY	48Vdc from POE 12Vdc from AC adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11a: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	802.11b & 802.11g: 2.412 ~ 2.462GHz 802.11a: 5.150 ~ 5.350GHz and 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	802.11b & 802.11g: 11 802.11a: 13
CHANNEL SPACING	802.11b & 802.11g: 5MHz 802.11a: 20MHz
OUTPUT POWER	51.168mW for 2.412 ~ 2.462GHz 14.421mW for 5.150 ~ 5.350GHz 32.137mW for 5.725 ~ 5.850GHz
ANTENNA TYPE	Refer to Note 2 as below
DATA CABLE	NA
I/O PORTS	RJ45, RS232
ASSOCIATED DEVICES	NA

NOTE:

- The EUT was operated with the following POE and adapters:

POE	
BRAND	PowerDsine 3001
MODEL	PD-3001/AC
INPUT	100-250Vac, 50-60Hz, 0.5A
OUTPUT	48Vdc, 0.35A
POWER LINE	AC 1.2m non-shielded cable without core

Adapter 1	
BRAND	ENG
MODEL	57-12-1500
INPUT	120Vac, 60Hz, 32W
OUTPUT	12Vdc, 1500mA
POWER LINE	DC 1.8m non-shielded cable without core

Adapter 2	
BRAND	FAIRWAY
MODEL	VE20-120
INPUT	120-240Vac, 50-60Hz, 1A
OUTPUT	12Vdc, 1.66A
POWER LINE	DC 1.6m non-shielded cable without core AC 1.5m non-shielded cable without core

2. The following antennas were provided to this EUT.

Antenna Type	Antenna	Gain (dBi)		Antenna connector
		2.4G	5G	
Dual-Band Omni-Directional Antenna	SAA05-22063A	5	7	RP TNC Plug
Dual Band Dipole Antenna	SDW0939A1	2.05	2.27	RP-TNC(M)
Dual-Band Directional Antenna	SAA05-22056A	6	8	RP TNC Plug

3. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
4. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 2400 ~ 2483.5MHz band:

For 802.11b/g: Eleven channels are provided to this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

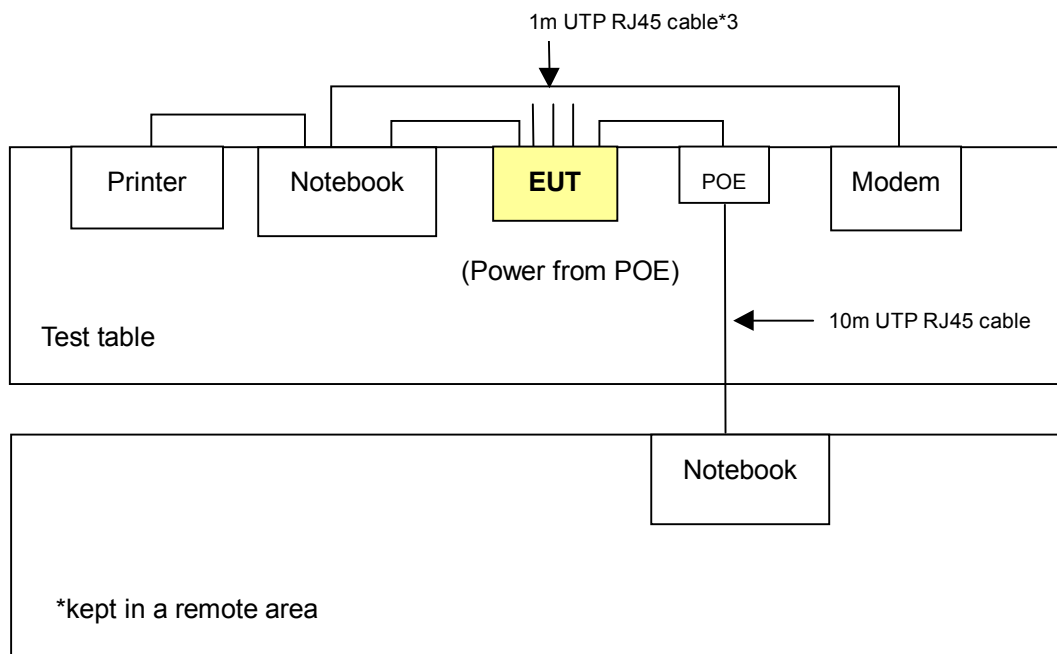
Operated in 5725 ~ 5850MHz band:

For 802.11a: Five channels are provided to this EUT.

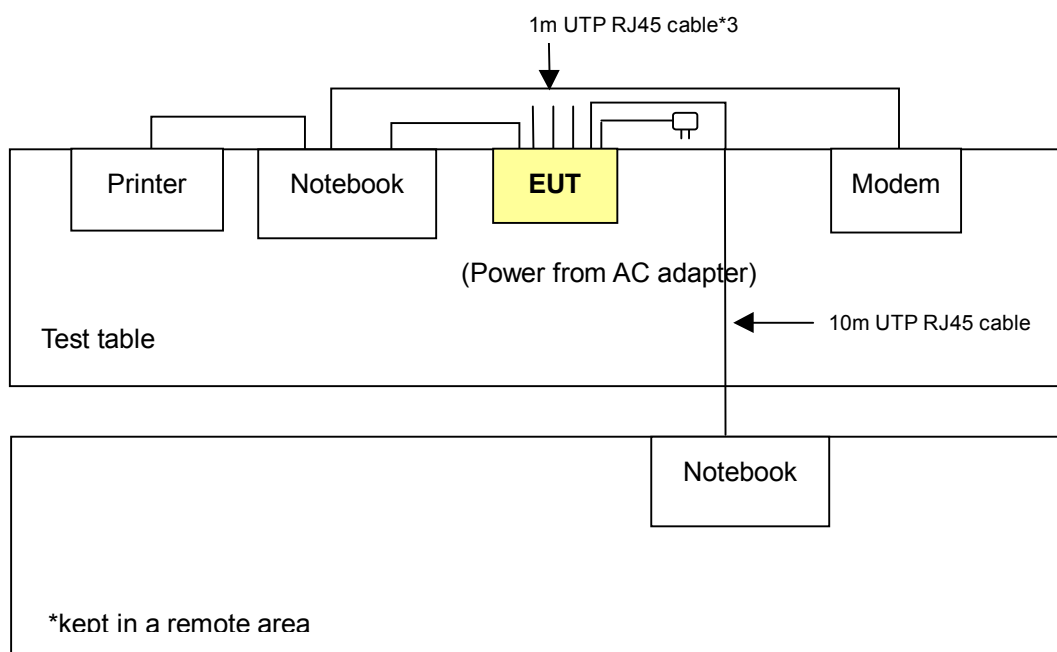
Channel	Frequency
1	5745 MHz
2	5765 MHz
3	5785 MHz
4	5805 MHz
5	5825 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

(Power from POE)



(Power from AC adapter)



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A1	-	√	-	-	Power from POE (PD-3001/AC) with Antenna SAA05-22063A
A2	-	√	-	-	Power from POE (PD-3001/AC) with Antenna SDW0939A1
A3	√	√	-	-	Power from POE (PD-3001/AC) with Antenna SAA05-22056A
B1	-	√	-	-	Power from AC Adapter (57-12-1500) with Antenna SAA05-22063A
B2	-	√	-	-	Power from AC Adapter (57-12-1500) with Antenna SDW0939A1
B3	√	√	-	-	Power from AC Adapter (57-12-1500) with Antenna SAA05-22056A
C1	-	√	√	-	Power from AC Adapter (VE20-120) with Antenna SAA05-22063A
C2	-	√	√	-	Power from AC Adapter (VE20-120) with Antenna SDW0939A1
C3	√	√	√	√	Power from AC Adapter (VE20-120) with Antenna SAA05-22056A

Where PLC: Power Line Conducted Emission
RE≥1G: Radiated Emission above 1GHz
“-”: No effect

RE<1G RE: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
B3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
C3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
A3	802.11a	1 to 5	3	OFDM	BPSK	6
B3	802.11a	1 to 5	3	OFDM	BPSK	6
C3	802.11a	1 to 5	3	OFDM	BPSK	6

Radiated Emission Test (Below 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A1 ~ A3	802.11g	1 to 11	11	OFDM	BPSK	6
B1 ~ B3	802.11g	1 to 11	11	OFDM	BPSK	6
C1 ~ C3	802.11g	1 to 11	11	OFDM	BPSK	6
A1 ~ A3	802.11a	1 to 5	3	OFDM	BPSK	6
B1 ~ B3	802.11a	1 to 5	3	OFDM	BPSK	6
C1 ~ C3	802.11a	1 to 5	3	OFDM	BPSK	6

Radiated Emission Test (Above 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
C1 ~ C3	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
C1 ~ C3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
C1 ~ C3	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6

Bandedge Measurement:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6
802.11a	1 to 5	1, 5	OFDM	BPSK	6

**Antenna Port Conducted Measurement:**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a AirMagnet SmartEdge Sensor. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)

ANSI C63.4-2003

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008248	IFAXDM1414
4	NOTEBOOK COMPUTER	DELL	PP05L	20838027664	E2K24CLNS

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m shielded cable
3	1.2m shielded cable
4	NA

NOTE: All power cords of the above support units are non shielded (1.8m).

4. TEST TYPES AND RESULTS (802.11b & g 2412~2462MHz Band)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 3.
 3. The VCCI Site Registration No. is C-2047.



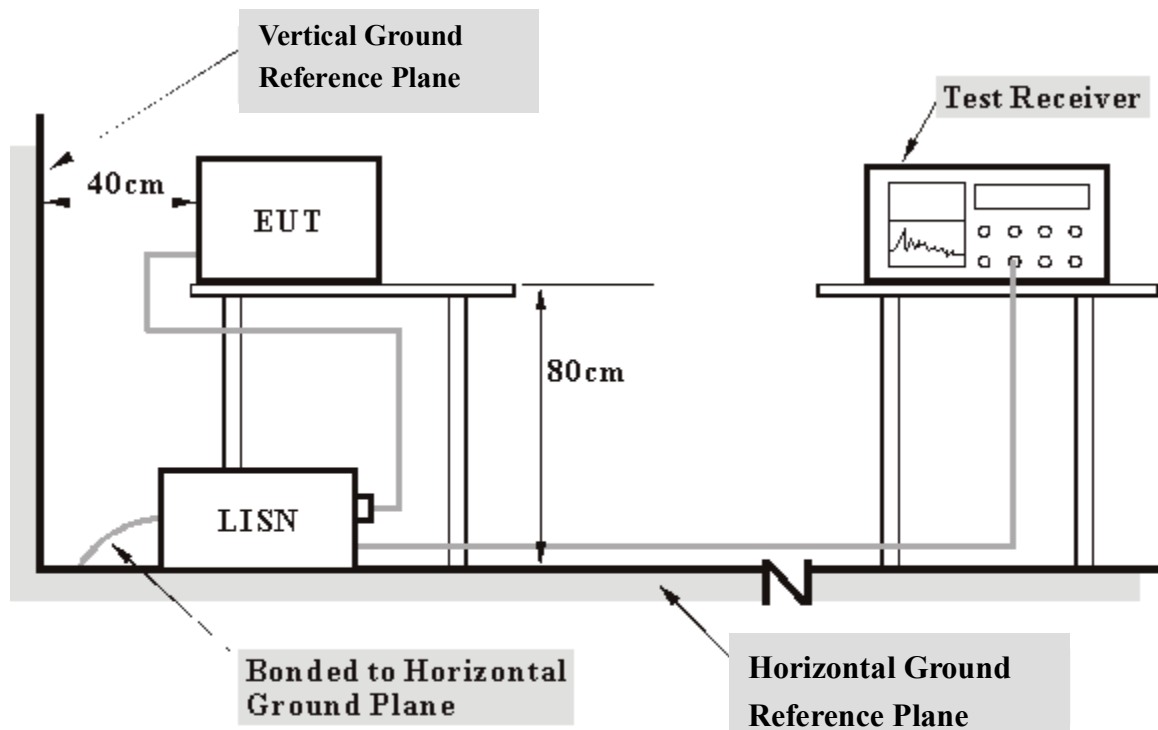
4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

- a. Connected the EUT to notebook via an RJ45 cable and placed on a testing table.
- b. The notebook ran a test program (provided by manufacturer) to enable all functions under transmission/receiving condition continuously at specific channel frequency.
- c. The notebook system sent "H" messages to its screen.
- d. The notebook system sent "H" messages to modem.
- e. The notebook system sent "H" messages to printer and the printer prints them on paper.
- f. Step c ~ e was repeated.

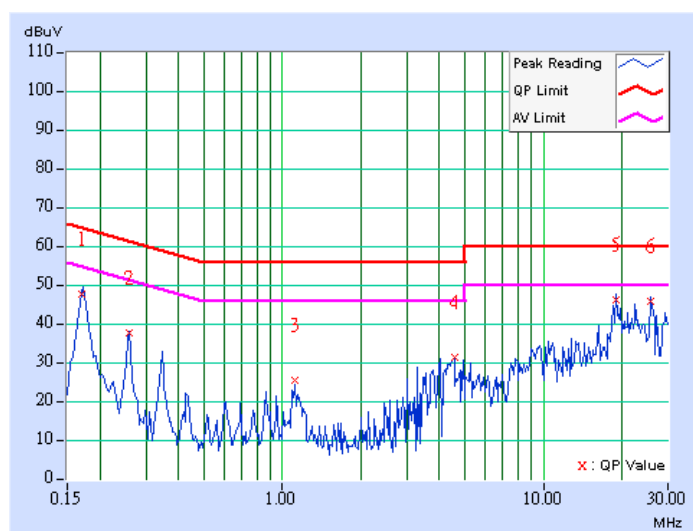
4.1.7 TEST RESULTS

Conducted Worst-Case Data (Power from POE)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	46.32	-	46.43	-	64.98	54.98	-18.56	-
2	0.259	0.11	36.19	-	36.30	-	61.45	51.45	-25.15	-
3	1.121	0.23	24.10	-	24.33	-	56.00	46.00	-31.67	-
4	4.570	0.30	30.12	-	30.42	-	56.00	46.00	-25.58	-
5	18.914	0.89	45.02	-	45.91	-	60.00	50.00	-14.09	-
6	25.875	1.42	44.64	-	46.06	-	60.00	50.00	-13.94	-

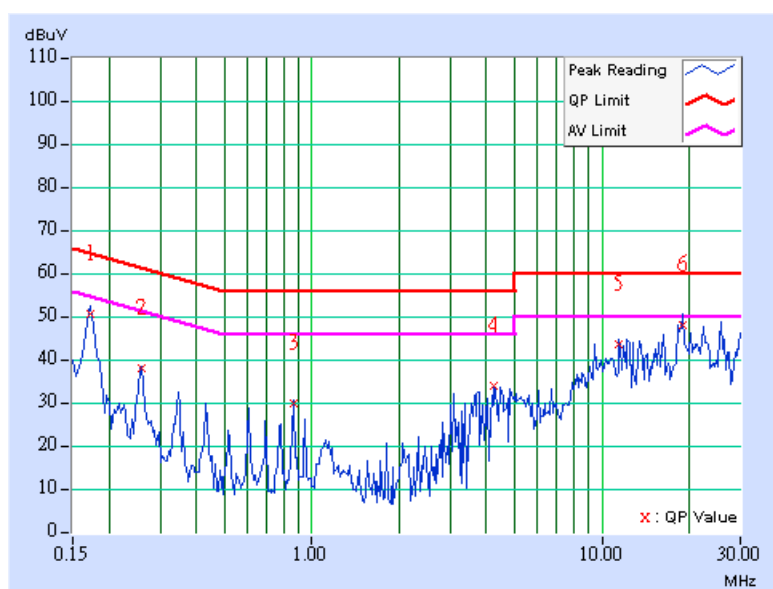
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.11	49.88	-	49.99	-	64.79	54.79	-14.81	-
2	0.259	0.11	37.16	-	37.27	-	61.45	51.45	-24.18	-
3	0.861	0.20	29.27	-	29.47	-	56.00	46.00	-26.53	-
4	4.223	0.30	33.21	-	33.51	-	56.00	46.00	-22.49	-
5	11.459	0.57	42.81	-	43.38	-	60.00	50.00	-16.62	-
6	18.922	0.91	47.09	-	48.00	-	60.00	50.00	-12.00	-

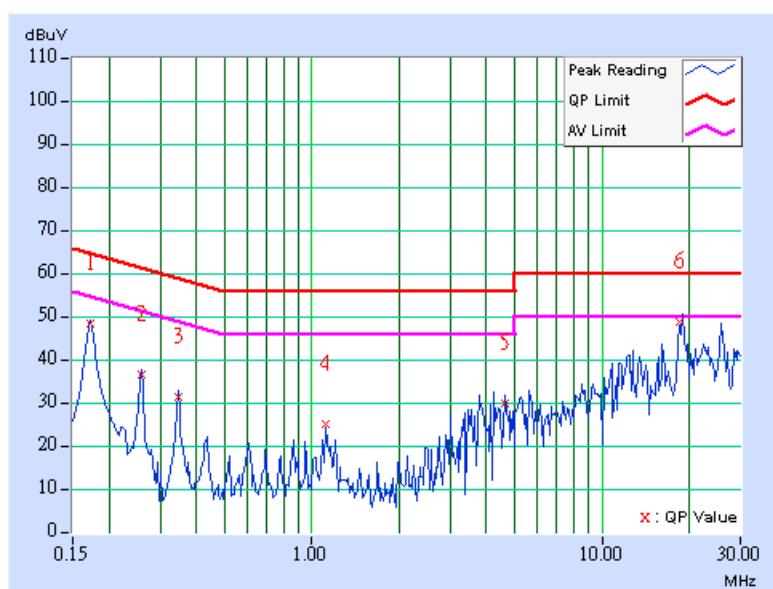
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.11	47.71	-	47.82	-	64.79	54.79	-16.98	-
2	0.259	0.11	36.00	-	36.11	-	61.45	51.45	-25.34	-
3	0.345	0.12	30.73	-	30.85	-	59.07	49.07	-28.23	-
4	1.121	0.23	24.18	-	24.41	-	56.00	46.00	-31.59	-
5	4.660	0.31	29.14	-	29.45	-	56.00	46.00	-26.55	-
6	18.488	0.85	48.09	-	48.94	-	60.00	50.00	-11.06	-

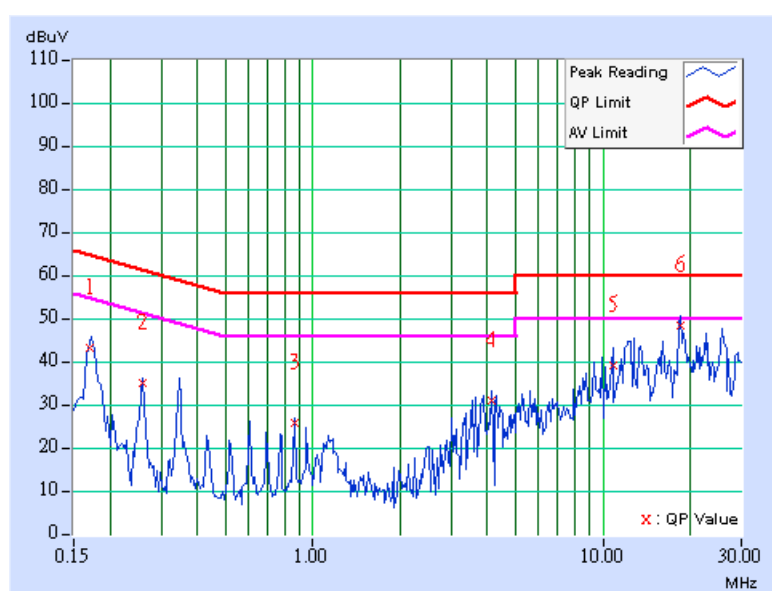
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	42.35	-	42.46	-	64.98	54.98	-22.53	-
2	0.259	0.11	34.46	-	34.57	-	61.45	51.45	-26.88	-
3	0.865	0.21	25.22	-	25.43	-	56.00	46.00	-30.57	-
4	4.145	0.30	30.35	-	30.65	-	56.00	46.00	-25.35	-
5	10.793	0.56	38.40	-	38.96	-	60.00	50.00	-21.04	-
6	18.485	0.88	47.49	-	48.37	-	60.00	50.00	-11.63	-

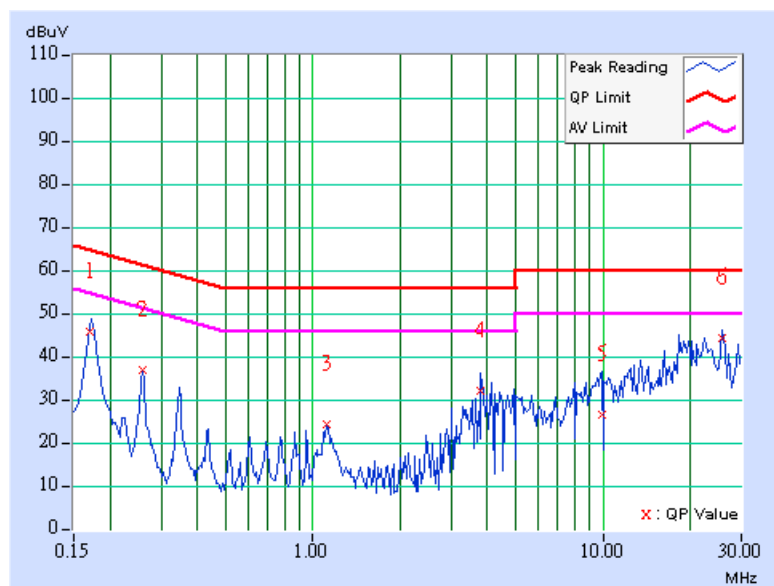
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	44.46	-	44.57	-	64.98	54.98	-20.42	-
2	0.259	0.11	35.75	-	35.86	-	61.45	51.45	-25.59	-
3	1.117	0.23	23.06	-	23.29	-	56.00	46.00	-32.71	-
4	3.805	0.29	30.84	-	31.13	-	56.00	46.00	-24.87	-
5	9.938	0.44	25.37	-	25.81	-	60.00	50.00	-34.19	-
6	25.691	1.40	43.01	-	44.41	-	60.00	50.00	-15.59	-

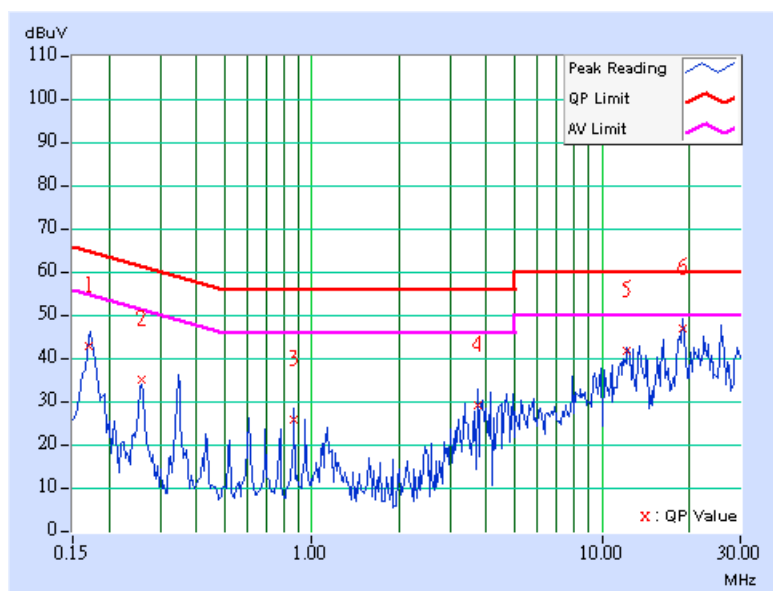
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	42.13	-	42.24	-	64.98	54.98	-22.75	-
2	0.259	0.11	34.46	-	34.57	-	61.45	51.45	-26.88	-
3	0.865	0.21	25.05	-	25.26	-	56.00	46.00	-30.74	-
4	3.715	0.28	28.51	-	28.79	-	56.00	46.00	-27.21	-
5	12.199	0.59	40.97	-	41.56	-	60.00	50.00	-18.44	-
6	18.922	0.91	46.16	-	47.07	-	60.00	50.00	-12.93	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

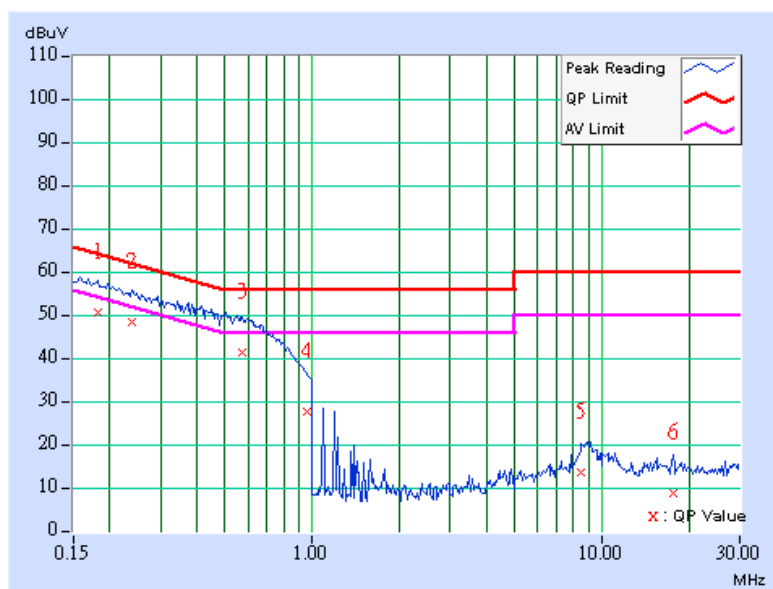


Conducted Worst-Case Data (Power from AC adapter_57-12-1500)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.181	0.10	50.07	-	50.17	-	64.43	54.43	-14.26	-
2	0.240	0.10	47.91	-	48.01	-	62.10	52.10	-14.09	-
3	0.576	0.13	40.79	-	40.92	-	56.00	46.00	-15.08	-
4	0.959	0.19	27.15	-	27.34	-	56.00	46.00	-28.66	-
5	8.527	0.28	13.17	-	13.45	-	60.00	50.00	-46.55	-
6	17.652	0.61	8.33	-	8.94	-	60.00	50.00	-51.06	-

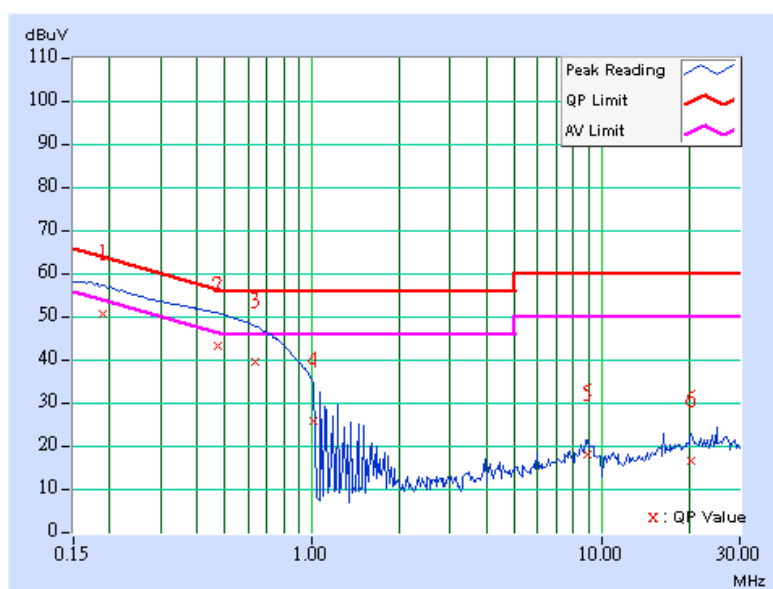
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.10	49.80	-	49.90	-	64.08	54.08	-14.18	-
2	0.474	0.11	42.52	-	42.63	-	56.44	46.44	-13.81	-
3	0.638	0.14	38.81	-	38.95	-	56.00	46.00	-17.05	-
4	1.016	0.20	25.12	-	25.32	-	56.00	46.00	-30.68	-
5	8.957	0.37	17.25	-	17.62	-	60.00	50.00	-42.38	-
6	20.500	0.82	15.78	-	16.60	-	60.00	50.00	-43.40	-

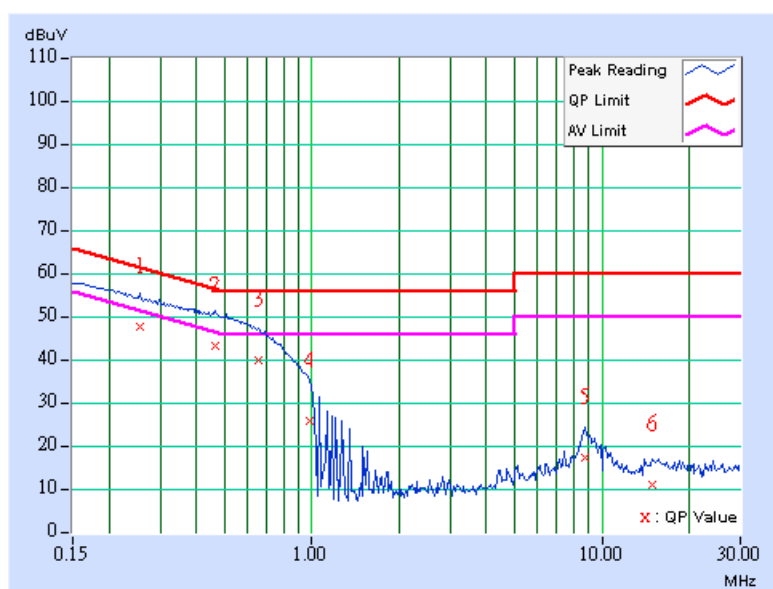
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.255	0.10	47.24	-	47.34	-	61.58	51.58	-14.24	-
2	0.463	0.11	42.86	-	42.97	-	56.65	46.65	-13.68	-
3	0.654	0.14	39.67	-	39.81	-	56.00	46.00	-16.19	-
4	0.982	0.20	25.62	-	25.82	-	56.00	46.00	-30.18	-
5	8.719	0.28	17.03	-	17.31	-	60.00	50.00	-42.69	-
6	14.883	0.40	10.77	-	11.17	-	60.00	50.00	-48.83	-

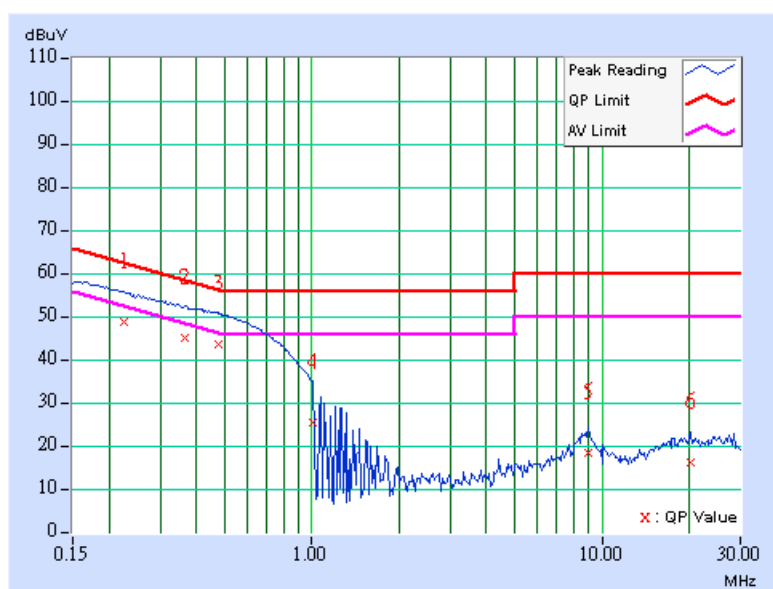
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.224	0.10	47.99	-	48.09	-	62.66	52.66	-14.57	-
2	0.365	0.10	44.21	-	44.31	-	58.62	48.62	-14.31	-
3	0.474	0.11	43.01	-	43.12	-	56.44	46.44	-13.32	-
4	1.004	0.20	24.92	-	25.12	-	56.00	46.00	-30.88	-
5	9.020	0.37	17.58	-	17.95	-	60.00	50.00	-42.05	-
6	20.113	0.80	15.42	-	16.22	-	60.00	50.00	-43.78	-

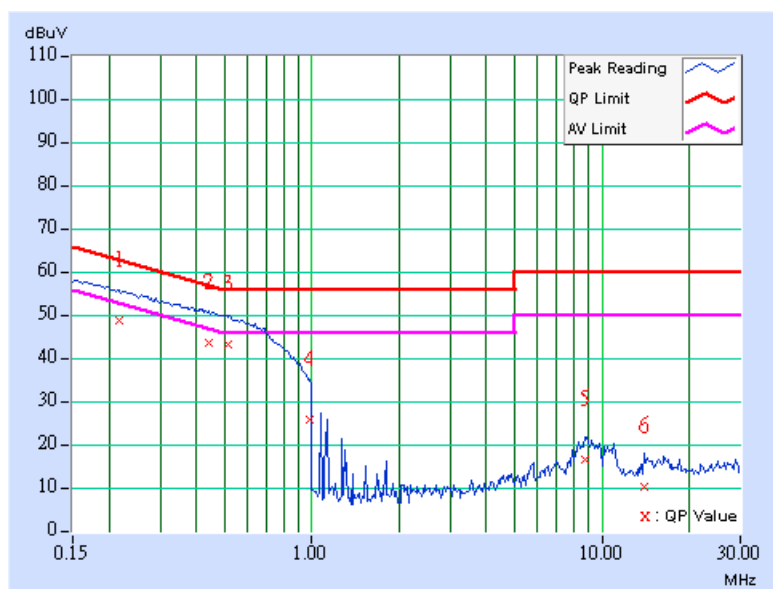
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.216	0.10	48.50	-	48.60	-	62.96	52.96	-14.36	-
2	0.443	0.11	43.20	-	43.31	-	57.01	47.01	-13.70	-
3	0.517	0.12	42.96	-	43.08	-	56.00	46.00	-12.92	-
4	0.986	0.20	25.47	-	25.67	-	56.00	46.00	-30.33	-
5	8.734	0.28	16.32	-	16.60	-	60.00	50.00	-43.40	-
6	14.055	0.38	9.94	-	10.32	-	60.00	50.00	-49.68	-

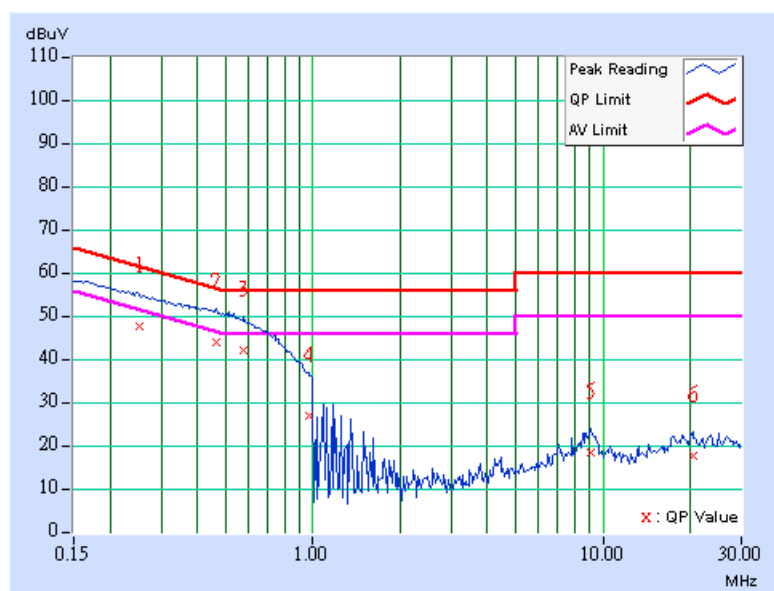
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.252	0.10	46.97	-	47.07	-	61.71	51.71	-14.64	-
2	0.466	0.11	43.13	-	43.24	-	56.58	46.58	-13.34	-
3	0.580	0.13	41.23	-	41.36	-	56.00	46.00	-14.64	-
4	0.966	0.19	26.38	-	26.57	-	56.00	46.00	-29.43	-
5	9.098	0.37	17.76	-	18.13	-	60.00	50.00	-41.87	-
6	20.410	0.82	17.01	-	17.83	-	60.00	50.00	-42.17	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

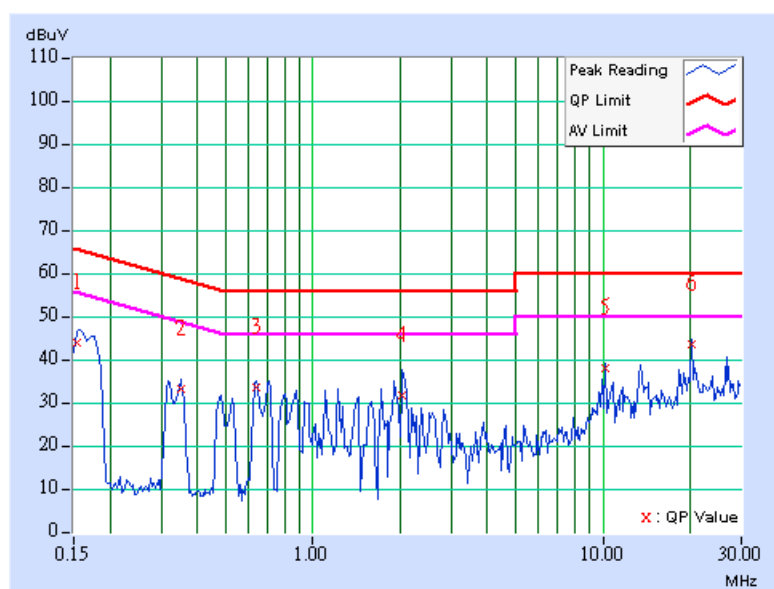


Conducted Worst-Case Data (Power from AC adapter_VE20-120)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.11	42.99	-	43.10	-	65.79	55.79	-22.69	-
2	0.353	0.12	32.20	-	32.32	-	58.89	48.89	-26.57	-
3	0.642	0.16	32.74	-	32.90	-	56.00	46.00	-23.10	-
4	2.027	0.25	30.90	-	31.15	-	56.00	46.00	-24.85	-
5	10.242	0.45	37.17	-	37.62	-	60.00	50.00	-22.38	-
6	20.258	1.00	42.64	-	43.64	-	60.00	50.00	-16.36	-

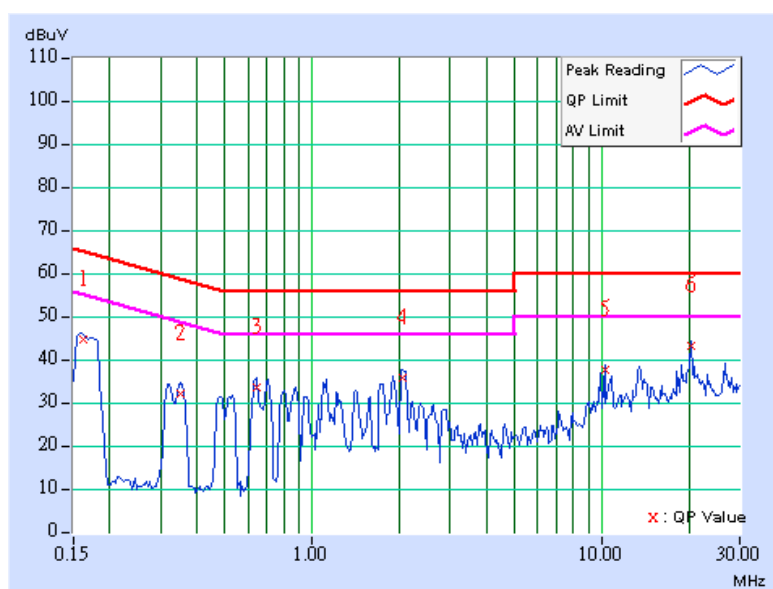
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.11	43.69	-	43.80	-	65.38	55.38	-21.58	-
2	0.349	0.12	31.16	-	31.28	-	58.98	48.98	-27.70	-
3	0.642	0.16	32.65	-	32.81	-	56.00	46.00	-23.19	-
4	2.051	0.25	34.84	-	35.09	-	56.00	46.00	-20.91	-
5	10.246	0.55	36.87	-	37.42	-	60.00	50.00	-22.58	-
6	20.258	0.99	42.48	-	43.47	-	60.00	50.00	-16.53	-

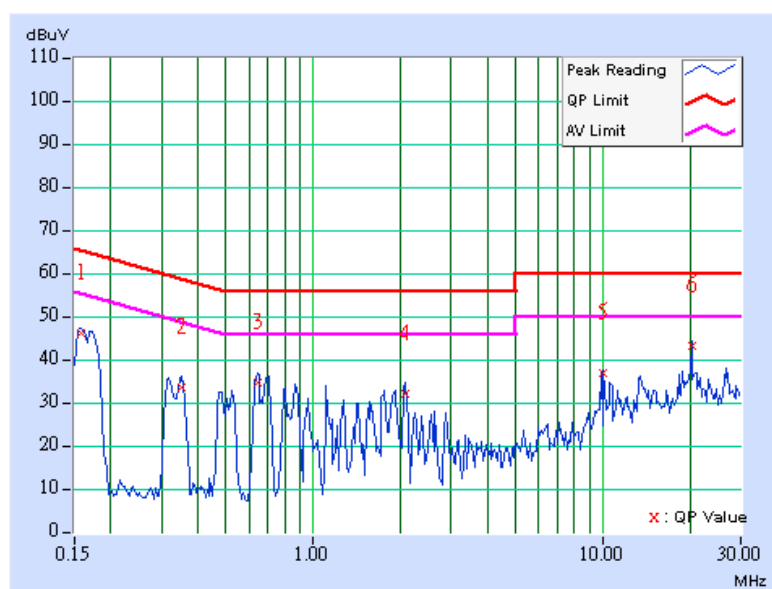
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.11	45.45	-	45.56	-	65.58	55.58	-20.02	-
2	0.349	0.12	32.87	-	32.99	-	58.98	48.98	-25.99	-
3	0.642	0.16	33.77	-	33.93	-	56.00	46.00	-22.07	-
4	2.094	0.25	31.06	-	31.31	-	56.00	46.00	-24.69	-
5	10.059	0.44	35.94	-	36.38	-	60.00	50.00	-23.62	-
6	20.258	1.00	42.32	-	43.32	-	60.00	50.00	-16.68	-

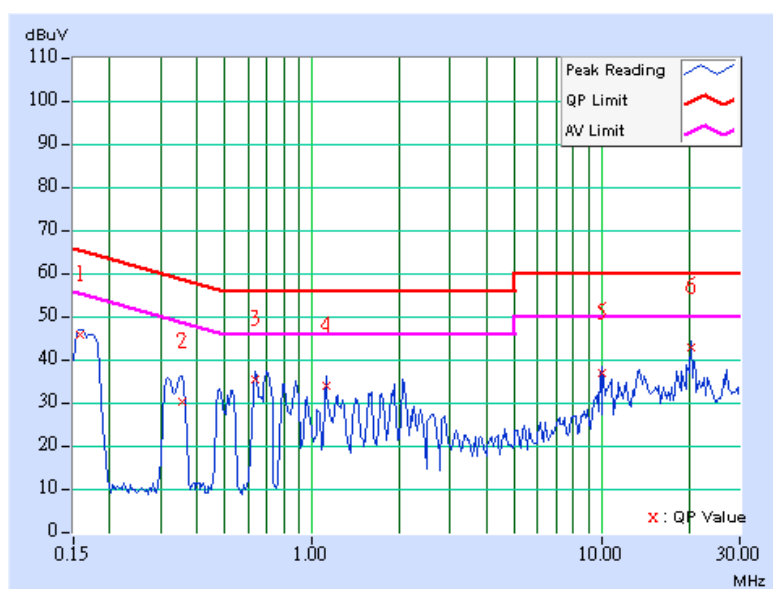
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.11	44.87	-	44.98	-	65.58	55.58	-20.60	-
2	0.357	0.12	29.54	-	29.66	-	58.80	48.80	-29.14	-
3	0.634	0.16	34.70	-	34.86	-	56.00	46.00	-21.14	-
4	1.121	0.23	33.18	-	33.41	-	56.00	46.00	-22.59	-
5	10.059	0.54	36.16	-	36.70	-	60.00	50.00	-23.30	-
6	20.258	0.99	42.07	-	43.06	-	60.00	50.00	-16.94	-

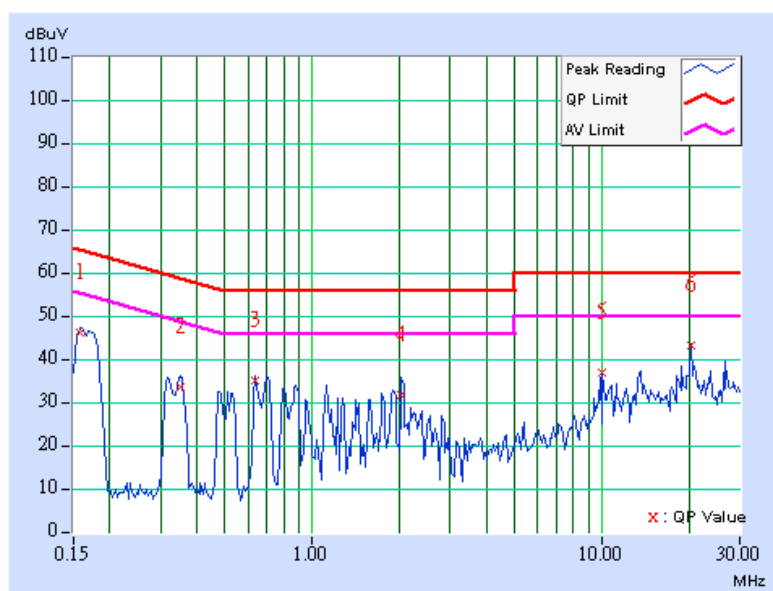
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.11	45.37	-	45.48	-	65.58	55.58	-20.10	-
2	0.353	0.12	32.75	-	32.87	-	58.89	48.89	-26.02	-
3	0.634	0.16	34.28	-	34.44	-	56.00	46.00	-21.56	-
4	2.031	0.25	31.00	-	31.25	-	56.00	46.00	-24.75	-
5	10.063	0.44	36.06	-	36.50	-	60.00	50.00	-23.50	-
6	20.258	1.00	42.34	-	43.34	-	60.00	50.00	-16.66	-

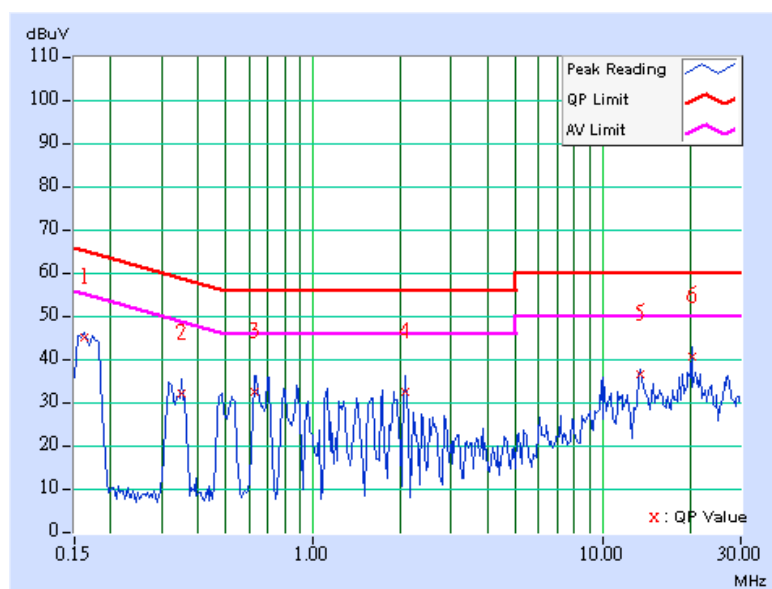
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	William Chien

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.11	44.06	-	44.17	-	65.38	55.38	-21.21	-
2	0.353	0.12	31.32	-	31.44	-	58.89	48.89	-27.45	-
3	0.630	0.16	31.63	-	31.79	-	56.00	46.00	-24.21	-
4	2.086	0.25	31.77	-	32.02	-	56.00	46.00	-23.98	-
5	13.418	0.62	35.61	-	36.23	-	60.00	50.00	-23.77	-
6	20.320	0.99	39.86	-	40.85	-	60.00	50.00	-19.15	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Jan. 07, 2006
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 29, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Jan. 05, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170242	Jan. 23, 2006
Preamplifier Agilent	8447D	2944A10631	Nov. 17, 2005
Preamplifier Agilent	8449B	3008A01960	Nov. 14, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219272/4	Jan. 26, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219275/4	Jan. 26, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 3.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The IC Site Registration No. is IC4924-4.

4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 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 is a broadband antenna, and its 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. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

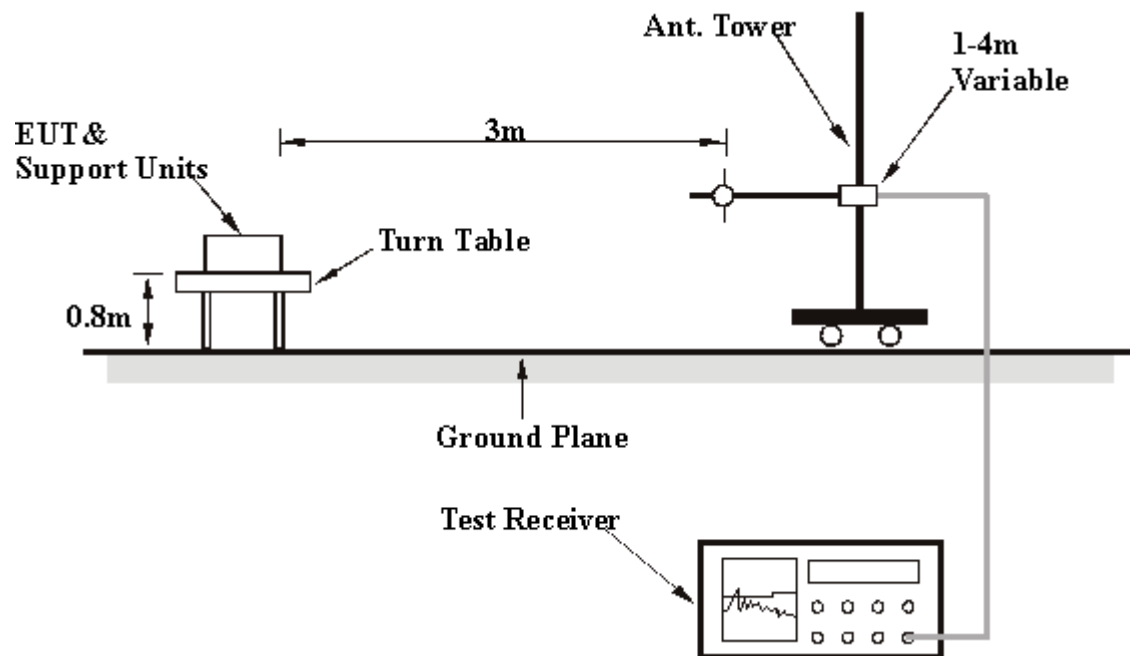
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS_ANTENNA SAA05-22063A (BELOW 1GHz TEST)

Below 1GHz Worst-Case Data (Power from POE)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A1	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	51.38	34.03 QP	40.00	-5.97	1.50 H	88	19.56	14.46
2	199.12	34.44 QP	43.50	-9.06	1.00 H	232	23.09	11.34
3	399.34	40.41 QP	46.00	-5.59	1.00 H	94	23.70	16.71
4	667.60	44.76 QP	46.00	-1.24	2.00 H	190	23.10	21.66
5	799.78	37.65 QP	46.00	-8.35	1.00 H	235	14.19	23.46
6	933.91	40.78 QP	46.00	-5.22	1.00 H	220	15.62	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	37.67 QP	40.00	-2.33	1.00 V	181	22.70	14.96
2	199.12	35.86 QP	43.50	-7.64	2.00 V	271	24.52	11.34
3	399.34	37.91 QP	46.00	-8.09	1.00 V	241	21.20	16.71
4	533.47	40.73 QP	46.00	-5.27	1.00 V	208	21.56	19.17
5	667.60	44.59 QP	46.00	-1.41	1.50 V	196	22.93	21.66
6	933.91	39.91 QP	46.00	-6.09	1.00 V	115	14.75	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_57-12-1500)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B1	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	53.33	33.60 QP	40.00	-6.40	1.00 H	61	19.33	14.27
2	133.03	34.97 QP	43.50	-8.53	2.00 H	154	21.08	13.89
3	300.20	39.58 QP	46.00	-6.42	1.00 H	136	25.16	14.41
4	667.60	44.18 QP	46.00	-1.82	2.00 H	205	22.52	21.66
5	799.78	42.01 QP	46.00	-3.99	1.00 H	142	18.55	23.46
6	933.91	41.49 QP	46.00	-4.51	2.00 H	178	16.32	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	38.68 QP	40.00	-1.32	1.25 V	157	24.67	14.01
2	399.34	41.71 QP	46.00	-4.29	1.00 V	181	24.99	16.71
3	533.47	42.61 QP	46.00	-3.39	1.00 V	178	23.44	19.17
4	667.60	44.44 QP	46.00	-1.56	1.50 V	154	22.78	21.66
5	799.78	38.21 QP	46.00	-7.79	1.00 V	115	14.75	23.46
6	933.91	39.43 QP	46.00	-6.57	2.00 V	145	14.26	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_VE20-120)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C1	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	199.12	35.00 QP	43.50	-8.50	1.00 H	235	23.66	11.34
2	232.16	36.83 QP	46.00	-9.17	1.00 H	103	24.35	12.48
3	399.34	40.22 QP	46.00	-5.78	1.00 H	106	23.50	16.71
4	667.60	43.14 QP	46.00	-2.86	1.50 H	154	21.48	21.66
5	799.78	36.90 QP	46.00	-9.10	1.00 H	226	13.44	23.46
6	933.91	41.28 QP	46.00	-4.72	2.00 H	223	16.12	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	38.14 QP	40.00	-1.86	2.00 V	136	23.18	14.96
2	199.12	36.09 QP	43.50	-7.41	1.00 V	274	24.75	11.34
3	399.34	38.23 QP	46.00	-7.77	1.00 V	235	21.52	16.71
4	533.47	41.05 QP	46.00	-4.95	1.00 V	211	21.88	19.17
5	667.60	44.53 QP	46.00	-1.47	1.50 V	196	22.87	21.66
6	933.91	40.34 QP	46.00	-5.66	1.00 V	112	15.17	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

4.2.8 TEST RESULTS_ ANTENNA SDW0939A1 (BELOW 1GHz TEST)

Below 1GHz Worst-Case Data (Power from POE)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	199.12	34.53 QP	43.50	-8.97	1.00 H	256	23.19	11.34
2	232.16	36.48 QP	46.00	-9.52	1.25 H	106	24.00	12.48
3	399.34	40.38 QP	46.00	-5.62	1.00 H	97	23.66	16.71
4	667.60	43.30 QP	46.00	-2.70	1.00 H	154	21.64	21.66
5	799.78	36.76 QP	46.00	-9.24	1.50 H	145	13.30	23.46
6	933.91	41.07 QP	46.00	-4.93	1.00 H	223	15.91	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	38.11 QP	40.00	-1.89	1.25 V	172	23.15	14.96
2	199.12	35.75 QP	43.50	-7.75	1.00 V	292	24.41	11.34
3	399.34	38.33 QP	46.00	-7.67	1.00 V	244	21.62	16.71
4	533.47	40.97 QP	46.00	-5.03	1.00 V	202	21.80	19.17
5	667.60	44.16 QP	46.00	-1.84	1.50 V	196	22.50	21.66
6	933.91	40.30 QP	46.00	-5.70	1.00 V	112	15.13	25.16

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_57-12-1500)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	300.20	36.35 QP	46.00	-9.65	1.00 H	142	21.94	14.41
2	399.34	39.01 QP	46.00	-6.99	1.00 H	205	22.30	16.71
3	533.47	41.93 QP	46.00	-4.07	2.00 H	355	22.76	19.17
4	667.60	44.46 QP	46.00	-1.54	2.00 H	202	22.80	21.66
5	799.78	40.39 QP	46.00	-5.61	1.00 H	154	16.93	23.46
6	933.91	42.50 QP	46.00	-3.50	1.50 H	184	17.34	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	38.36 QP	40.00	-1.64	1.00 V	229	24.35	14.01
2	199.12	35.54 QP	43.50	-7.96	1.00 V	172	24.20	11.34
3	399.34	41.50 QP	46.00	-4.50	1.50 V	244	24.78	16.71
4	533.47	40.37 QP	46.00	-5.63	1.00 V	250	21.20	19.17
5	667.60	44.13 QP	46.00	-1.87	1.50 V	232	22.47	21.66
6	933.91	40.40 QP	46.00	-5.60	1.00 V	226	15.24	25.16

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_VE20-120)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	39.72	30.38 QP	40.00	-9.62	1.00 H	148	15.12	15.26
2	199.12	34.48 QP	43.50	-9.02	1.50 H	247	23.14	11.34
3	232.16	36.64 QP	46.00	-9.36	1.00 H	112	24.16	12.48
4	399.34	40.25 QP	46.00	-5.75	1.00 H	97	23.54	16.71
5	667.60	43.42 QP	46.00	-2.58	1.00 H	157	21.76	21.66
6	933.91	41.12 QP	46.00	-4.88	2.00 H	106	15.96	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	37.08 QP	40.00	-2.92	1.00 V	64	22.12	14.96
2	199.12	36.22 QP	43.50	-7.28	1.50 V	259	24.88	11.34
3	399.34	37.88 QP	46.00	-8.12	1.00 V	232	21.16	16.71
4	533.47	40.76 QP	46.00	-5.24	1.00 V	208	21.59	19.17
5	667.60	44.25 QP	46.00	-1.75	1.50 V	193	22.59	21.66
6	933.91	39.95 QP	46.00	-6.05	1.00 V	112	14.78	25.16

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

4.2.9 TEST RESULTS_ ANTENNA SAA05-22056A (BELOW 1GHz TEST)

Below 1GHz Worst-Case Data (Power from POE)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	39.72	31.37 QP	40.00	-8.63	1.00 H	217	16.11	15.26
2	199.12	34.97 QP	43.50	-8.53	1.50 H	235	23.63	11.34
3	232.16	37.26 QP	46.00	-8.74	1.00 H	115	24.78	12.48
4	399.34	40.23 QP	46.00	-5.77	1.00 H	97	23.51	16.71
5	667.60	44.48 QP	46.00	-1.52	2.00 H	187	22.82	21.66
6	933.91	40.82 QP	46.00	-5.18	1.00 H	103	15.66	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	37.91 QP	40.00	-2.09	2.00 V	181	22.95	14.96
2	166.07	36.49 QP	43.50	-7.01	1.00 V	334	22.17	14.32
3	399.34	38.31 QP	46.00	-7.69	1.00 V	241	21.60	16.71
4	533.47	41.32 QP	46.00	-4.68	1.00 V	205	22.16	19.17
5	667.60	44.12 QP	46.00	-1.88	1.50 V	277	22.46	21.66
6	933.91	39.68 QP	46.00	-6.32	1.00 V	112	14.51	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_57-12-1500)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	300.20	37.21 QP	46.00	-8.79	1.25 H	130	22.80	14.41
2	399.34	38.17 QP	46.00	-7.83	1.00 H	199	21.45	16.71
3	533.47	41.73 QP	46.00	-4.27	2.00 H	343	22.56	19.17
4	667.60	44.76 QP	46.00	-1.24	2.00 H	202	23.10	21.66
5	799.78	39.26 QP	46.00	-6.74	1.00 H	157	15.81	23.46
6	933.91	40.40 QP	46.00	-5.60	2.00 H	208	15.24	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	38.43 QP	40.00	-1.57	1.25 V	226	24.42	14.01
2	199.12	35.97 QP	43.50	-7.53	1.00 V	178	24.63	11.34
3	399.34	41.12 QP	46.00	-4.88	1.00 V	244	24.41	16.71
4	533.47	38.88 QP	46.00	-7.12	1.50 V	262	19.71	19.17
5	667.60	44.83 QP	46.00	-1.17	1.00 V	268	23.17	21.66
6	933.91	39.75 QP	46.00	-6.25	2.00 V	181	14.59	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

Below 1GHz Worst-Case Data (Power from AC adapter_VE20-120)

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	32.62 QP	40.00	-7.38	1.25 H	103	17.66	14.96
2	166.07	35.81 QP	43.50	-7.69	1.00 H	109	21.49	14.32
3	399.34	39.90 QP	46.00	-6.10	1.00 H	103	23.19	16.71
4	533.47	38.35 QP	46.00	-7.65	2.00 H	286	19.18	19.17
5	667.60	44.97 QP	46.00	-1.03	2.00 H	202	23.31	21.66
6	933.91	40.84 QP	46.00	-5.16	1.00 H	106	15.67	25.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.78	38.37 QP	40.00	-1.63	2.00 V	157	23.41	14.96
2	199.12	35.95 QP	43.50	-7.55	1.00 V	301	24.61	11.34
3	399.34	38.35 QP	46.00	-7.65	1.00 V	232	21.63	16.71
4	533.47	40.93 QP	46.00	-5.07	1.00 V	205	21.77	19.17
5	667.60	44.73 QP	46.00	-1.27	1.50 V	196	23.07	21.66
6	933.91	39.87 QP	46.00	-6.13	1.00 V	109	14.71	25.16

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value

4.2.10 TEST RESULTS ANTENNA SAA05-22063A (ABOVE 1GHz TEST)

802.11b DSSS modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.12 PK	74.00	-30.88	1.02 H	19	15.57	27.55
2	2390.00	42.55 PK	74.00	-31.45	1.30 H	66	10.68	31.87
3	*2412.00	99.95 PK			1.30 H	66	67.99	31.96
3	*2412.00	91.79 AV			1.30 H	66	59.83	31.96
4	4824.00	47.61 PK	74.00	-26.39	1.00 H	210	9.78	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.17 PK	74.00	-28.83	1.01 V	211	17.62	27.55
2	2320.00	61.34 PK	74.00	-12.66	1.00 V	352	29.73	31.61
2	2320.00	51.28 AV	54.00	-2.72	1.00 V	352	19.67	31.61
3	2390.00	57.20 PK	74.00	-16.80	1.20 V	347	25.33	31.87
3	2390.00	48.97 AV	54.00	-5.03	1.20 V	347	17.10	31.87
4	*2412.00	114.60 PK			1.20 V	347	82.64	31.96
4	*2412.00	106.37 AV			1.20 V	347	74.41	31.96
5	4824.00	57.53 PK	74.00	-16.47	1.06 V	7	19.70	37.83
5	4824.00	46.85 AV	54.00	-7.15	1.06 V	7	9.02	37.83

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.22 PK	74.00	-29.78	1.00 H	29	16.67	27.55
2	*2437.00	99.72 PK			1.28 H	72	67.66	32.06
2	*2437.00	91.54 AV			1.28 H	72	59.48	32.06
3	4874.00	47.06 PK	74.00	-26.94	1.03 H	225	9.08	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.24 PK	74.00	-28.76	1.00 V	215	17.69	27.55
2	2320.00	61.30 PK	74.00	-12.70	1.02 V	358	29.69	31.61
2	2320.00	51.24 AV	54.00	-2.76	1.02 V	358	19.63	31.61
3	*2437.00	114.32 PK			1.14 V	0	82.26	32.06
3	*2437.00	105.97 AV			1.14 V	0	73.91	32.06
4	4874.00	57.69 PK	74.00	-16.31	1.02 V	11	19.71	37.98
4	4874.00	46.93 AV	54.00	-7.07	1.02 V	11	8.95	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.09 PK	74.00	-29.91	1.01 H	34	16.54	27.55
2	*2462.00	99.65 PK			1.25 H	81	67.49	32.16
2	*2462.00	91.36 AV			1.25 H	81	59.20	32.16
3	2483.50	40.10 PK	74.00	-33.90	1.25 H	81	7.86	32.24
4	4924.00	47.11 PK	74.00	-26.89	1.04 H	217	8.97	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.07 PK	74.00	-28.93	1.09 V	241	17.52	27.55
2	2320.00	61.27 PK	74.00	-12.73	1.02 V	359	29.66	31.61
2	2320.00	51.19 AV	54.00	-2.81	1.02 V	359	19.58	31.61
3	*2462.00	114.29 PK			1.18 V	357	82.13	32.16
3	*2462.00	105.92 AV			1.18 V	357	73.76	32.16
4	2483.50	54.74 PK	74.00	-19.26	1.18 V	357	22.50	32.24
4	2483.50	46.37 AV	54.00	-7.63	1.18 V	357	14.13	32.24
5	4924.00	57.51 PK	74.00	-16.49	1.05 V	11	19.37	38.14
5	4924.00	46.82 AV	54.00	-7.18	1.05 V	11	8.68	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

802.11g OFDM modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.87 PK	74.00	-29.13	1.09 H	237	17.32	27.55
2	2390.00	43.89 PK	74.00	-30.11	1.98 H	276	12.02	31.87
3	*2412.00	94.57 PK			1.98 H	276	62.61	31.96
3	*2412.00	84.36 AV			1.98 H	276	52.40	31.96
4	4824.00	47.96 PK	74.00	-26.04	1.03 H	279	10.13	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.83 PK	74.00	-28.17	1.01 V	289	18.28	27.55
2	2320.00	61.97 PK	74.00	-12.03	1.00 V	235	30.36	31.61
2	2320.00	51.67 AV	54.00	-2.33	1.00 V	235	20.06	31.61
3	2390.00	56.48 PK	74.00	-17.52	1.00 V	37	24.61	31.87
3	2390.00	46.45 AV	54.00	-7.55	1.00 V	37	14.58	31.87
4	*2412.00	107.16 PK			1.00 V	37	75.20	31.96
4	*2412.00	97.13 AV			1.00 V	37	65.17	31.96
5	4824.00	48.56 PK	74.00	-25.44	1.05 V	243	10.73	37.83

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.07 PK	74.00	-28.93	1.12 H	241	17.52	27.55
2	*2437.00	93.61 PK			1.96 H	277	61.55	32.06
2	*2437.00	83.42 AV			1.96 H	277	51.36	32.06
3	4874.00	47.52 PK	74.00	-26.48	1.03 H	217	9.54	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.89 PK	74.00	-27.11	1.12 V	195	19.34	27.55
2	2320.00	61.89 PK	74.00	-12.11	1.06 V	215	30.28	31.61
2	2320.00	51.58 AV	54.00	-2.42	1.06 V	215	19.97	31.61
3	*2437.00	106.08 PK			1.00 V	40	74.02	32.06
3	*2437.00	96.29 AV			1.00 V	40	64.23	32.06
4	4874.00	48.36 PK	74.00	-25.64	1.01 V	251	10.38	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	CI	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.63 PK	74.00	-29.37	1.12 H	87	17.08	27.55
2	*2462.00	94.65 PK			1.90 H	265	62.49	32.16
2	*2462.00	84.44 AV			1.90 H	265	52.28	32.16
3	2483.50	41.82 PK	74.00	-32.18	1.90 H	265	9.58	32.24
4	4924.00	47.75 PK	74.00	-26.25	1.03 H	237	9.61	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.74 PK	74.00	-28.26	1.00 V	235	18.19	27.55
2	2320.00	61.86 PK	74.00	-12.14	1.02 V	252	30.25	31.61
2	2320.00	51.53 AV	54.00	-2.47	1.02 V	252	19.92	31.61
3	*2462.00	106.11 PK			1.01 V	43	73.95	32.16
3	*2462.00	96.32 AV			1.01 V	43	64.16	32.16
4	2483.50	53.32 PK	74.00	-20.68	1.01 V	43	21.08	32.24
4	2483.50	43.53 AV	54.00	-10.47	1.01 V	43	11.29	32.24
5	4924.00	48.22 PK	74.00	-25.78	1.01 V	290	10.08	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

4.2.11 TEST RESULTS_ ANTENNA SDW0939A1 (ABOVE 1GHz TEST)

802.11b DSSS modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.27 PK	74.00	-30.73	1.01 H	211	15.72	27.55
2	2390.00	46.50 PK	74.00	-27.50	1.41 H	237	14.63	31.87
3	*2412.00	101.21 PK			1.41 H	237	69.25	31.96
3	*2412.00	93.02 AV			1.41 H	237	61.06	31.96
4	4824.00	48.31 PK	74.00	-25.69	1.08 H	156	10.48	37.83
4	4824.00	37.87 AV	54.00	-16.13	1.08 H	156	0.04	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.75 PK	74.00	-29.25	1.01 V	123	17.20	27.55
2	2390.00	57.72 PK	74.00	-16.28	1.03 V	170	25.85	31.87
2	2390.00	49.49 AV	54.00	-4.51	1.03 V	170	17.62	31.87
3	*2412.00	112.43 PK			1.03 V	170	80.47	31.96
3	*2412.00	104.20 AV			1.03 V	170	72.24	31.96
4	4824.00	55.96 PK	74.00	-18.04	1.07 V	182	18.13	37.83
4	4824.00	47.43 AV	54.00	-6.57	1.07 V	182	9.60	37.83

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.87 PK	74.00	-30.13	1.02 H	155	16.32	27.55
2	*2437.00	101.08 PK			1.38 H	233	69.02	32.06
2	*2437.00	92.87 AV			1.38 H	233	60.81	32.06
3	4874.00	48.65 PK	74.00	-25.35	1.04 H	115	10.67	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.61 PK	74.00	-29.39	1.06 V	153	17.06	27.55
2	*2437.00	112.28 PK			1.00 V	170	80.22	32.06
2	*2437.00	104.10 AV			1.00 V	170	72.04	32.06
3	4874.00	55.87 PK	74.00	-18.13	1.00 V	159	17.89	37.98
3	4874.00	47.21 AV	54.00	-6.79	1.00 V	159	9.23	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.28 PK	74.00	-30.72	1.06 H	84	15.73	27.55
2	*2462.00	101.19 PK			1.38 H	241	69.03	32.16
2	*2462.00	93.00 AV			1.38 H	241	60.84	32.16
3	2483.50	44.50 PK	74.00	-29.50	1.38 H	241	12.26	32.24
4	4924.00	48.27 PK	74.00	-25.73	1.00 H	132	10.13	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.82 PK	74.00	-29.18	1.06 V	210	17.27	27.55
2	*2462.00	112.35 PK			1.00 V	172	80.19	32.16
2	*2462.00	104.22 AV			1.00 V	172	72.06	32.16
3	2483.50	55.66 PK	74.00	-18.34	1.00 V	172	23.42	32.24
3	2483.50	47.53 AV	54.00	-6.47	1.00 V	172	15.29	32.24
4	4924.00	55.72 PK	74.00	-18.28	1.02 V	149	17.58	38.14
4	4924.00	47.31 AV	54.00	-6.69	1.02 V	149	9.17	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

802.11g OFDM modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	41.42 PK	74.00	-32.58	1.00 H	183	13.87	27.55
1	1066.00	35.85 AV	54.00	-18.15	1.00 H	183	8.30	27.55
2	2390.00	42.04 PK	74.00	-31.96	1.00 H	143	10.17	31.87
3	*2412.00	89.94 PK			1.00 H	143	57.98	31.96
3	*2412.00	80.29 AV			1.00 H	143	48.33	31.96
4	4824.00	48.88 PK	74.00	-25.12	1.06 H	107	11.05	37.83
4	4824.00	35.36 AV	54.00	-18.64	1.06 H	107	-2.47	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.61 PK	74.00	-29.39	1.17 V	51	17.06	27.55
1	1066.00	39.36 AV	54.00	-14.64	1.17 V	51	11.81	27.55
2	2320.00	58.86 PK	74.00	-15.14	1.03 V	172	27.25	31.61
2	2320.00	48.99 AV	54.00	-5.01	1.03 V	172	17.38	31.61
3	2390.00	57.29 PK	74.00	-16.71	1.03 V	172	25.42	31.87
3	2390.00	47.32 AV	54.00	-6.68	1.03 V	172	15.45	31.87
4	*2412.00	105.19 PK			1.03 V	172	73.23	31.96
4	*2412.00	95.22 AV			1.03 V	172	63.26	31.96
5	2480.00	60.63 PK	74.00	-13.37	1.00 V	169	28.40	32.23
5	2480.00	51.29 AV	54.00	-2.71	1.00 V	169	19.06	32.23
6	4824.00	49.56 PK	74.00	-24.44	1.02 V	213	11.73	37.83
6	4824.00	35.47 AV	54.00	-18.53	1.02 V	213	-2.36	37.83

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	42.81 PK	74.00	-31.19	1.05 H	217	15.26	27.55
2	*2437.00	89.95 PK			1.28 H	130	57.89	32.06
2	*2437.00	80.29 AV			1.28 H	130	48.23	32.06
3	4874.00	48.75 PK	74.00	-25.25	1.03 H	100	10.77	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.76 PK	74.00	-29.24	1.15 V	66	17.21	27.55
2	*2437.00	104.65 PK			1.00 V	167	72.59	32.06
2	*2437.00	95.16 AV			1.00 V	167	63.10	32.06
3	4874.00	49.27 PK	74.00	-24.73	1.08 V	174	11.29	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C2	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	42.38 PK	74.00	-31.62	1.05 H	146	14.83	27.55
2	*2462.00	89.81 PK			1.01 H	144	57.65	32.16
2	*2462.00	80.18 AV			1.01 H	144	48.02	32.16
3	2483.50	40.21 PK	74.00	-33.79	1.01 H	144	7.97	32.24
4	4924.00	48.71 PK	74.00	-25.29	1.01 H	129	10.57	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.21 PK	74.00	-28.79	1.01 V	304	17.66	27.55
2	2400.00	61.14 PK	74.00	-12.86	1.00 V	173	29.23	31.91
2	2400.00	51.67 AV	54.00	-2.33	1.00 V	173	19.76	31.91
3	*2462.00	104.77 PK			1.00 V	173	72.61	32.16
3	*2462.00	94.86 AV			1.00 V	173	62.70	32.16
4	2483.50	55.17 PK	74.00	-18.83	1.00 V	173	22.93	32.24
4	2483.50	45.26 AV	54.00	-8.74	1.00 V	173	13.02	32.24
5	4924.00	49.26 PK	74.00	-24.74	1.02 V	240	11.12	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

4.2.12 TEST RESULTS_ ANTENNA SAA05-22056A (ABOVE 1GHz TEST)

802.11b DSSS modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.62 PK	74.00	-30.38	1.00 H	13	16.07	27.55
2	2390.00	47.65 PK	74.00	-26.35	1.31 H	276	15.78	31.87
3	*2412.00	102.75 PK			1.31 H	276	70.79	31.96
3	*2412.00	94.63 AV			1.31 H	276	62.67	31.96
4	4824.00	48.38 PK	74.00	-25.62	1.01 H	215	10.55	37.83
4	4824.00	36.10 AV	54.00	-17.90	1.01 H	215	-1.73	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.79 PK	74.00	-28.21	1.03 V	214	18.24	27.55
2	2320.00	62.38 PK	74.00	-11.62	1.03 V	214	30.77	31.61
2	2320.00	52.37 AV	54.00	-1.63	1.03 V	214	20.76	31.61
3	2390.00	60.92 PK	74.00	-13.08	1.04 V	358	29.05	31.87
3	2390.00	52.74 AV	54.00	-1.26	1.04 V	358	20.87	31.87
4	*2412.00	115.52 PK			1.04 V	358	83.56	31.96
4	*2412.00	107.34 AV			1.04 V	358	75.38	31.96
5	4824.00	58.86 PK	74.00	-15.14	1.03 V	6	21.03	37.83
5	4824.00	48.07 AV	54.00	-5.93	1.03 V	6	10.24	37.83

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.07 PK	74.00	-29.93	1.01 H	335	16.52	27.55
2	*2437.00	102.21 PK			1.30 H	277	70.15	32.06
2	*2437.00	94.16 AV			1.30 H	277	62.10	32.06
3	4874.00	47.87 PK	74.00	-26.13	1.00 H	206	9.89	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.21 PK	74.00	-27.79	1.02 V	231	18.66	27.55
2	2320.00	62.47 PK	74.00	-11.53	1.08 V	259	30.86	31.61
2	2320.00	52.44 AV	54.00	-1.56	1.08 V	259	20.83	31.61
3	*2437.00	115.45 PK			1.04 V	359	83.39	32.06
3	*2437.00	107.18 AV			1.04 V	359	75.12	32.06
4	4874.00	58.26 PK	74.00	-15.74	1.00 V	9	20.28	37.98
4	4874.00	47.71 AV	54.00	-6.29	1.00 V	9	9.73	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.37 PK	74.00	-29.63	1.03 H	217	16.82	27.55
2	*2462.00	102.56 PK			1.32 H	277	70.40	32.16
2	*2462.00	94.52 AV			1.32 H	277	62.36	32.16
3	2483.50	43.96 PK	74.00	-30.04	1.32 H	277	11.72	32.24
4	4924.00	48.61 PK	74.00	-25.39	1.03 H	217	10.47	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.65 PK	74.00	-27.35	1.00 V	217	19.10	27.55
2	2320.00	62.51 PK	74.00	-11.49	1.06 V	261	30.90	31.61
2	2320.00	52.47 AV	54.00	-1.53	1.06 V	261	20.86	31.61
3	*2462.00	115.76 PK			1.00 V	356	83.60	32.16
3	*2462.00	107.50 AV			1.00 V	356	75.34	32.16
4	2483.50	58.16 PK	74.00	-15.84	1.00 V	356	25.92	32.24
4	2483.50	49.90 AV	54.00	-4.10	1.00 V	356	17.66	32.24
5	4924.00	58.62 PK	74.00	-15.38	1.02 V	21	20.48	38.14
5	4924.00	48.04 AV	54.00	-5.96	1.02 V	21	9.90	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

802.11g OFDM modulation

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.22 PK	74.00	-29.78	1.10 H	279	16.67	27.55
2	2390.00	51.38 PK	74.00	-22.62	1.16 H	203	19.51	31.87
2	2390.00	41.02 AV	54.00	-12.98	1.16 H	203	9.15	31.87
3	*2412.00	97.47 PK			1.16 H	203	65.51	31.96
3	*2412.00	87.11 AV			1.16 H	203	55.15	31.96
4	4824.00	48.87 PK	74.00	-25.13	1.00 H	295	11.04	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.27 PK	74.00	-27.73	1.03 V	329	18.72	27.55
2	2320.00	62.40 PK	74.00	-11.60	1.15 V	342	30.79	31.61
2	2320.00	52.31 AV	54.00	-1.69	1.15 V	342	20.70	31.61
3	2390.00	62.37 PK	74.00	-11.63	1.07 V	351	30.50	31.87
3	2390.00	52.47 AV	54.00	-1.53	1.07 V	351	20.60	31.87
4	*2412.00	108.76 PK			1.07 V	351	76.80	31.96
4	*2412.00	98.86 AV			1.07 V	351	66.90	31.96
5	4824.00	48.73 PK	74.00	-25.27	1.06 V	225	10.90	37.83

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. The limit value is defined as per 15.247
6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.76 PK	74.00	-29.24	1.06 H	253	17.21	27.55
2	*2437.00	97.29 PK			1.15 H	206	65.23	32.06
2	*2437.00	87.03 AV			1.15 H	206	54.97	32.06
3	4874.00	48.26 PK	74.00	-25.74	1.10 H	216	10.28	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.28 PK	74.00	-27.72	1.02 V	213	18.73	27.55
2	2320.00	62.31 PK	74.00	-11.69	1.10 V	329	30.70	31.61
2	2320.00	52.27 AV	54.00	-1.73	1.10 V	329	20.66	31.61
3	*2437.00	108.23 PK			1.08 V	350	76.17	32.06
3	*2437.00	98.30 AV			1.08 V	350	66.24	32.06
4	4874.00	48.92 PK	74.00	-25.08	1.10 V	132	10.94	37.98

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency

EUT	AirMagnet SmartEdge Sensor	MEASUREMENT DETAIL	
MODEL	A5020	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 985hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	C3	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	43.67 PK	74.00	-30.33	1.09 H	254	16.12	27.55
2	*2462.00	97.84 PK			1.17 H	204	65.68	32.16
2	*2462.00	87.57 AV			1.17 H	204	55.41	32.16
3	2483.50	48.73 PK	74.00	-25.27	1.17 H	204	16.49	32.24
4	4924.00	47.96 PK	74.00	-26.04	1.12 H	213	9.82	38.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	46.27 PK	74.00	-27.73	1.09 V	57	18.72	27.55
2	2320.00	62.73 PK	74.00	-11.27	1.11 V	347	31.12	31.61
2	2320.00	52.63 AV	54.00	-1.37	1.11 V	347	21.02	31.61
3	*2462.00	108.59 PK			1.07 V	357	76.43	32.16
3	*2462.00	98.47 AV			1.07 V	357	66.31	32.16
4	2483.50	59.48 PK	74.00	-14.52	1.07 V	357	27.24	32.24
4	2483.50	49.36 AV	54.00	-4.64	1.07 V	357	17.12	32.24
5	4924.00	48.62 PK	74.00	-25.38	1.07 V	142	10.49	38.14
5	4924.00	36.10 AV	54.00	-17.90	1.07 V	142	-2.03	38.14

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 14, 2006

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

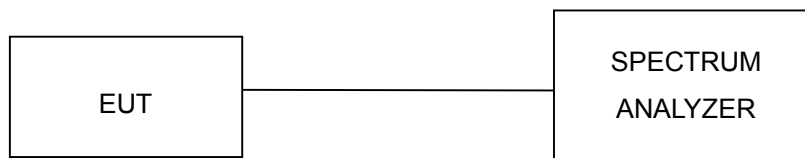
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

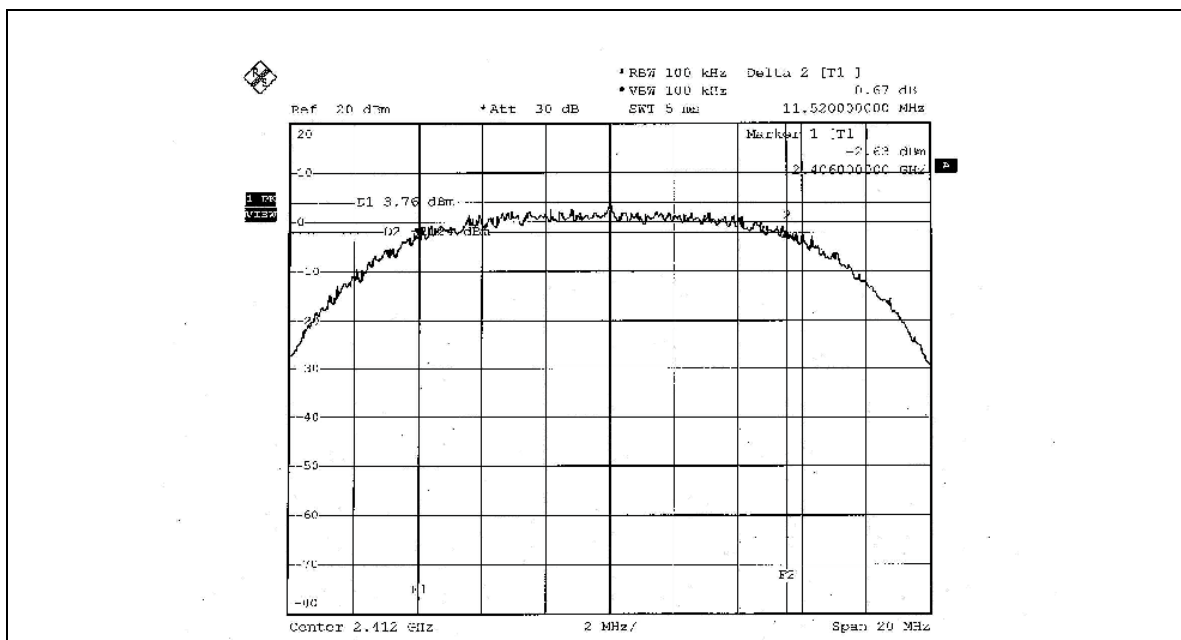
4.3.7 TEST RESULTS

802.11b DSSS modulation

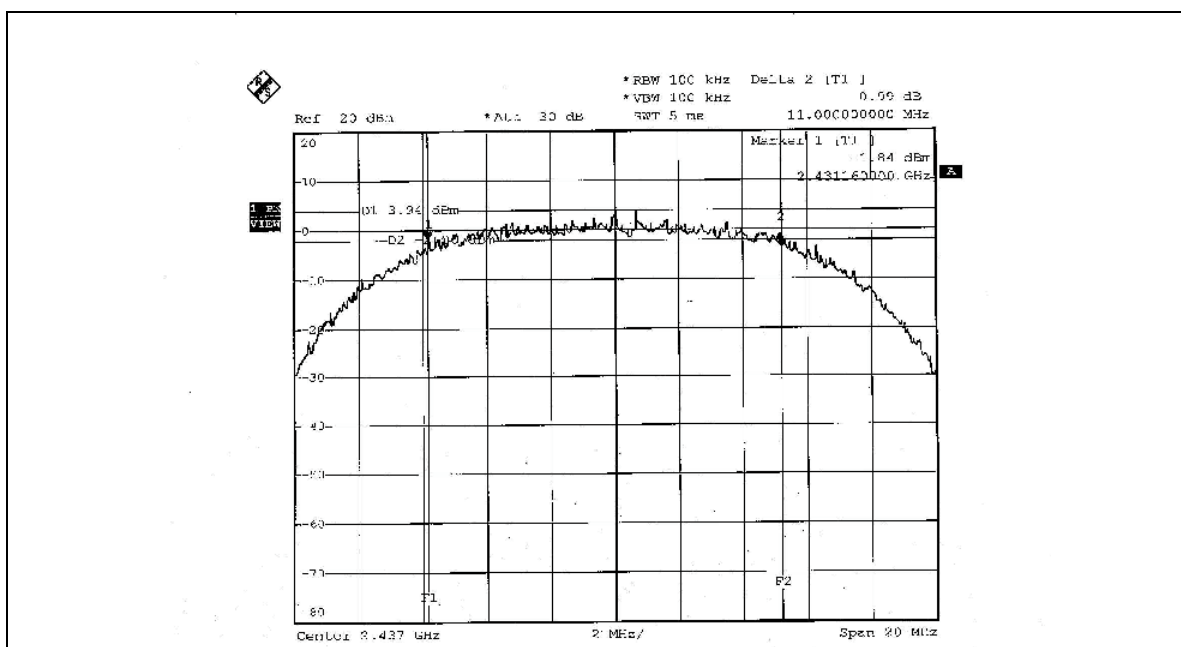
EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.52	0.5	PASS
6	2437	11.00	0.5	PASS
11	2462	11.56	0.5	PASS

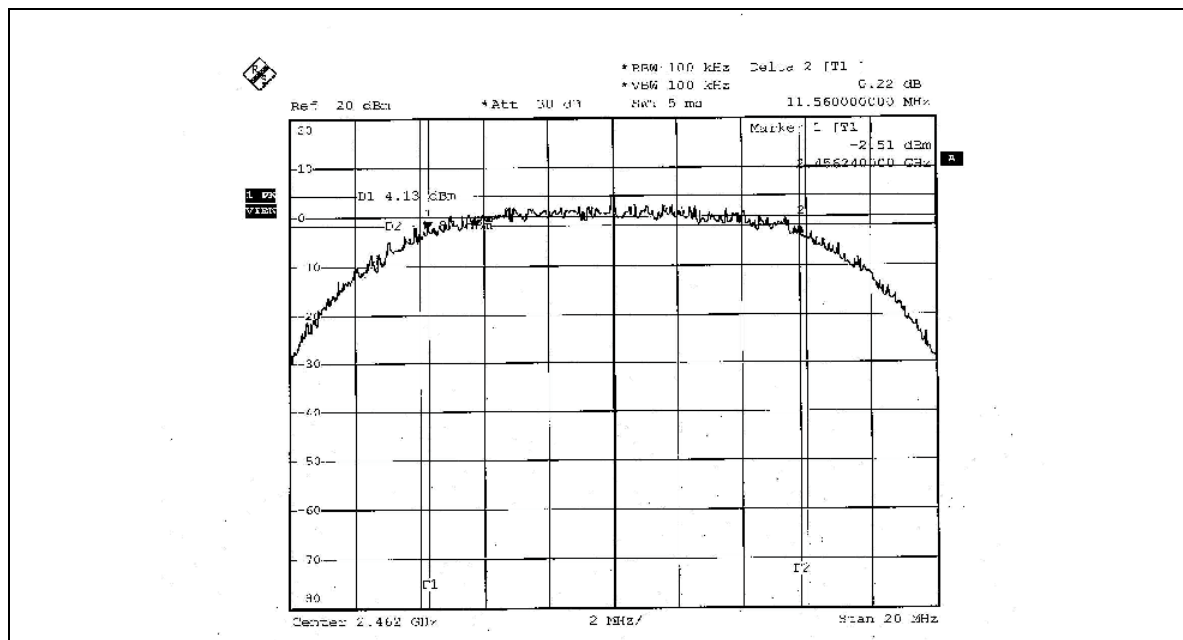
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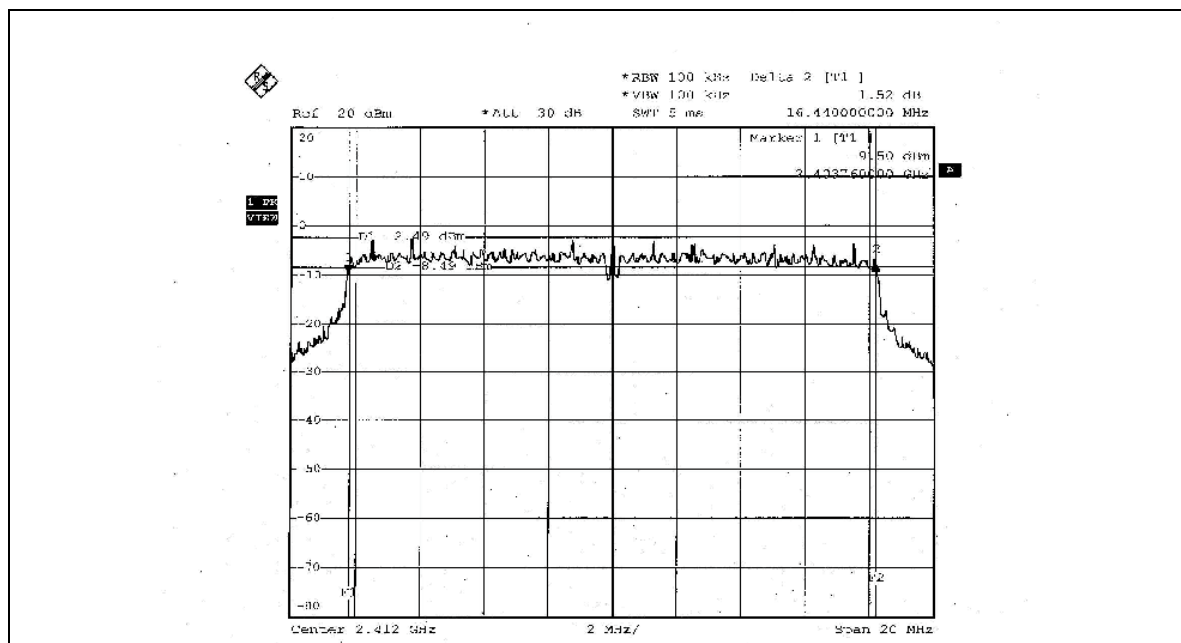


802.11g OFDM modulation

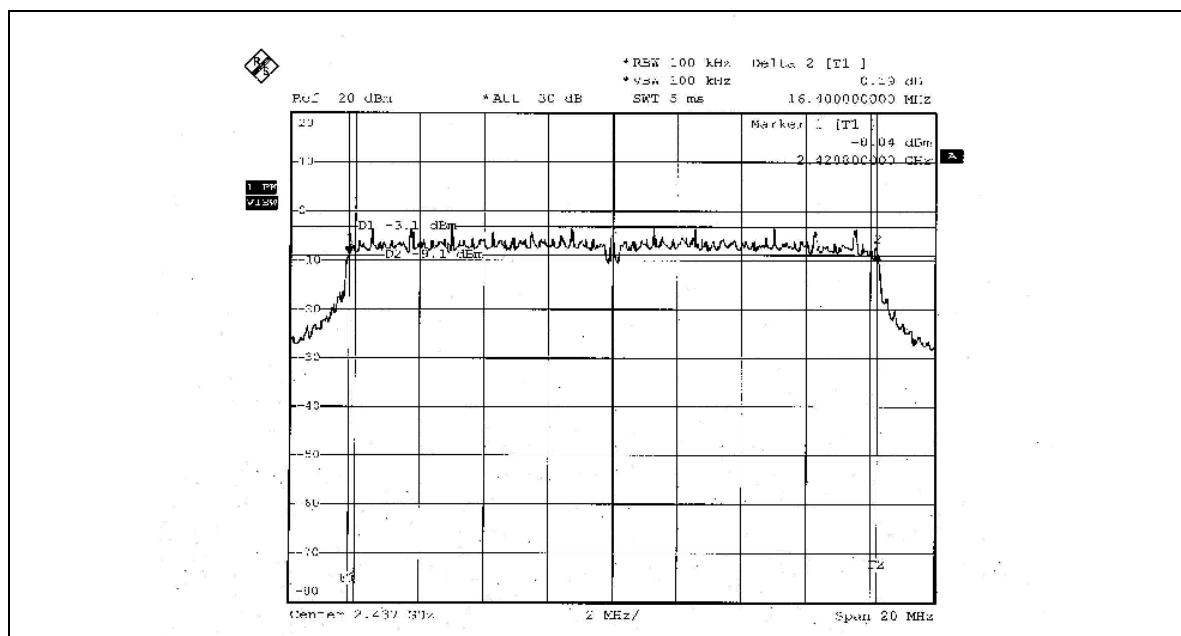
EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.44	0.5	PASS
6	2437	16.40	0.5	PASS
11	2462	16.40	0.5	PASS

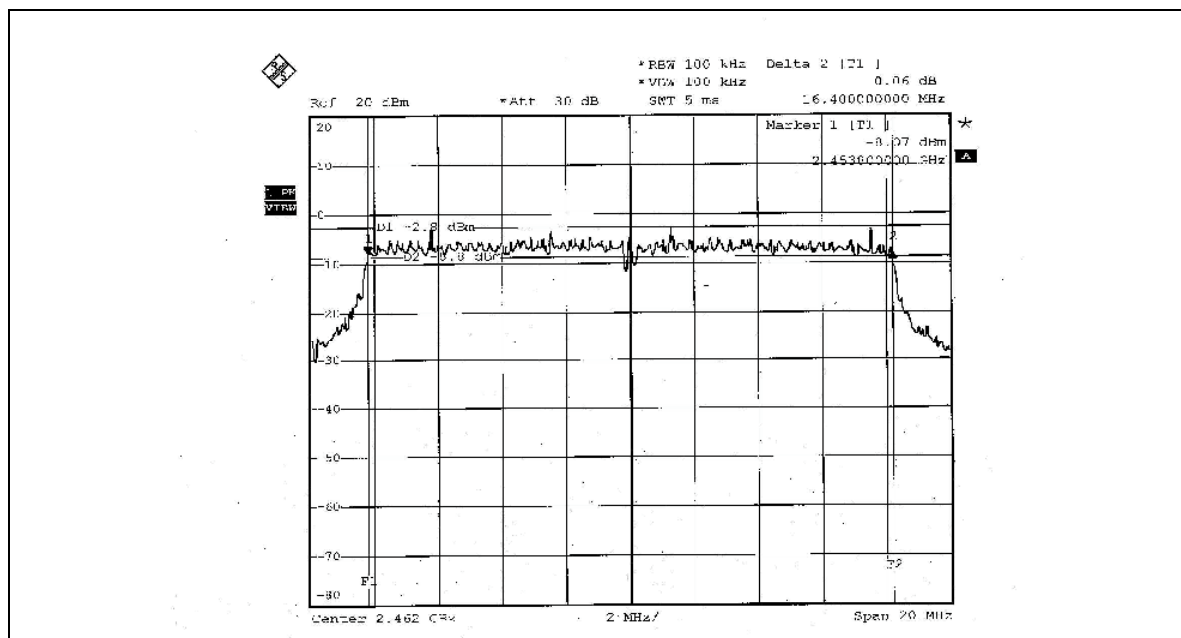
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4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.1 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP



4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS

802.11b DSSS modulation

EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	50.186	17.06	30	PASS
6	2437	51.168	17.09	30	PASS
11	2462	50.350	17.02	30	PASS

802.11g OFDM modulation

EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	25.293	14.03	30	PASS
6	2437	25.586	14.08	30	PASS
11	2462	25.410	14.05	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

NOTE:

The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

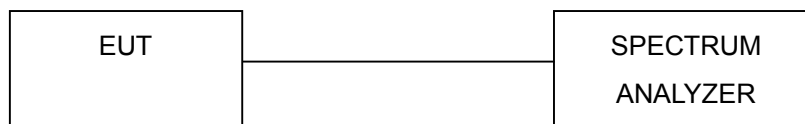
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

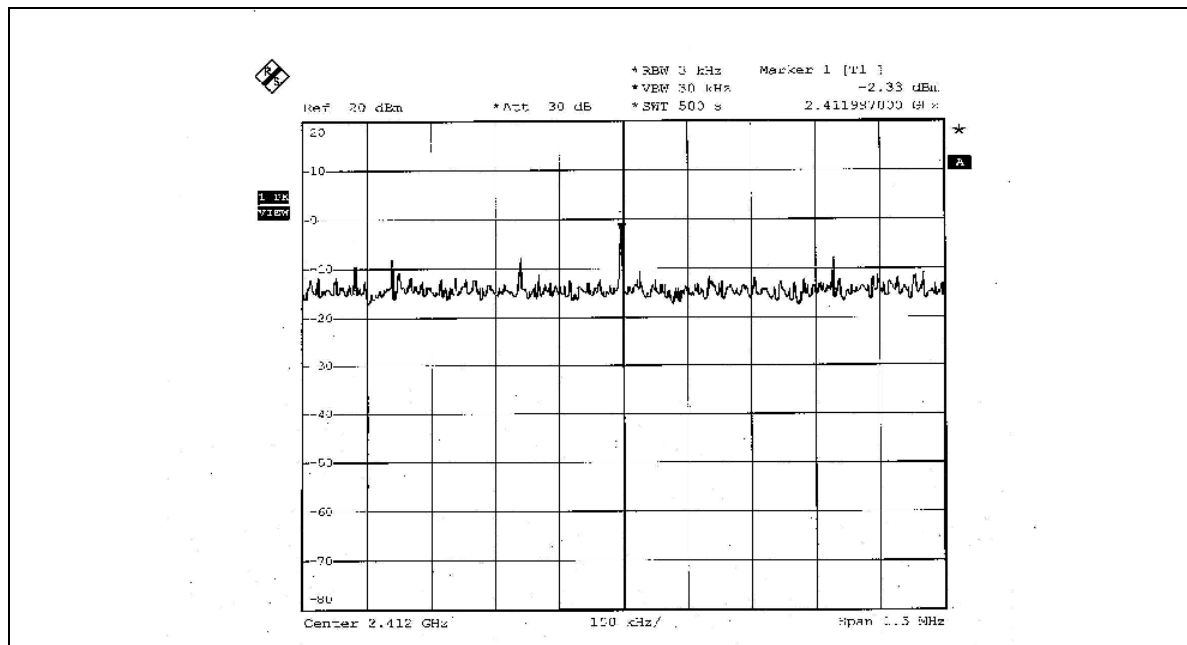
4.5.7 TEST RESULTS

802.11b DSSS modulation

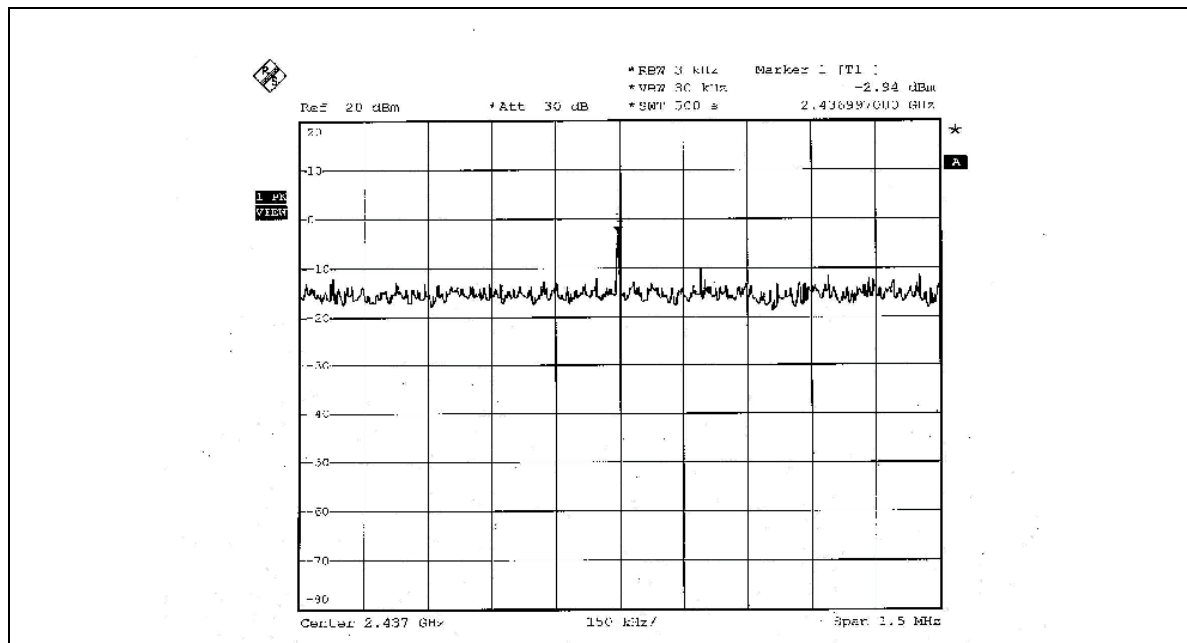
EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-2.33	8	PASS
6	2437	-2.94	8	PASS
11	2462	-2.67	8	PASS

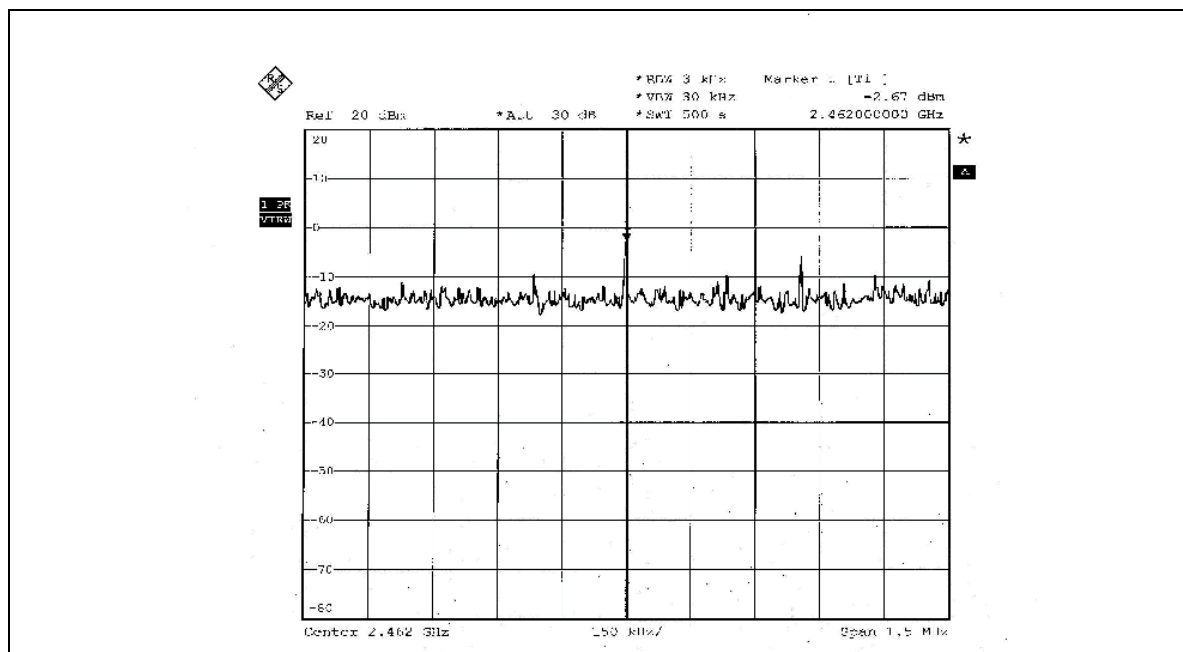
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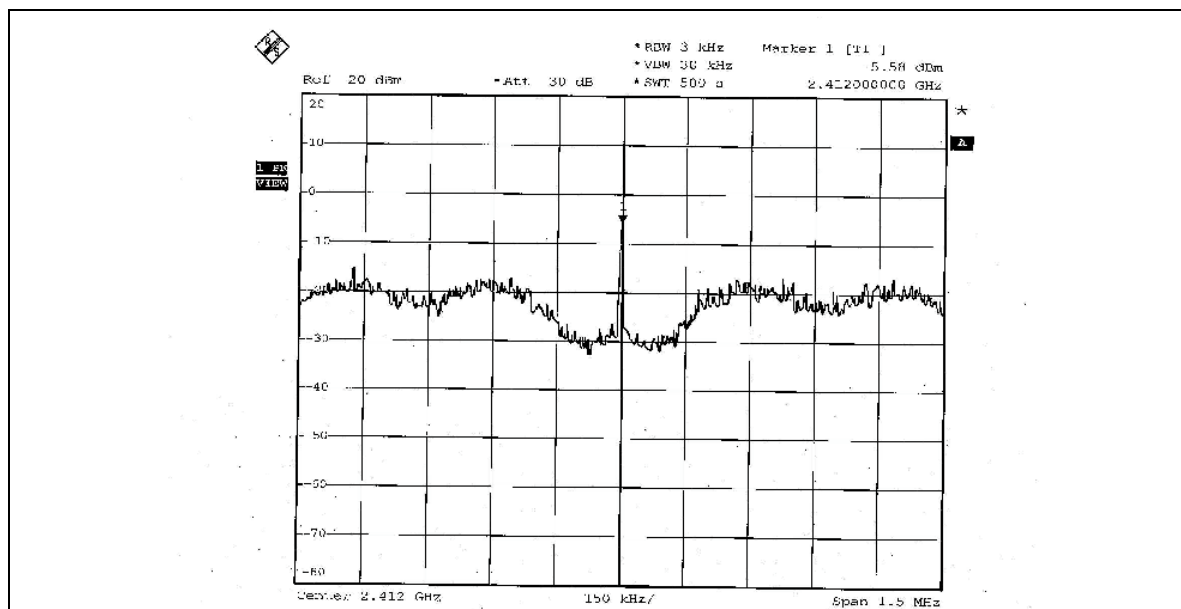


802.11g OFDM modulation

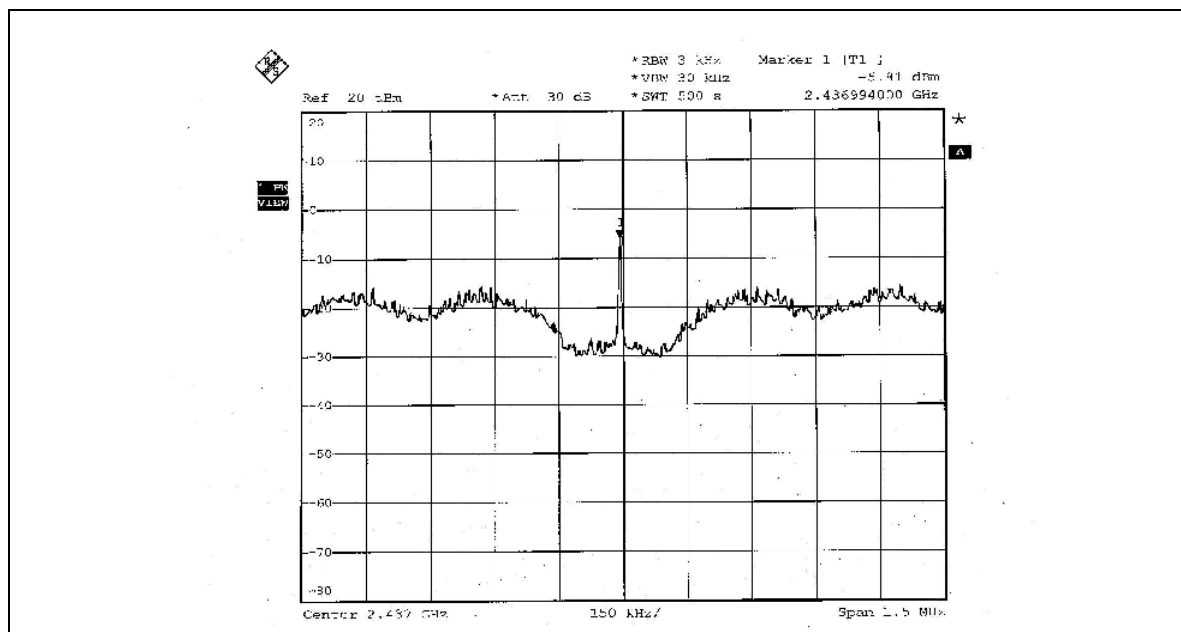
EUT	AirMagnet SmartEdge Sensor	MODEL	A5020
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg.C, 60%RH, 985hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-5.58	8	PASS
6	2437	-5.81	8	PASS
11	2462	-5.98	8	PASS

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CH 11

