



TEST REPORT

Product Name : SecuCam AV100

Model Number : RXO-B31

Applicant : AIPTEK International Inc.

Address : No. 19 Industry E. Rd. IV, Science-Based Industrial Park,
Hsin-Chu 300, Taiwan, R.O.C.

Received Date : Oct. 07, 2003

Tested Date : Oct. 08~ Nov. 21, 2003

Notes :

1. This report will be invalid if duplicated or photocopied in part.
2. This report refers only to the specimen(s) submitted to testing, and be invalid as seperately used.
3. This report is invalid without examination stamp and signature of this institute.
4. The tested specimen(s) will be preserved for thirty days from the data issued.
5. The report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.





Ecom Sertech Corp.

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Rd., ChuTung Chen, Hsinchu, Taiwan 310, R.O.C
TEL:886-3-5918012 FAX: 886-3-5825720

FCC ID : NRQRXOB31

Report No. : ER03-10-018FRF

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Test Report Certification

Product Name : SecuCam AV100
Model Number : RXO-B31
Applicant : AIPTEK International Inc.

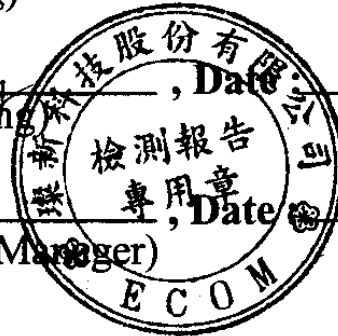
Measurement Standard :

47 CFR Part 15, Subpart B and Subpart C (Section 15.249),
ANSI C63.4-2001

Tested By : K. P. Pang, **Date** : Nov. 21, 2003
(K. P. Pang)

Reviewed By : Roger Sheng, **Date** : Nov. 21, 2003
(Roger Sheng)

Approved By : Chieh-De Tsai, **Date** : Nov. 21, 2003
(Chieh-De Tsai, Manager)



WE HEREBY CERTIFY THAT: The measurements shown in the attachment were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable. We assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.



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1. GENERAL INFORMATION

1.1 General Statement

MEASUREMENT DEVIATION : Comply with standard in full

TRACEABILITY : This test result is traceable to national or international std.

1.2 General Description of EUT & Power

MANUFACTURER : AIPTEK International Inc.
SAMPLE NAME : SecuCam AV100
MODEL NAME : RXO-B31
EUT Description : This SecuCam AV100 baby monitor is combined with one transmitter and one receiver. The LCD Monitor is a receiver and the Wireless Camera is a transmitter. To prevent interference when using two sets of EUT in the close proximity, four different frequency channels, 2411MHz to 2473MHz, is available to avoid the frequency conflict. These four channels can be switched manually.
FREQUENCY RANGE : 2400MHz to 2483.5MHz
CHANNEL NUMBER : 4
CHANNEL Frequency : 2411MHz, 2433MHz, 2453MHz, 2473MHz
TYPE OF MODULATION : FSK
FREQUENCY SELECTION : manual
EUT Description : 2.4GHz (FSK) Data Transceiver for SecuCam AV100
ANTENNA TYPE : L Type Antenna , Antenna Gain : 2dBi
POWER SOURCE : 6VDC (From Adapter)

Power Adapter (1) :

MANUFACTURER : ZTA ELECTRONICS CO., LTD.
MODEL NUMBER : MW41-0601000
INPUT POWER : 120VAC/60Hz, 11W
OUTPUT POWER : 6VDC, 1A

Power Adapter (2) :

MANUFACTURER : ZTA ELECTRONICS CO., LTD.
MODEL NUMBER : MW41-0601000
INPUT POWER : 120VAC/60Hz, 11W
OUTPUT POWER : 6VDC, 1A



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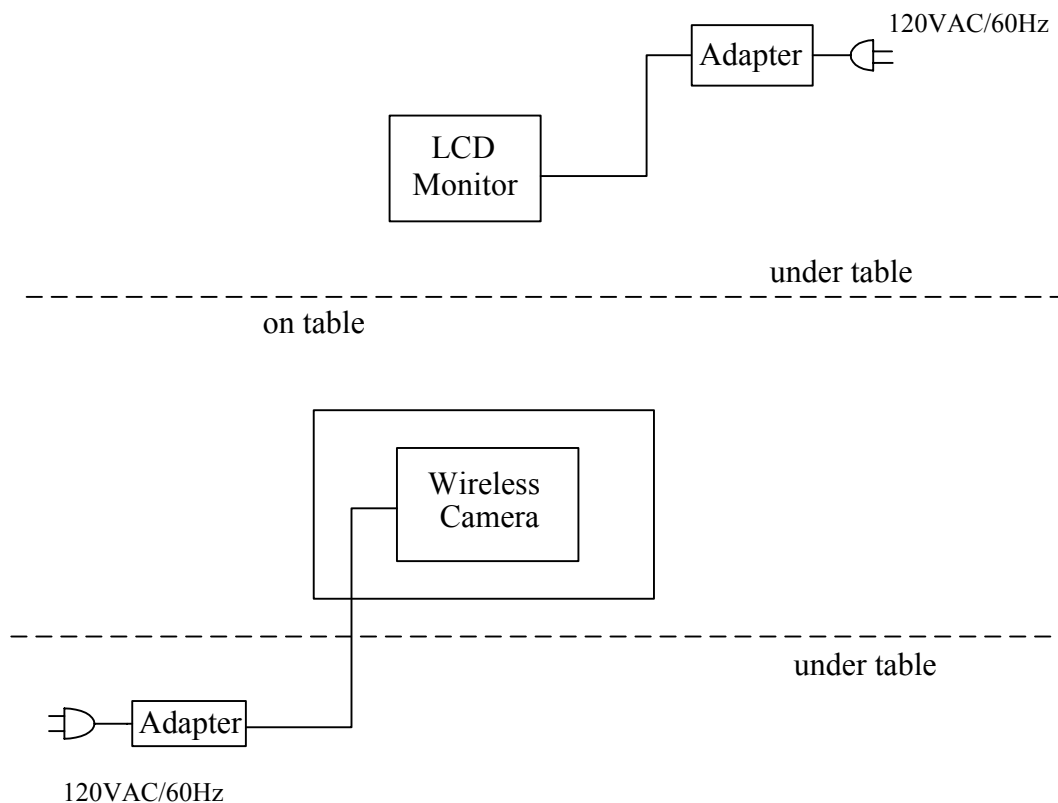
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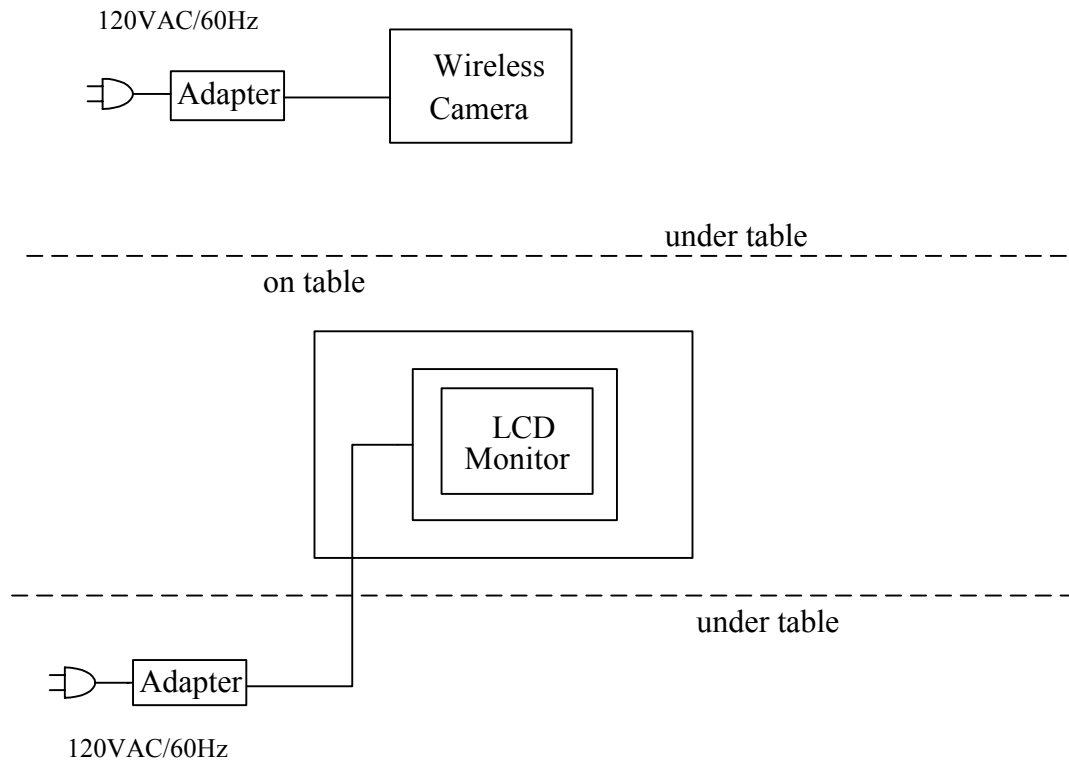
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1.3 EUT & Peripherals Setup Diagram

For transmitter test :



For receiver test :



1.4 EUT Operating Condition

1. Set up the EUT as described in set up diagram.
2. Select wanted TX channel at Wireless Camera manually.
3. Select the RX channel at LCD monitor to TX channel.
4. Check the image on LCD monitor screen.
5. Start test.

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1.5 Description of Test Site

SITE DESCRIPTION : FCC Certificate NO. : 90585

BSMI Certificate NO. : SL2-IN-E-0002

NVLAP Lab code : 200118-0

CNLA Certificate NO. : CNLA-ZL97018

VCCI Certificate NO. : R-1229, C-1250

NAME OF SITE : Ecom Sertech Corp. Hsinchu
(Spin-off from ITRI / ERSO on Apr. 01, 2003)SITE LOCATION : Rm.258, Bldg.17, NO.195, Sec. 4, Chung Hsing Rd.,
Chu-Tung Chen. Hsin-Chu, Taiwan 310 R.O.C.

1.6 Summary of Test Results

The EUT has been tested according to the following specifications :

APPLIED STANDARD : 47 CFR Part 15, Subpart B and Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.107 15.207	AC Power Conducted Emission Limit : 15.107, 15.207	PASS	Meet the requirement of limit
15.249(a)(c)	Field strength of Fundamental Limit : 93.98dB uV/m	PASS	Meet the requirement of limit
15.249(a)(c)	Field strength of Harmonics Limit : 53.97dB uV/m	PASS	Meet the requirement of limit
15.109 15.205 15.209 15.249(d)	Transmitter Radiated Emissions Limit : Table 15.209	PASS	Meet the requirement of limit
15.249(d)	Out of Band Emission and Restricted Band Radiation Limit:50dB less than peak value of fundamental frequency Restricted band Limit:Table 15.209	PASS	Meet the requirement of limit



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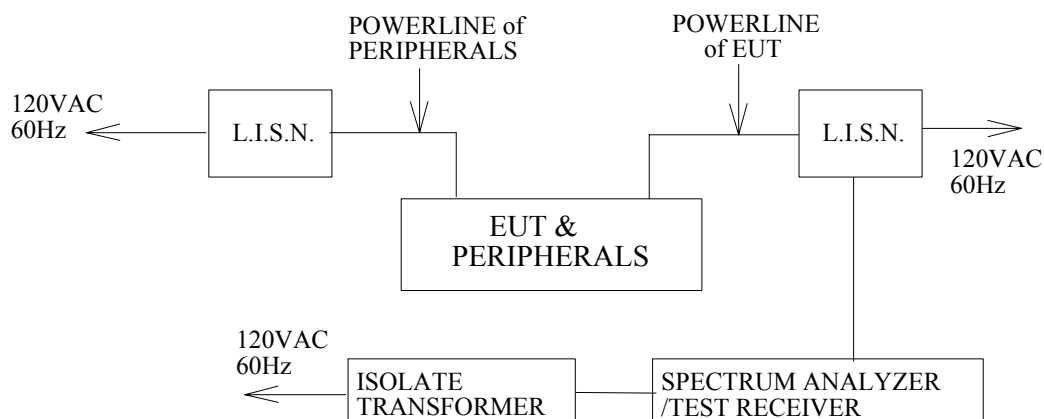
2. CONDUCTED POWERLINE TEST

2.1 Test Equipments

The following test equipments are used during the conducted powerline tests :

Manufacturer or Type	Model No	Serial No.	Date of Calibration	Calibration Period	Remark
SPECTRUM ANALYZER & DISPLAY	HP 8568A	2235A02320	APR. 01, 2003	1 Year	PRETEST
QUASI-PEAK ADAPTER	HP 85650 A	2341A00672	APR. 01, 2003	1 Year	PRETEST
ISOLATION TRANSFORMER	SOLAR 7032-1	N/A	N/A	N/A	FINAL
L.I.S.N.	EMCO 3850/2	9311-1025 9401-1028	JAN. 08, 2003 For Characteristic impedance MAY 18, 2003 For Insertion loss	1 Year	FINAL
TEST RECEIVER	R/S ESHS30	838550/003	JUN. 07, 2003	1 Year	FINAL
SHIELDED ROOM	KEENE 5983	NO.1	N/A	N/A	FINAL
PULSE LIMIT	R/S EHS3Z2	357.8810.52	JUL. 10, 2003	1 Year	FINAL
N TYPE COAXIAL CABLE	-----	-----	JUL. 10, 2003	1 Year	FINAL
50Ω TERMINATOR	-----	-----	JUL. 10, 2003	1 Year	FINAL

2.2 Test Setup



2.3 Conducted Power Line Emission Limit

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

Frequency (MHz)	Maximum RF Line Voltage (Db μ v)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56	56-46
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

For intentional device, according to § 15.207(a) Line Conducted Emission Limit is same as above table.

2.4 Test Procedure

The test procedure is performed in a 12ft×12ft×8ft(L×W×H) shielded room. the EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

2.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is ± 1.36 dB.



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2.6 Conducted RF Voltage Measurement

The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

Temperature : 26 °C

Humidity : 65 % RH

Frequency (MHz)	Loss(dB)		Measurement				L1 Emission (dBμV)		L2 Emission (dBμV)		Limits (dBμV)	
			L1(dBμV)		L2(dBμV)							
	L1	L2	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.
0.150	0.10	0.20	*	*	*	*	*	*	*	*	66.00	56.00
0.198	0.10	0.20	39.90	*	*	*	40.00	*	*	*	63.69	53.69
0.246	0.10	0.20	*	*	38.50	*	*	*	38.70	*	61.89	51.89
0.432	0.10	0.20	*	*	35.40	*	*	*	35.60	*	57.21	47.21
0.444	0.10	0.20	37.30	*	*	*	37.40	*	*	*	56.99	46.99
0.500	0.10	0.20	31.90	*	*	*	32.00	*	*	*	56.00	46.00
0.690	0.10	0.20	*	*	27.90	*	*	*	28.10	*	56.00	46.00
1.110	0.10	0.20	21.60	*	*	*	21.70	*	*	*	56.00	46.00
1.110	0.10	0.20	*	*	21.40	*	*	*	21.60	*	56.00	46.00
2.230	0.12	0.20	*	*	10.60	*	*	*	10.80	*	56.00	46.00
2.240	0.12	0.20	12.10	*	*	*	12.22	*	*	*	56.00	46.00
4.270	0.20	0.20	8.60	*	*	*	8.80	*	*	*	56.00	46.00
4.760	0.20	0.20	*	*	8.30	*	*	*	8.50	*	56.00	46.00
11.750	0.50	0.50	20.60	*	*	*	21.10	*	*	*	60.00	50.00
12.250	0.50	0.50	*	*	15.00	*	*	*	15.50	*	60.00	50.00
24.550	1.11	1.06	22.50	*	*	*	23.61	*	*	*	60.00	50.00
24.550	1.11	1.06	*	*	20.80	*	*	*	21.86	*	60.00	50.00
30.000	1.40	1.80	*	*	*	*	*	*	*	*	60.00	50.00

REMARKS : 1. * Undetectable or the Q.P. value is lower than the limits of Ave.

2. For Wireless Camera.

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The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

Temperature : 26 °C

Humidity : 65 % RH

Frequency (MHz)	Loss(dB)		Measurement				L1 Emission		L2 Emission		Limits	
			L1(dBμV)		L2(dBμV)		(dBμV)		(dBμV)		(dBμV)	
	L1	L2	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.	Q.P.	A.V.
0.150	0.10	0.20	*	*	*	*	*	*	*	*	66.00	56.00
0.177	0.10	0.20	41.50	*	*	*	41.60	*	*	*	64.63	54.63
0.288	0.10	0.20	*	*	37.80	*	*	*	38.00	*	60.58	50.58
0.435	0.10	0.20	*	*	37.80	*	*	*	38.00	*	57.16	47.16
0.456	0.10	0.20	37.20	*	*	*	37.30	*	*	*	56.77	46.77
0.500	0.10	0.20	32.40	*	32.10	*	32.50	*	32.30	*	56.00	46.00
1.100	0.10	0.20	21.90	*	*	*	22.00	*	*	*	56.00	46.00
1.110	0.10	0.20	*	*	21.70	*	*	*	21.90	*	56.00	46.00
2.140	0.11	0.20	*	*	11.30	*	*	*	11.50	*	56.00	46.00
2.200	0.12	0.20	15.30	*	*	*	15.42	*	*	*	56.00	46.00
4.350	0.20	0.20	8.40	*	*	*	8.60	*	*	*	56.00	46.00
4.360	0.20	0.20	*	*	8.30	*	*	*	8.50	*	56.00	46.00
11.250	0.50	0.50	8.30	*	*	*	8.80	*	*	*	60.00	50.00
11.950	0.50	0.50	*	*	19.90	*	*	*	20.40	*	60.00	50.00
24.550	1.11	1.06	8.90	*	22.50	*	10.01	*	23.56	*	60.00	50.00
30.000	1.40	1.80	*	*	*	*	*	*	*	*	60.00	50.00

REMARKS : 1. * Undetectable or the Q.P. value is lower than the limits of Ave.
2. For LCD Monitor.

2.7 Photos of Conduction Test

Wireless Camera



LCD Monitor



3. RADIATED EMISSION TEST

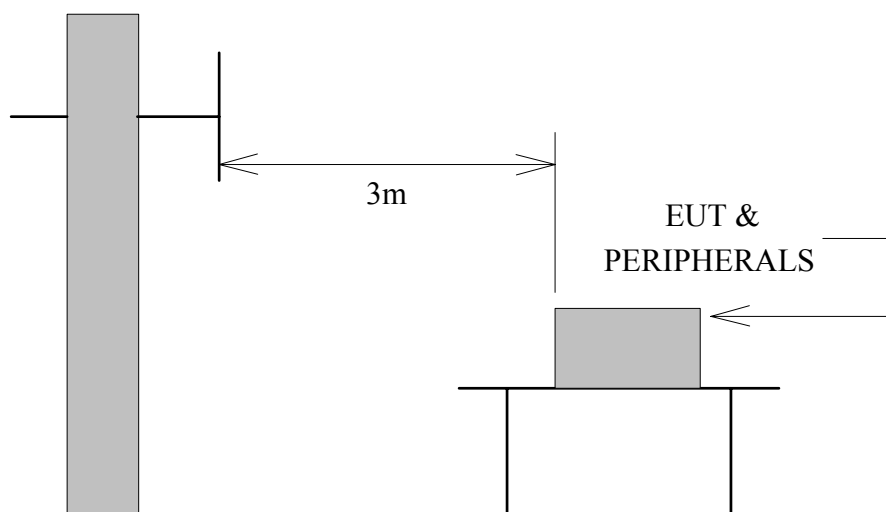
3.1 Test Equipments

The following test equipments are utilized in making the measurements contained in this report.

Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
CHASE BI-LOG ANTENNA	CBL6112B	2421	MAY 07, 2003	1 Year	FINAL
OPEN SITE	-----	No.2	JAN. 10, 2003	1 Year	FINAL
N TYPE COAXIAL CABLE	CHA9525	4	JUL. 13, 2003	1 Year	FINAL
Horn Antenna	AH-118	10089	FEB. 25, 2003	1 Year	FINAL
HP Pre-amplifier	8449B	3008A01471	OCT. 11, 2003	1 Year	FINAL
HP High pass filter	84300/80038	011	cal. on use	1 Year	FINAL
Horn Antenna	AH-840	03077	FEB. 25, 2003	1 Year	FINAL

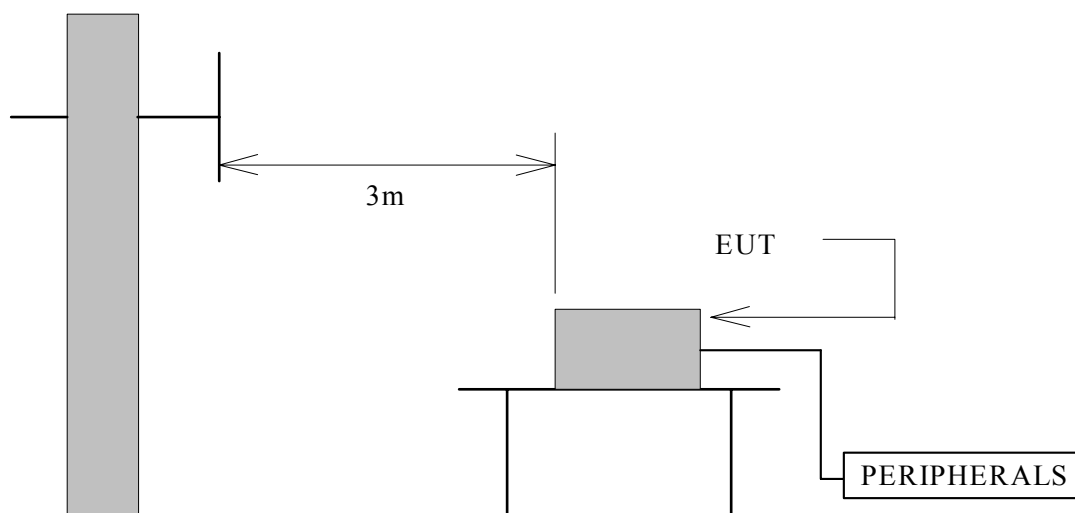
3.2 Test Setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 30 to 1GHz.



Antenna Elevation Variable

The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



Antenna Elevation Variable

3.3 Radiation Limit

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values :

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/M)	Radiated (μV/M)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.



3.4 Test Procedures

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. 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 polarization 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 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 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin 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 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

3.5 Uncertainty of Radiated Emission

The uncertainty of radiated emission is ± 2.72 dB.



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3.6 Radiated RF Noise Measurement

Test Requirement: 15.109, 15.209

The frequency spectrum from 30 MHz to 1000 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

All readings are quasi-peak values.

Temperature : 25.7 °C

Humidity : 63 % RH

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Meter Reading at 3m(dB μ V/M)		Limits at 3m (dB μ V/M)	Emission Level at 3m(dB μ V/M)	
			Horizontal	Vertical		Horizontal	Vertical
30.00	21.39	0.90	*	*	40.00	*	*
161.99	11.16	2.51	9.10	10.70	43.50	22.77	24.37
215.99	11.25	2.93	9.30	11.30	43.50	23.48	25.48
431.99	17.58	4.42	12.90	14.30	46.00	34.91	36.30
458.99	17.87	4.61	7.50	7.20	46.00	30.00	29.68
479.52	18.09	4.76	12.50	13.10	46.00	35.35	35.95
485.99	18.16	4.80	8.60	9.80	46.00	31.56	32.76
512.99	18.47	4.96	6.80	6.90	46.00	30.23	30.33
1000.00	21.58	7.00	*	*	54.00	*	*

REMARKS : 1. * Undetectable

2. Emission level (dB μ V/M) = Antenna Factor (dB/m) + Cable loss (dB)
+ Meter Reading (dB μ V).

3. According to technical experiences, all spurious emission at channel 1,2,3,4 are almost the same below 1GHz, so that the channel 1 was chosen as representative in final test.

4. For Wireless Camera.

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Test Requirement: 15.109, 15.209

The frequency spectrum from 30 MHz to 1000 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

All readings are quasi-peak values.

Temperature : 25.7 °C

Humidity : 63 % RH

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Meter Reading at 3m(dB μ V/M)		Limits at 3m (dB μ V/M)	Emission Level at 3m(dB μ V/M)	
			Horizontal	Vertical		Horizontal	Vertical
30.00	21.39	0.90	*	*	40.00	*	*
161.99	11.16	2.51	8.06	10.10	43.50	21.73	23.77
215.99	11.25	2.93	8.10	10.40	43.50	22.28	24.58
431.99	17.58	4.42	10.30	13.50	46.00	32.30	35.50
458.99	17.87	4.61	6.40	6.30	46.00	28.88	28.78
479.52	18.09	4.76	11.80	12.90	46.00	34.65	35.75
485.99	18.16	4.80	9.20	8.90	46.00	32.16	31.86
512.99	18.47	4.96	7.10	6.30	46.00	30.53	29.73
1000.00	21.58	7.00	*	*	54.00	*	*

REMARKS : 1. * Undetectable

2. Emission level (dB μ V/M) = Antenna Factor (dB/m) + Cable loss (dB)
+ Meter Reading (dB μ V).

3. According to technical experiences, all spurious emission at channel 1,2,3,4 are almost the same below 1GHz, so that the channel 1 was chosen as representative in final test.

4. For LCD Monitor.



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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH1 RX				Measurement Distance at 1m				Horizontal polarity			
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4822.03	44.52	34.43	2.82	35.16	9.50	0.00	37.11	74	-36.89	P	1.0
4822.03	35.12	34.43	2.82	35.16	9.50	0.00	27.71	54	-26.29	A	1.0
7232.98	45.87	39.81	4.79	35.65	9.50	0.00	45.32	74	-28.68	P	1.0
7232.98	34.68	39.81	4.79	35.65	9.50	0.00	34.13	54	-19.87	A	1.0
9643.95	46.32	38.54	5.90	36.43	9.50	0.00	44.83	74	-29.17	P	1.0
9643.95	35.02	38.54	5.90	36.43	9.50	0.00	33.53	54	-20.47	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The test limit is 3M limit.
6. The other emission levels were very low against the limit.
7. For LCD Monitor.



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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH1 RX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4822.03	43.33	34.43	2.82	35.16	9.50	0.00	35.92	74	-38.08	P	1.0
4822.03	32.37	34.43	2.82	35.16	9.50	0.00	24.96	54	-29.04	A	1.0
7232.98	46.07	39.81	4.79	35.65	9.50	0.00	45.52	74	-28.48	P	1.0
7232.98	33.93	39.81	4.79	35.65	9.50	0.00	33.38	54	-20.62	A	1.0
9643.95	45.40	38.54	5.90	36.43	9.50	0.00	43.91	74	-30.09	P	1.0
9643.95	34.29	38.54	5.90	36.43	9.50	0.00	32.80	54	-21.20	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.

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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH2 RX				Measurement Distance at 1m				Horizontal polarity			
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4866.32	45.17	34.72	2.74	35.19	9.50	0.00	37.94	74	-36.06	P	1.0
4866.32	35.65	34.72	2.74	35.19	9.50	0.00	28.42	54	-25.58	A	1.0
7299.36	46.12	39.78	4.82	35.64	9.50	0.00	45.58	74	-28.42	P	1.0
7299.36	33.21	39.78	4.82	35.64	9.50	0.00	32.67	54	-21.33	A	1.0
9732.05	44.58	38.53	5.90	36.57	9.50	0.00	42.94	74	-31.06	P	1.0
9732.05	35.02	38.53	5.90	36.57	9.50	0.00	33.38	54	-20.62	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.

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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH2 RX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4866.32	45.32	34.72	2.74	35.19	9.50	0.00	38.09	74	-35.91	P	1.0
4866.32	34.25	34.72	2.74	35.19	9.50	0.00	27.02	54	-26.98	A	1.0
7299.36	44.85	39.78	4.82	35.64	9.50	0.00	44.31	74	-29.69	P	1.0
7299.36	35.30	39.78	4.82	35.64	9.50	0.00	34.76	54	-19.24	A	1.0
9732.05	45.47	38.53	5.90	36.57	9.50	0.00	43.83	74	-30.17	P	1.0
9732.05	35.62	38.53	5.90	36.57	9.50	0.00	33.98	54	-20.02	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.



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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH3 RX				Measurement Distance at 1m				Horizontal polarity			
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4906.25	44.96	34.98	2.67	35.23	9.50	0.00	37.89	74	-36.11	P	1.0
4906.25	34.25	34.98	2.67	35.23	9.50	0.00	27.18	54	-26.82	A	1.0
7359.12	46.02	39.76	4.84	35.63	9.50	0.00	45.49	74	-28.51	P	1.0
7359.12	35.42	39.76	4.84	35.63	9.50	0.00	34.89	54	-19.11	A	1.0
9812.40	45.78	38.52	5.90	36.70	9.50	0.00	44.00	74	-30.00	P	1.0
9812.40	34.68	38.52	5.90	36.70	9.50	0.00	32.90	54	-21.10	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The test limit is 3M limit.
6. The other emission levels were very low against the limit.
7. For LCD Monitor.

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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH3 RX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4906.25	46.32	34.98	2.67	35.23	9.50	0.00	39.25	74	-34.75	P	1.0
4906.25	36.12	34.98	2.67	35.23	9.50	0.00	29.05	54	-24.95	A	1.0
7359.12	45.79	39.76	4.84	35.63	9.50	0.00	45.26	74	-28.74	P	1.0
7359.12	36.21	39.76	4.84	35.63	9.50	0.00	35.68	54	-18.32	A	1.0
9812.40	46.25	38.52	5.90	36.70	9.50	0.00	44.47	74	-29.53	P	1.0
9812.40	36.07	38.52	5.90	36.70	9.50	0.00	34.29	54	-19.71	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.

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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.4°C , 58%

CH4 RX				Measurement Distance at 1m					Horizontal polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4946.12	44.56	35.24	2.60	35.26	9.50	0.00	37.64	74	-36.36	P	1.0
4946.12	34.38	35.24	2.60	35.26	9.50	0.00	27.46	54	-26.54	A	1.0
7419.42	45.89	39.73	4.87	35.62	9.50	0.00	45.37	74	-28.63	P	1.0
7419.42	36.02	39.73	4.87	35.62	9.50	0.00	35.50	54	-18.50	A	1.0
9892.32	46.12	38.51	5.90	36.83	9.50	0.00	44.20	74	-29.80	P	1.0
9892.32	35.32	38.51	5.90	36.83	9.50	0.00	33.40	54	-20.60	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.

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Test Requirement: 15.109, 15.209

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.4°C , 58%

CH4 RX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
4946.12	45.27	35.24	2.60	35.26	9.50	0.00	38.35	74	-35.65	P	1.0
4946.12	35.46	35.24	2.60	35.26	9.50	0.00	28.54	54	-25.46	A	1.0
7419.42	46.02	39.73	4.87	35.62	9.50	0.00	45.50	74	-28.50	P	1.0
7419.42	36.14	39.73	4.87	35.62	9.50	0.00	35.62	54	-18.38	A	1.0
9892.32	45.59	38.51	5.90	36.83	9.50	0.00	43.67	74	-30.33	P	1.0
9892.32	35.38	38.51	5.90	36.83	9.50	0.00	33.46	54	-20.54	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB

4. The result basic equation calculation as follow :

$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$

5. The test limit is 3M limit.

6. The other emission levels were very low against the limit.

7. For LCD Monitor.



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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH1 TX				Measurement Distance at 1m					Horizontal polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2411.15	60.95	31.79	3.68	0.00	9.50	0.00	86.91	113.98	Fundamental Frequency	P	1.00
2411.15	58.74	31.79	3.68	0.00	9.50	0.00	84.70	93.98		A	1.00
* 4822.22	48.17	34.43	2.82	35.16	9.50	2.01	42.77	74	-31.23	P	1.00
* 4822.22	42.79	34.43	2.82	35.16	9.50	2.01	37.39	54	-16.61	A	1.00
7233.08	47.45	39.81	4.79	35.65	9.50	2.00	48.90	74	-25.10	P	1.00
7233.08	38.69	39.81	4.79	35.65	9.50	2.00	40.14	54	-13.86	A	1.00
9644.08	46.34	38.54	5.90	36.43	9.50	0.61	45.46	74	-28.54	P	1.00
9644.08	34.77	38.54	5.90	36.43	9.50	0.61	33.89	54	-20.11	A	1.00
* 12055.75	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14466.90	-----	-----	-----	-----	0.00	0.66	-----	-----	-----	-----	1.00
16878.05	-----	-----	-----	-----	0.00	0.43	-----	-----	-----	-----	1.00
* 19289.20	-----	-----	-----	-----	0.00	1.95	-----	-----	-----	-----	1.00
21700.35	-----	-----	-----	-----	0.00	0.82	-----	-----	-----	-----	1.00
24111.50	-----	-----	-----	-----	0.00	2.92	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level – Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.



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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH1 TX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2410.94	64.38	31.79	3.68	0.00	9.50	0.00	90.35	113.98	Fundamental Frequency	P	1.00
2410.94	63.44	31.79	3.68	0.00	9.50	0.00	89.41	93.98		A	1.00
* 4822.03	44.17	34.43	2.82	35.16	9.50	2.01	38.77	74	-35.23	P	1.00
* 4822.03	33.88	34.43	2.82	35.16	9.50	2.01	28.48	54	-25.52	A	1.00
7233.36	46.30	39.81	4.79	35.65	9.50	2.00	47.75	74	-26.25	P	1.00
7233.36	37.01	39.81	4.79	35.65	9.50	2.00	38.46	54	-15.54	A	1.00
9644.06	45.70	38.54	5.90	36.43	9.50	0.61	44.82	74	-29.18	P	1.00
9644.06	34.40	38.54	5.90	36.43	9.50	0.61	33.52	54	-20.48	A	1.00
* 12054.70	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14465.64	-----	-----	-----	-----	0.00	0.66	-----	-----	-----	-----	1.00
16876.58	-----	-----	-----	-----	0.00	0.43	-----	-----	-----	-----	1.00
* 19287.52	-----	-----	-----	-----	0.00	1.95	-----	-----	-----	-----	1.00
21698.46	-----	-----	-----	-----	0.00	0.82	-----	-----	-----	-----	1.00
24109.40	-----	-----	-----	-----	0.00	2.92	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.

**Ecom Sertech Corp.**

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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH2 TX				Measurement Distance at 1m					Horizontal polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2432.39	58.80	31.77	3.51	0.00	9.50	0.00	84.58	113.98	Fundamental Frequency	P	1.00
2432.39	58.37	31.77	3.51	0.00	9.50	0.00	84.15	93.98		A	1.00
* 4866.11	47.89	34.72	2.74	35.19	9.50	1.84	42.49	74	-31.51	P	1.00
* 4866.11	42.41	34.72	2.74	35.19	9.50	1.84	37.01	54	-16.99	A	1.00
* 7298.89	47.15	39.78	4.82	35.64	9.50	2.00	48.61	74	-25.39	P	1.00
* 7298.89	37.75	39.78	4.82	35.64	9.50	2.00	39.21	54	-14.79	A	1.00
9732.12	45.76	38.53	5.90	36.57	9.50	0.56	44.68	74	-29.32	P	1.00
9732.12	34.87	38.53	5.90	36.57	9.50	0.56	33.79	54	-20.21	A	1.00
* 12161.95	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14594.34	-----	-----	-----	-----	0.00	0.62	-----	-----	-----	-----	1.00
17026.73	-----	-----	-----	-----	0.00	0.51	-----	-----	-----	-----	1.00
* 19459.12	-----	-----	-----	-----	0.00	2.15	-----	-----	-----	-----	1.00
21891.51	-----	-----	-----	-----	0.00	0.74	-----	-----	-----	-----	1.00
24323.90	-----	-----	-----	-----	0.00	2.58	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.

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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH2 TX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2432.34	62.80	31.77	3.51	0.00	9.50	0.00	88.58	113.98	Fundamental Frequency	P	1.00
2432.34	62.40	31.77	3.51	0.00	9.50	0.00	88.18	93.98		A	1.00
* 4869.25	45.71	34.74	2.74	35.20	9.50	1.82	40.31	74	-33.69	P	1.00
* 4869.25	35.17	34.74	2.74	35.20	9.50	1.82	29.77	54	-24.23	A	1.00
* 7299.05	45.32	39.78	4.82	35.64	9.50	2.00	46.78	74	-27.22	P	1.00
* 7299.05	35.23	39.78	4.82	35.64	9.50	2.00	36.69	54	-17.31	A	1.00
9732.45	46.14	38.53	5.90	36.57	9.50	0.56	45.06	74	-28.94	P	1.00
9732.45	35.46	38.53	5.90	36.57	9.50	0.56	34.38	54	-19.62	A	1.00
* 12161.70	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14594.04	-----	-----	-----	-----	0.00	0.62	-----	-----	-----	-----	1.00
17026.38	-----	-----	-----	-----	0.00	0.51	-----	-----	-----	-----	1.00
* 19458.72	-----	-----	-----	-----	0.00	2.15	-----	-----	-----	-----	1.00
21891.06	-----	-----	-----	-----	0.00	0.74	-----	-----	-----	-----	1.00
24323.40	-----	-----	-----	-----	0.00	2.58	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For 802.11b mode at 11Mbps.
10. For Wireless Camera.



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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH3 TX				Measurement Distance at 1m					Horizontal polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2452.29	59.00	31.75	3.36	0.00	9.50	0.00	84.61	113.98	Fundamental Frequency	P	1.00
2452.29	58.44	31.75	3.36	0.00	9.50	0.00	84.05	93.98		A	1.00
* 4906.52	50.02	34.98	2.67	35.23	9.50	1.67	44.62	74	-29.38	P	1.00
* 4906.52	45.29	34.98	2.67	35.23	9.50	1.67	39.89	54	-14.11	A	1.00
* 7359.20	45.46	39.76	4.84	35.63	9.50	2.00	46.93	74	-27.07	P	1.00
* 7359.20	37.44	39.76	4.84	35.63	9.50	2.00	38.91	54	-15.09	A	1.00
9812.12	45.50	38.52	5.90	36.70	9.50	0.51	44.23	74	-29.77	P	1.00
9812.12	35.06	38.52	5.90	36.70	9.50	0.51	33.79	54	-20.21	A	1.00
* 12261.45	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14713.74	-----	-----	-----	-----	0.00	0.53	-----	-----	-----	-----	1.00
17166.03	-----	-----	-----	-----	0.00	0.57	-----	-----	-----	-----	1.00
* 19618.32	-----	-----	-----	-----	0.00	2.32	-----	-----	-----	-----	1.00
* 22070.61	-----	-----	-----	-----	0.00	0.70	-----	-----	-----	-----	1.00
24522.90	-----	-----	-----	-----	0.00	2.27	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.

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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH3 TX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2452.19	62.81	31.75	3.36	0.00	9.50	0.00	88.42	113.98	Fundamental Frequency	P	1.00
2452.19	62.21	31.75	3.36	0.00	9.50	0.00	87.82	93.98		A	1.00
* 4906.23	46.30	34.98	2.67	35.22	9.50	1.68	40.90	74	-33.10	P	1.00
* 4906.23	34.98	34.98	2.67	35.22	9.50	1.68	29.58	54	-24.42	A	1.00
* 7359.05	44.69	39.76	4.84	35.63	9.50	2.00	46.16	74	-27.84	P	1.00
* 7359.05	34.28	39.76	4.84	35.63	9.50	2.00	35.75	54	-18.25	A	1.00
9812.12	46.03	38.52	5.90	36.70	9.50	0.51	44.76	74	-29.24	P	1.00
9812.12	35.78	38.52	5.90	36.70	9.50	0.51	34.51	54	-19.49	A	1.00
* 12260.95	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14713.14	-----	-----	-----	-----	0.00	0.53	-----	-----	-----	-----	1.00
17165.33	-----	-----	-----	-----	0.00	0.57	-----	-----	-----	-----	1.00
* 19617.52	-----	-----	-----	-----	0.00	2.32	-----	-----	-----	-----	1.00
* 22069.71	-----	-----	-----	-----	0.00	0.70	-----	-----	-----	-----	1.00
24521.90	-----	-----	-----	-----	0.00	2.27	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.



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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH4 TX				Measurement Distance at 1m					Horizontal polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2472.24	58.32	31.73	3.21	0.00	9.50	0.00	83.76	113.98	Fundamental Frequency	P	1.00
2472.24	57.78	31.73	3.21	0.00	9.50	0.00	83.22	93.98		A	1.00
* 4946.07	49.64	35.24	2.60	35.26	9.50	1.52	44.24	74	-29.76	P	1.00
* 4946.07	44.31	35.24	2.60	35.26	9.50	1.52	38.91	54	-15.09	A	1.00
* 7419.35	46.38	39.73	4.87	35.62	9.50	2.00	47.86	74	-26.14	P	1.00
* 7419.35	38.19	39.73	4.87	35.62	9.50	2.00	39.67	54	-14.33	A	1.00
9892.22	45.78	38.51	5.90	36.83	9.50	0.46	44.33	74	-29.67	P	1.00
9892.22	35.56	38.51	5.90	36.83	9.50	0.46	34.11	54	-19.89	A	1.00
* 12361.20	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14833.44	-----	-----	-----	-----	0.00	0.43	-----	-----	-----	-----	1.00
17305.68	-----	-----	-----	-----	0.00	0.62	-----	-----	-----	-----	1.00
* 19777.92	-----	-----	-----	-----	0.00	2.48	-----	-----	-----	-----	1.00
* 22250.16	-----	-----	-----	-----	0.00	0.70	-----	-----	-----	-----	1.00
24722.40	-----	-----	-----	-----	0.00	1.99	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.

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Test Requirement: 15.205

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Company	AIPTEK International Inc.	Test Date :	2003/10/3
Product Name	SecuCam AV100	Test By:	K. P. Pang
Model Name	RXO-B31	TEMP&Humidity :	27.9°C , 43%

CH4 TX				Measurement Distance at 1m					Vertical polarity		
Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(Meter)
2472.79	62.57	31.73	3.21	0.00	9.50	0.00	88.00	113.98	Fundamental Frequency	P	1.00
2472.79	62.18	31.73	3.21	0.00	9.50	0.00	87.61	93.98		A	1.00
* 4946.22	45.08	35.25	2.60	35.26	9.50	1.52	39.68	74	-34.32	P	1.00
* 4946.22	35.19	35.25	2.60	35.26	9.50	1.52	29.79	54	-24.21	A	1.00
* 7419.17	45.64	39.73	4.87	35.62	9.50	2.00	47.12	74	-26.88	P	1.00
* 7419.17	35.77	39.73	4.87	35.62	9.50	2.00	37.25	54	-16.75	A	1.00
9829.12	45.59	38.52	5.90	36.73	9.50	0.50	44.28	74	-29.72	P	1.00
9829.12	35.59	38.52	5.90	36.73	9.50	0.50	34.28	54	-19.72	A	1.00
* 12363.95	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14836.74	-----	-----	-----	-----	0.00	0.43	-----	-----	-----	-----	1.00
17309.53	-----	-----	-----	-----	0.00	0.62	-----	-----	-----	-----	1.00
* 19782.32	-----	-----	-----	-----	0.00	2.48	-----	-----	-----	-----	1.00
* 22255.11	-----	-----	-----	-----	0.00	0.70	-----	-----	-----	-----	1.00
24727.90	-----	-----	-----	-----	0.00	1.98	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For Wireless Camera.

3.7 Photos of Open Site









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4. BANDEDGE MEASUREMENT

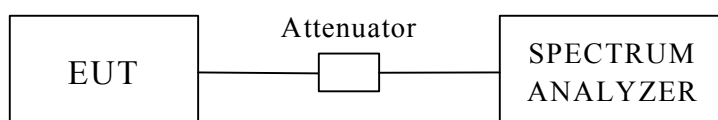
4.1 Test Equipments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	JUN. 17, 2003
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

Note :

1. The measurement uncertainty is less than $\pm 2.6\text{dB}$, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.2 Test Setup



4.3 Limits of Out of Band Emissions Measurement

1. Below -20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.



4.4 Test Procedure

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 100KHz with suitable frequency span including 100KHz bandwidth from band edge. The band edges were measured and recorded.

4.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is $\pm 1.82\text{dB}$.

4.6 Test Results

A. Conducted

Refer to 4.7 photo of out band Emission measurement

B. Radiated

Refer to the section 3.6, the measured radiated band edge emissions are listed below :

Input Power (System)	6VDC(From Adapter)	Environmental Conditions	33.4°C, 43%RH
Tested By	K. P. Pang		

Bandedge		Measured radiated band edge field strength (dBuV/m)		Horizontal radiated band edge field strength limit (dBuV/m)		Test result
		Horizontal	Vertical	Horizontal	Vertical	
2399.90	PK	25.11	28.55	36.91	40.35	Pass
	AVG	22.90	27.61	34.70	39.41	
2483.50	PK	30.84	35.08	74.00	74.00	Pass
	AVG	30.30	34.69	54.00	54.00	

NOTE : Radiated front band edge field strength is measured with FCC recommended mark-delta method.

Measured radiated band edge field strength Test Results = Radiated fundamental emission field strength - DELTA.

DELTA = Relative measurement between conducted measured peak level of fundamental emission and relevant band edge emission. Please refer to 4.7 photo of out of Band Measurement.



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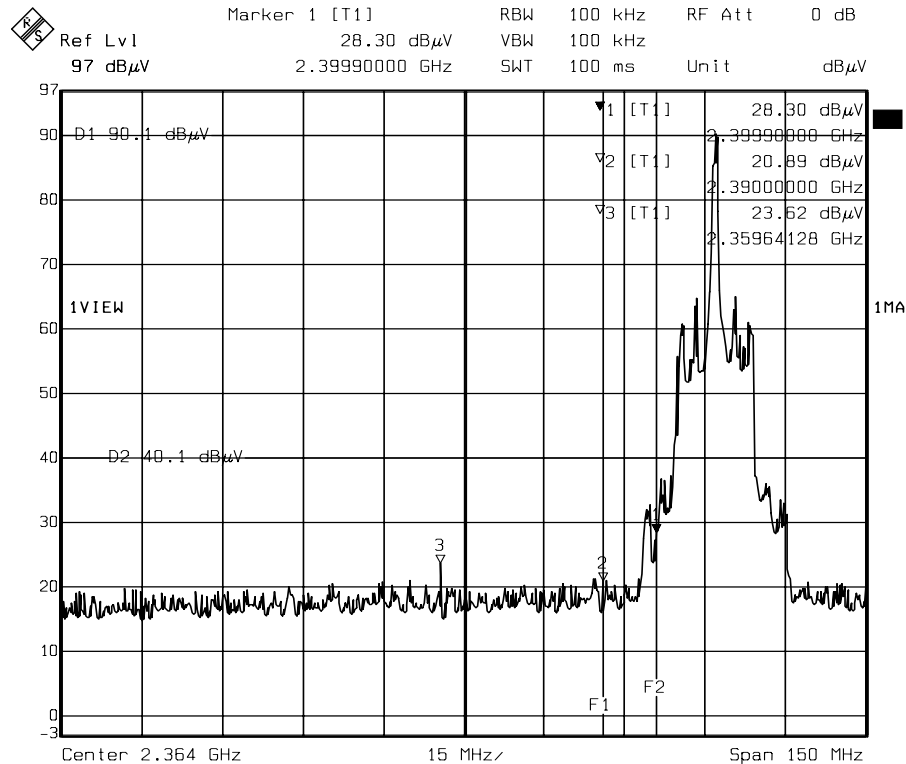
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FCC ID : NRQRXOB31

Report No. : ER03-10-018FRF

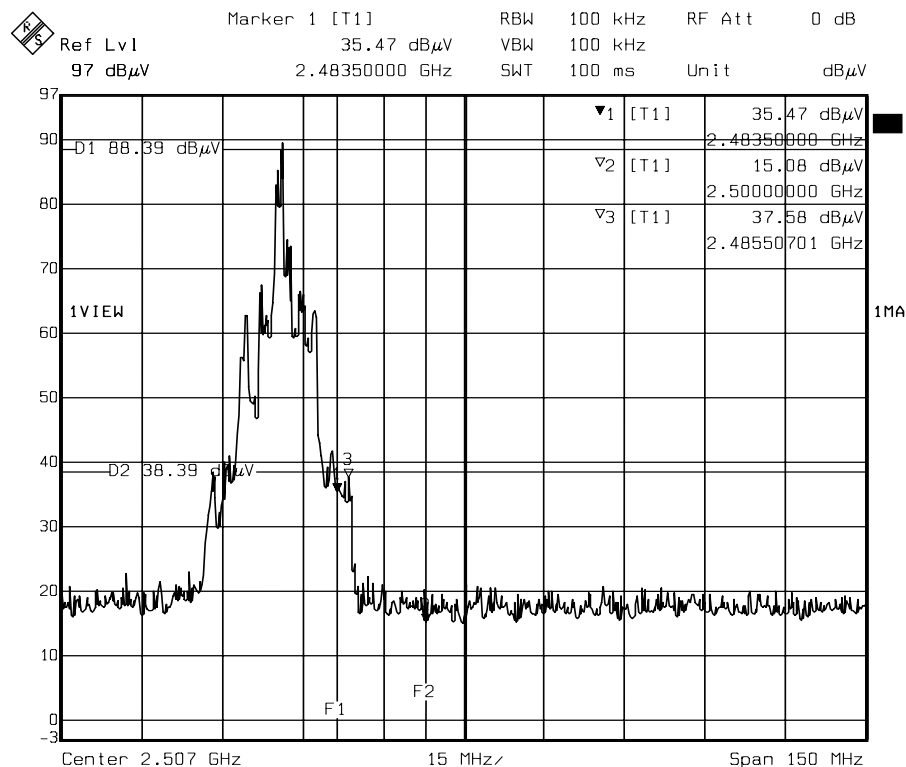
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4.7 Photo of Bandedge Measurement



Date: 21.NOV.2003 11:49:20

FRONT



Date: 21.NOV.2003 11:45:55

BACK



5. ANTENNA REQUIREMENT

5.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

5.2 Antenna Connected Construction

The antenna used in this product is L Type Antenna, the antenna connector is directly mounted on PCB. And the maximum Gain of the antenna is only 2dBi.



6. RF EXPOSURE EVALUATION

According to FCC 1.1310 : The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b) LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time
(A) Limits for Occupational / Control Exposures				
300-1,500	--	--	F/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Population / Uncontrol Exposures				
300-1,500	--	--	F/1500	6
1,500-100,000	--	--	1	30

6.1 Friis Formula

Friis transmission formula : $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

6.2 EUT Operating Condition

A software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

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6.3 Test Result of RF Exposure Evaluation

Test Item : RF Exposure Evaluation Data

Test Mode : Normal Operation

6.3.1 Antenna Gain

Antenna Gain : The maximum Gain measured in fully anechoic chamber is 2dBi linear scale.

6.3.2 Output Power into Antenna & RF Exposure Evaluation Distance

Channel	Channel Frequency (MHz)	Output Peak Power to Antenna (dBm)	Power Density at 20cm (mW/cm ²)	LIMITS (mW/cm ²)
CH1	2411	-12.68	0.00001701	1
CH2	2433	-13.00	0.00001580	1
CH3	2453	-13.27	0.00001485	1
CH4	2473	-13.55	0.00001392	1

Note : The power density Pd (4th column) at a distance of 20cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm². The EUT is classified as mobile product. So, RF exposure limit warning or SAR test are not required