Test Report

Product Name ： Wireless vehicle safety video system
Model No. ： 2400TB/TC
FCC ID. ： SQJCA2400TBCR2400

Applicant ： Anchor Security System Co., Ltd.
Address ： 4F, No.70, Chien-Liu Rd., Chung-Ho City, Taipei, Taiwan, R.O.C.

Date of Receipt ： 2004/11/24
Issued Date ： 2004/11/29
Report No. ： 04BH079-F-R02-T

Test Report Certification

Issued Date : 2004/11/29
Report No. : 04BH079-F-R02-T

QuieTek
Accredited by NIST (NVLAP)
NVLAP Lab Code: 200347-0

Product Name	:	Wireless vehicle safety video system
Applicant	:	Anchor Security System Co., Ltd.
Address	:	4F, No.70, Chien-Liu Rd., Chung-Ho City, Taipei, Taiwan, R.O.C.
Manufacturer	:	Anchor Security System Co., Ltd.
Model No.	:	2400TB/TC
FCC ID.	:	SQJCA2400TBCR2400
Rated Voltage	:	DC 12V
EUT Voltage	:	DC 12V
Trade Name	:	Anchor
Measurement Standard	:	FCC CFR Title 47 Part 15 Subpart C Paragraph 15.249: 2003 FCC CFR Title 47 Part 15 Subpart C Paragraph 15.231: 2003
Measurement Procedure	:	ANSI C63.4: 2001
Test Result	:	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Sandy chuang
(Sandy Chuang)

Tested By : Dampier Chang
(Dampier Chang)

Approved By :
(James Chang)

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1. General Information

1.1. EUT Description

Product Name	Wireless vehicle safety video system
Trade Name	Anchor
Model No.	2400TB/TC
FCC ID	SQJCA2400TBCR2400
Frequency Range	(1) 2414 MHz ~ 2468 MHz (2) 433 MHz
Channel Number	(1) 4 (2) 1
Type of Modulation	(1) FM (2) FSK
Working Voltage	(1) DC 12V (2) DC 12V
Antenna Gain	(1) 2dBi (2) –3dBi
Channel Control	(1) Manual (2) Non-Applied
Antenna Type	(1) Soldered on PCB (2) Soldered on PCB

Component	
Power Cable	Non-Shielded, 0.85m
Power Cable	Non-Shielded, 0.23m

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2414 MHz	002	2432 MHz	003	2450 MHz	004	2468 MHz

Working Frequency of Each Channel	
Channel	Frequency
001	433 MHz

Note:

1. This device is a Wireless vehicle safety video system included a 2.4 GHz transmitting function, a 433 MHz transmitting/receiving function.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.249 and 15.231.
3. This device is a composite device in accordance with Part 15 regulations. The function 2.4 GHz receiving was measured and made a test report that the report number is 04BH078-F-R01-R under Declaration of Conformity and the function 433 MHz receiving was measured and made a test report that the report number is 04BH079-F-R01-R under Declaration of Conformity.

1.2. Operation Description

The EUT is a Wireless vehicle safety video system included a 2.4 GHz transmitting function, a 433 MHz transmitting/receiving function. The operation frequency is from 2.414GHz to 2.468GHz with FM modulation and 433 MHz with FSK modulation.

The 2.4 GHz transmitting function have four manually selectable channels were built in the EUT, the signal will be transmitted through 2.4 GHz FM RF signal from the soldered on PCB antenna from EUT to receiver. DC 12V shall be provided for EUT operation.

Aside from the 433 MHz within the system, the dual direction control channel by using 433 MHz channel to control over 2.4 GHz channel for camera signaling and the frequency is automatically swappable to assure of more stable signaling.

The device is manually operated and that the device ceases transmission within not more than 5 seconds of being released.

1.3. Test Mode

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode	
TX	Mode 1: 2.4 GHz Transmit Mode 2: 433 MHz Transmit
Final Test Mode	
TX	Mode 1: 2.4 GHz Transmit Mode 2: 433 MHz Transmit

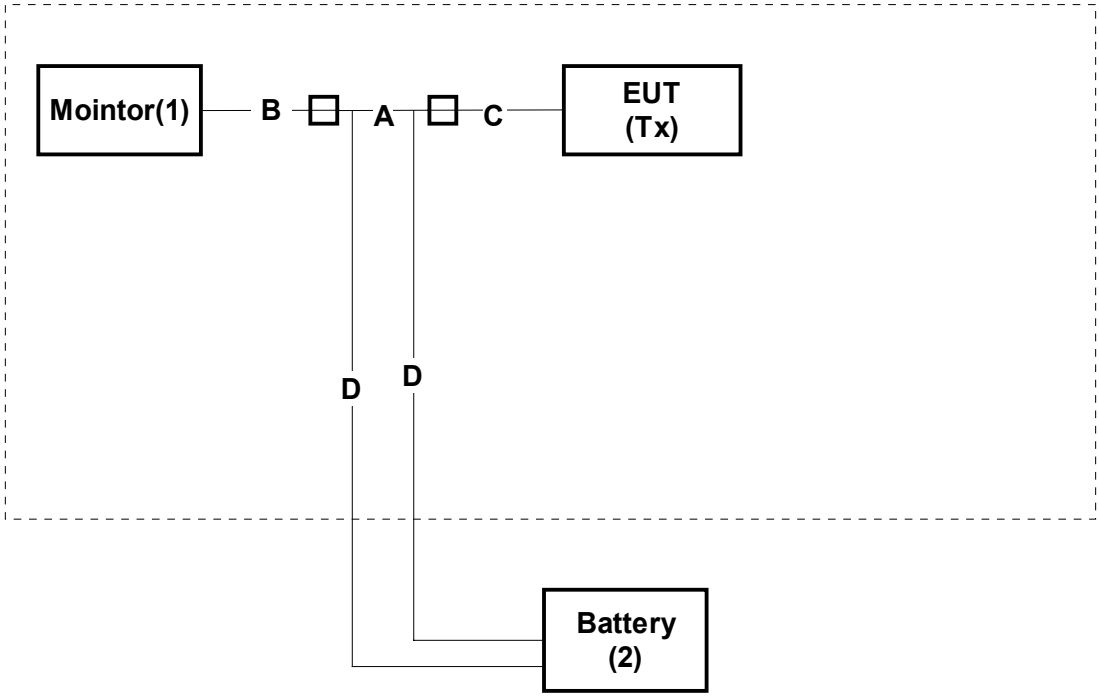
1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Monitor	THOMSON	15LCDMO3B SN	15LCDMO3B SN FRD100085	DoC	Non-shielded, 1.8m
2	Battery	Global & Yuasa	36B20R	N/A	DoC	--

1.5. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	Power Cable	Non-Shielded, 0.23m
B	AV Cable	Non-Shielded, 1.8m
C	Power Cable	Non-Shielded, 0.85m
D	Power Line	Non-Shielded, 1.2m, 2 Pcs.

1.6. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.5.
2	Turn on the power of all equipment.
3	The EUT (Tx) will start to operate.
4	The EUT (Tx) will transmit the video signal to EUT (Rx).
5	The monitor will display “Video figure” on monitor in the same time.
6	Repeat the above procedure (4) to (5)

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.249 Band Edge	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.249 Radiated Emission	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.231 Duty Cycle	15 - 35	22
Humidity (%RH)		25 - 75	55
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.231 Occupied Bandwidth	15 - 35	22
Humidity (%RH)		25 - 75	55
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.231 Radiated Emission	15 - 35	22
Humidity (%RH)		25 - 75	55
Barometric pressure (mbar)		860 - 1060	950-1000

Site Description: June 18, 2004 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Accreditation on NVLAP
NVLAP Lab Code: 200347-0
Effective through Sep. 30, 2005

NVLAP Lab Code : 200347-0

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
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Taiwan, R.O.C.
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2. Conducted Emission

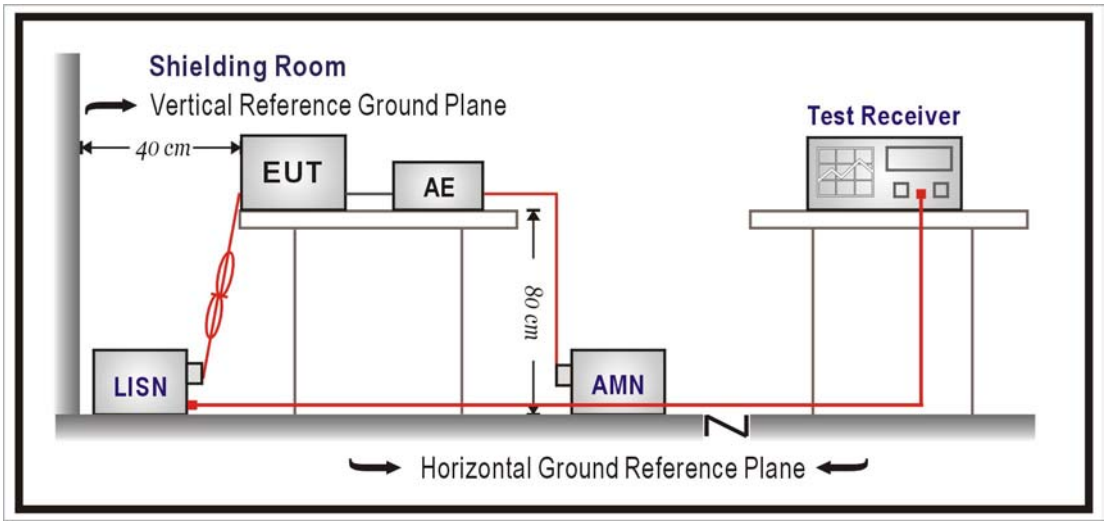
2.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/018	Sep., 2004	
2	Artificial Mains Network	R & S	ENV4200/848411/10	Feb., 2004	Peripherals
3	LISN	R & S	ESH3-Z5/825562/002	Feb., 2004	EUT
4	Pulse Limiter	R & S	ESH3-Z2/357.8810.52	Feb., 2004	
5	No.2 Shielded Room			N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2001 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Test Specification

According to FCC CFR Title 47 Part 15 Subpart C Paragraph 15.207: 2003

2.6. Test Result

Product	Wireless vehicle safety video system		
Test Item	Conducted Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.2 Shielded Room

Owing to the DC operation of EUT, this test item is not performed.

Product	Wireless vehicle safety video system		
Test Item	Conducted Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/11/29	Test Site	No.2 Shielded Room

Owing to the DC operation of EUT, this test item is not performed.

3. Radiated Emission

3.1. Test Equipment

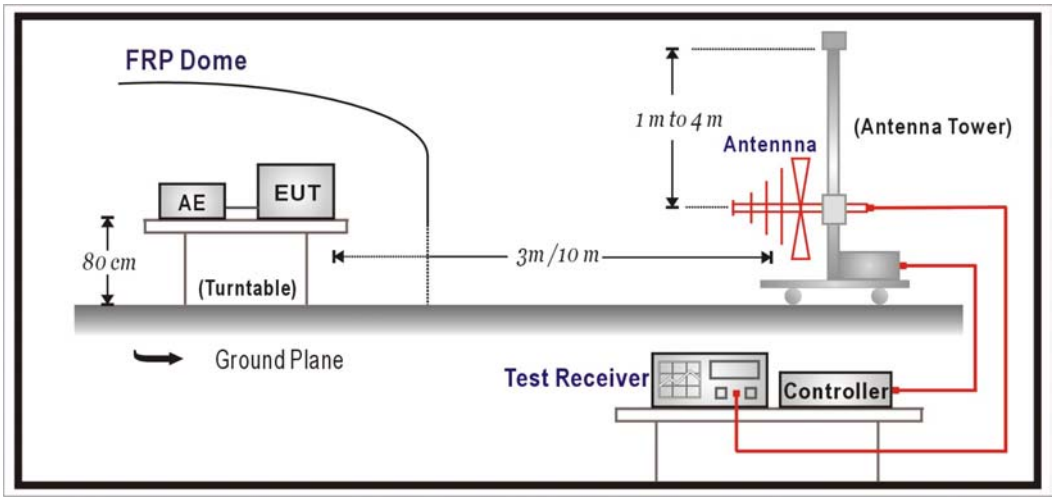
The following test equipment are used during the test:

Item	Equipment		Manufacturer	Model No. / Serial No.	Last Cal.
1	X	Test Receiver	R & S	ESCS 30 / 825442/017	Jan., 2004
2	X	Spectrum Analyzer	Advantest	R3261C / 81720266	N/A
3	X	Pre-Amplifier	HP	8447D / 2944A09276	N/A
4	X	Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2004
5	X	Spectrum Analyzer	R & S	FSP40 / 100005	Aug., 2004
6	X	Pre-Amplifier	HP	8449B / 3008A01123	Feb., 2004
7	X	Horn Antenna	Schwarzbeck	BBHA 9120D / BBHA9120D312	Jul., 2004
8	No.1 OATS				Sep., 2004

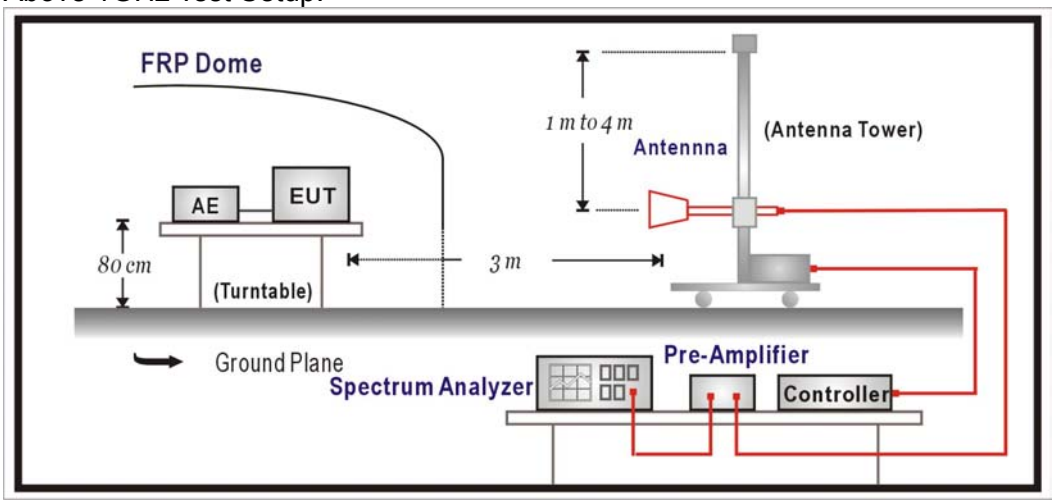
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark “X” test instruments are used to measure the final test results.

3.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



3.3. Limits

➢ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.249 Limits				
Fundamental Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	mV/m	dBuV/m	uV/m	dBuV/m
902-928	50	94	500	54
2400-2483.5	50	94	500	54
5725-5875	50	94	500	54

Remarks： 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➢ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.231 Limits				
Fundamental Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	uV/m	dBuV/m	uV/m	dBuV/m
40.66-40.70	2250	67.0	225	47.0
70-130	1250	62.0	125	42.0
130-174	1250-3750	62.0-71.5	125-375	42.0-51.5
174-260	3750	71.5	375	51.5
260-470	3750-12500	71.5-82.00	375-1250	51.5-62.0
above 470	12500	82.00	1250	62.0

Remarks： 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➢ Spurious electric field strength limits

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Remarks： 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2001 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

3.5. Test Specification

According to FCC CFR Title 47 Part 15 Subpart C Paragraph 15.249: 2003

FCC CFR Title 47 Part 15 Subpart C Paragraph 15.231: 2003

3.6. Test Result

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Horizontal							
Peak							
2413.600	2.86	27.27	0.00	64.90	95.03	18.97	114.00
Average							
2413.600	2.86	27.27	0.00	57.00	87.13	6.87	94.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Vertical							
Peak							
2414.800	2.86	27.27	0.00	68.59	98.72	15.28	114.00
Average							
2413.600	2.86	27.27	0.00	60.12	90.25	3.75	94.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Horizontal							
Peak							
2447.900	2.88	27.38	0.00	63.19	93.45	20.55	114.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Vertical							
Peak							
2451.400	2.88	27.38	0.00	65.71	95.97	18.03	114.00
Average							
2449.500	2.88	27.38	0.00	57.39	87.65	6.35	94.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Horizontal							
Peak							
2466.000	2.89	27.44	0.00	56.93	87.26	26.74	114.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Vertical							
Peak							
2469.600	2.89	27.44	0.00	67.44	97.77	16.23	114.00
Average							
2467.600	2.89	27.44	0.00	59.11	89.44	4.56	94.00

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor + Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Horizontal								
Peak								
4826.960	4.24	31.22	31.95	45.92		49.44	24.56	74.00
7235.900	5.63	35.95	32.67	47.38		56.29	17.71	74.00
9656.000	7.01	38.05	31.88	32.77	<	45.95	28.05	74.00
12070.00	8.40	38.59	31.32	31.87	<	47.53	26.47	74.00
Average								
7239.800	5.63	35.95	32.67	33.74		42.65	11.35	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Vertical								
Peak								
4826.200	4.24	31.22	31.95	48.78		52.30	21.70	74.00
7243.940	5.63	35.95	32.67	51.44		60.35	13.65	74.00
9656.200	7.01	38.05	31.88	32.72	<	45.90	28.10	74.00
12070.10	8.41	38.57	31.30	32.51	<	48.19	25.81	74.00
Average								
7239.900	5.63	35.95	32.67	37.93		46.84	7.16	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Horizontal								
Peak								
4901.000	4.28	31.35	31.95	45.65		49.33	24.67	74.00
7348.100	5.69	36.16	32.57	41.03		50.31	23.69	74.00
9799.900	7.09	38.08	31.59	34.09	<	47.67	26.33	74.00
12250.00	8.50	38.46	31.15	32.66	<	48.48	25.52	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Vertical								
Peak								
4902.500	4.28	31.35	31.95	47.41		51.09	22.91	74.00
7344.000	5.69	36.16	32.57	50.10		59.38	14.62	74.00
9800.100	7.09	38.08	31.59	34.35	<	47.93	26.07	74.00
12249.90	8.49	38.47	31.17	32.45	<	48.25	25.75	74.00
Average								
7347.800	5.69	36.16	32.57	35.72		45.00	9.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Horizontal								
Peak								
4932.700	4.31	31.44	31.96	46.04		49.84	24.16	74.00
7408.500	5.73	36.29	32.50	42.20		51.72	22.28	74.00
9872.100	7.14	38.10	31.41	33.35	<	47.18	26.82	74.00
12340.00	8.55	38.41	31.07	32.25	<	48.13	25.87	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Vertical								
Peak								
4932.600	4.31	31.44	31.96	47.52		51.32	22.68	74.00
7406.600	5.73	36.29	32.50	47.43		56.95	17.05	74.00
9872.100	7.14	38.10	31.41	32.81	<	46.64	27.36	74.00
12340.10	8.55	38.41	31.07	32.81	<	48.69	25.31	74.00
Average								
7401.900	5.72	36.26	32.51	33.56		43.02	10.98	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal								
Quasi-Peak								
	233.700	1.85	8.09	20.80	27.60	16.75	29.25	46.00
	308.390	2.16	13.85	20.41	33.20	28.80	17.20	46.00
	326.820	2.24	14.53	20.27	34.60	31.10	14.90	46.00
	345.250	2.31	14.22	20.20	33.00	29.33	16.67	46.00
	549.920	3.15	21.99	20.20	24.80	29.74	16.26	46.00
*	842.860	4.36	24.76	19.57	25.80	35.34	10.66	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 1

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical								
Quasi-Peak								
	94.990	1.28	15.44	20.56	29.60	25.76	17.74	43.50
	164.830	1.57	21.10	20.95	27.80	29.52	13.98	43.50
	308.390	2.16	17.05	20.41	28.40	27.20	18.80	46.00
	431.580	2.66	13.62	20.21	26.00	22.07	23.93	46.00
	632.370	3.49	18.32	20.18	26.00	27.64	18.36	46.00
*	846.740	4.37	24.71	19.51	25.20	34.77	11.23	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal								
Quasi-Peak								
	184.230	1.65	9.33	20.96	28.60	18.62	24.88	43.50
	309.360	2.16	13.89	20.41	33.20	28.84	17.16	46.00
	326.820	2.24	14.53	20.27	32.80	29.30	16.70	46.00
	355.920	2.36	14.23	20.32	30.20	26.47	19.53	46.00
	431.580	2.66	15.15	20.21	26.00	23.60	22.40	46.00
*	857.410	4.42	24.86	19.56	25.80	35.52	10.48	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 3

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical								
Quasi-Peak								
	96.930	1.29	16.10	20.78	27.20	23.82	19.68	43.50
	164.830	1.57	21.10	20.95	28.00	29.72	13.78	43.50
	309.360	2.16	16.99	20.41	25.60	24.35	21.65	46.00
	431.580	2.66	13.62	20.21	26.60	22.67	23.33	46.00
	552.830	3.16	20.41	20.20	25.20	28.57	17.43	46.00
*	849.650	4.38	24.73	19.50	25.40	35.01	10.99	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal								
Quasi-Peak								
	206.540	1.74	9.05	20.80	29.00	18.99	24.51	43.50
	308.390	2.16	13.85	20.41	32.20	27.80	18.20	46.00
	325.850	2.23	14.50	20.27	32.40	28.86	17.14	46.00
	345.250	2.31	14.22	20.20	28.80	25.13	20.87	46.00
	529.550	3.07	21.20	20.10	25.80	29.97	16.03	46.00
*	872.930	4.48	24.87	19.82	26.20	35.73	10.27	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/29	Test Site	No.1 OATS

Channel 4

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical								
Quasi-Peak								
	96.930	1.29	16.10	20.78	27.20	23.82	19.68	43.50
	166.770	1.58	20.42	20.97	29.40	30.43	13.07	43.50
	325.850	2.23	16.12	20.27	26.60	24.68	21.32	46.00
	432.550	2.67	13.64	20.23	27.40	23.47	22.53	46.00
	552.830	3.16	20.41	20.20	26.00	29.37	16.63	46.00
*	850.620	4.39	24.74	19.50	25.20	34.82	11.18	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Horizontal							
Peak							
433.960	0.93	19.61	0.00	69.32	89.86	10.72	100.82

Peak = 89.86dBuV/m; Duty Cycle= 20 Log (0.046);
Average = Peak +Duty Cycle= 63.115 dBuV/m
Average Limit =80.82 dBuV/m
Peak Limit = 80.82 + 20dB = 100.82 dBuV/m

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor+ Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission							
Vertical							
Peak							
433.956	0.93	17.86	0.00	69.52	88.04	12.54	100.82

Peak = 88.04dBuV/m; Duty Cycle= 20 Log (0.046);
Average = Peak +Duty Cycle= 61.295 dBuV/m
Average Limit = 80.82 dBuV/m
Peak Limit = 80.82 + 20dB = 100.82 dBuV/m

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Probe Factor+ Cable Loss.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Horizontal								
Peak								
860.040	1.56	25.01	22.60	46.53		50.51	30.31	80.82
1301.860	2.23	24.65	31.92	44.22		39.17	34.83	74.00
1735.850	2.47	25.37	31.99	48.67		44.52	36.30	80.82
2169.790	2.72	26.46	31.96	36.83	<	34.06	46.76	80.82
2603.750	2.97	27.71	31.75	36.46	<	35.39	45.43	80.82
3037.720	3.22	28.26	31.51	37.00	<	36.96	43.86	80.82
3471.670	3.46	28.48	31.43	37.77	<	38.28	42.54	80.82
3905.640	3.72	29.45	31.59	36.95	<	38.52	35.48	74.00
4339.590	3.96	30.31	31.83	36.69	<	39.13	34.87	74.00

Note:

1. All Readings are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector): RBW: 100kHz (under 1GHz), 1MHz (above 1 GHz); VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector): RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level		Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV		dBuV/m	dB	dBuV/m
Vertical								
Peak								
860.040	1.56	24.58	22.60	40.13		43.67	37.15	80.82
1301.950	2.23	24.65	31.92	43.94		38.89	35.11	74.00
1735.830	2.47	25.37	31.99	54.25		50.10	30.72	80.82
2169.820	2.72	26.46	31.96	39.57		36.80	44.02	80.82
2603.720	2.97	27.71	31.75	38.38	<	37.31	43.51	80.82
3037.690	3.22	28.26	31.51	38.69	<	38.65	42.17	80.82
3471.660	3.46	28.48	31.43	37.29	<	37.80	43.02	80.82
3905.650	3.72	29.45	31.59	37.15	<	38.72	35.28	74.00
4339.590	3.96	30.31	31.83	37.07	<	39.51	34.49	74.00

Note:

1. All Readings are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector): RBW: 100kHz (under 1GHz), 1MHz (above 1 GHz); VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector): RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal								
Quasi-Peak								
	215.690	0.60	9.50	22.60	33.81	21.32	59.50	80.82
*	269.730	0.69	14.11	22.60	37.86	30.05	15.95	46.00
	296.060	0.72	16.83	22.60	38.05	33.00	47.82	80.82
	322.390	0.76	17.47	22.60	29.74	25.37	20.63	46.00
	429.090	0.92	19.52	22.60	43.71	41.55	39.27	80.82
	458.190	0.96	20.10	22.60	37.80	36.26	44.56	80.82

Note:

1. All Readings for restricted bands are Quasi-Peak, other are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Radiated Emission		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/06	Test Site	No.1 OATS

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical								
Quasi-Peak								
*	131.160	0.48	16.40	22.60	33.81	28.09	15.41	43.50
	149.170	0.51	15.75	22.60	34.55	28.21	52.61	80.82
	268.340	0.68	15.22	22.60	35.36	28.66	17.34	46.00
	309.910	0.75	17.40	22.60	34.51	30.06	50.76	80.82
	429.090	0.92	18.19	22.60	43.83	40.35	40.47	80.82
	484.510	1.01	19.33	22.60	31.37	29.10	51.72	80.82

Note:

1. All Readings for restricted bands are Quasi-Peak, other are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

4. Band Edge

4.1. Test Equipment

The following test equipment are used during the test:

RF Conducted Measurement:				
Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer	R & S	FSP / 100561	Mar., 2004
2	No.1 OATS			Sep., 2004

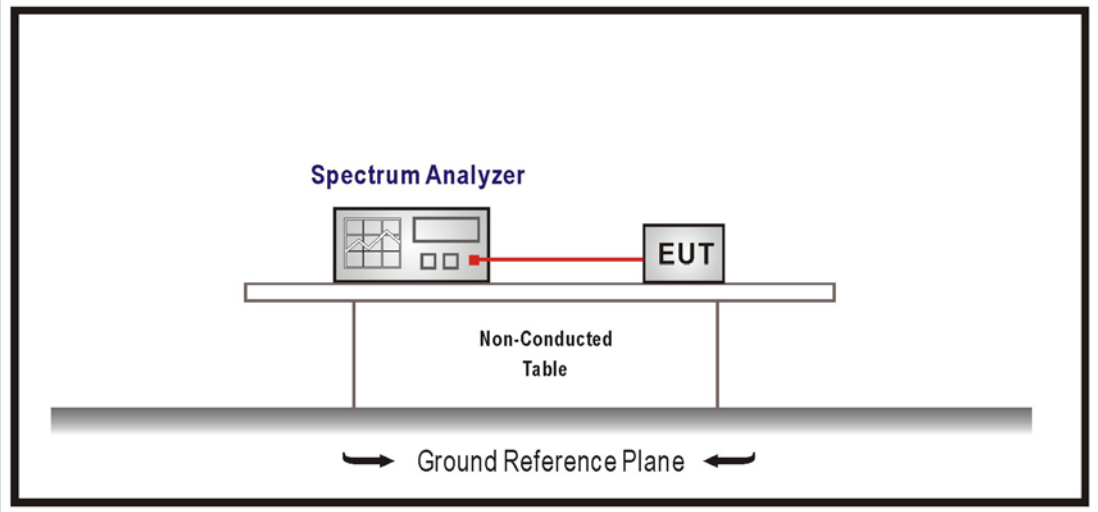
RF Radiated Measurement:					
Item	Equipment		Manufacturer	Model No. / Serial No.	Last Cal.
1	X	Spectrum Analyzer	R & S	FSP40 / 100005	Aug., 2004
2	X	Pre-Amplifier	HP	8449B / 3008A01123	Feb., 2004
3		Loop Antenna	R & S	HFH2-Z2 / 833799/004	Sep., 2004
4		BiconiLog Antenna	Schwarzbeck	VULB 9166 / 1061	Sep., 2004
5		Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2004
6	X	Horn Antenna	Schwarzbeck	BBHA 9120D / BBHA9120D312	Sep., 2004
7	No.1 OATS				Sep., 2004

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

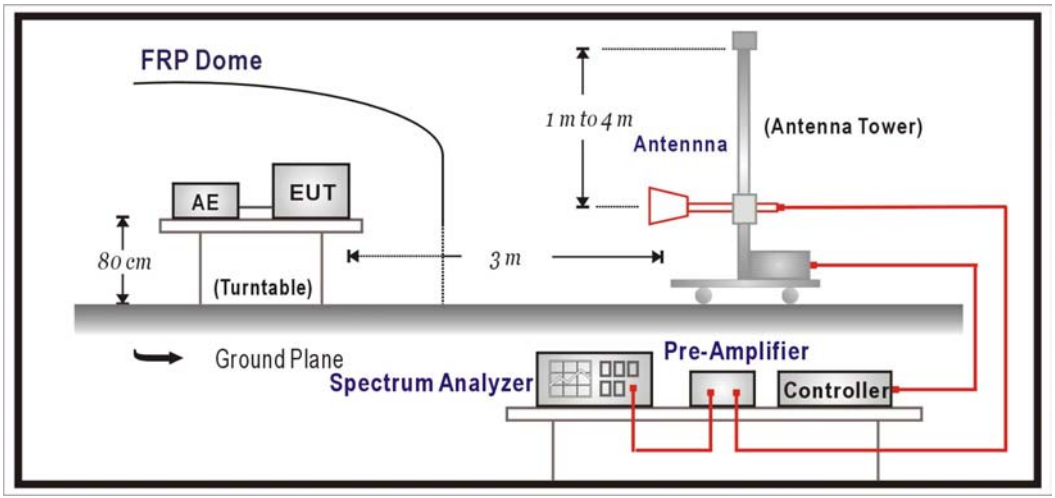
2. Mark “X” test instruments are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



4.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 50 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2001 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.

4.5. Test Specification

According to FCC CFR Title 47 Part 15 Subpart C Paragraph 15.249: 2003

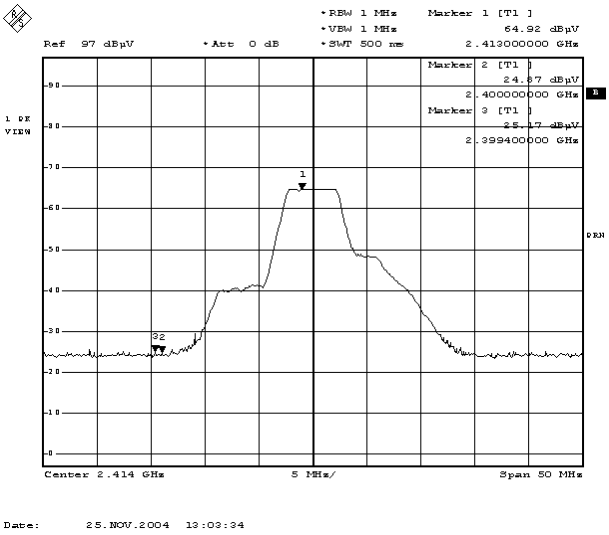
4.6. Test Result

Product	Wireless vehicle safety video system		
Test Item	Band Edge		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/25	Test Site	No.1 OATS

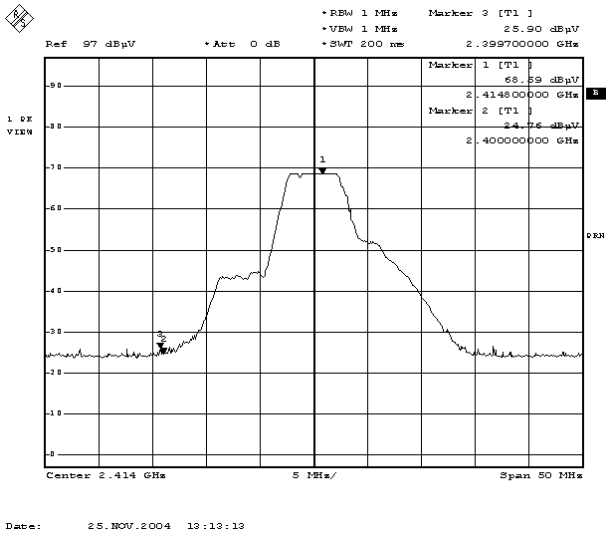
RF Radiated Measurement: (Peak Detector)

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2399.40	25.17	27.21	2.85	00.00	55.23	74.00	Pass
1(Vertical)	2399.40	25.90	27.21	2.85	00.00	55.96	74.00	Pass

Horizontal



Vertical



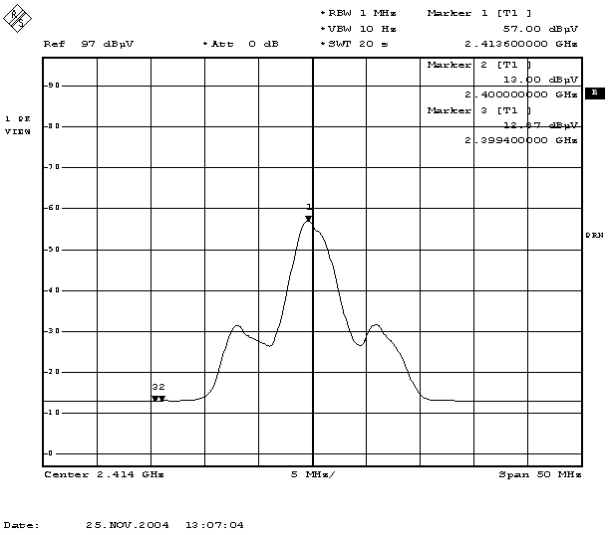
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Band Edge		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/25	Test Site	No.1 OATS

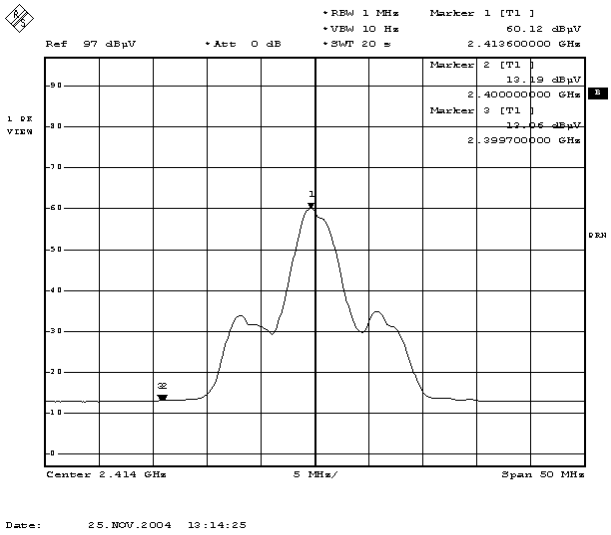
RF Radiated Measurement: (Average Detector)

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2399.40	12.87	27.21	2.85	00.00	42.93	54.00	Pass
1(Vertical)	2399.70	13.06	27.21	2.85	00.00	43.12	54.00	Pass

Horizontal



Vertical



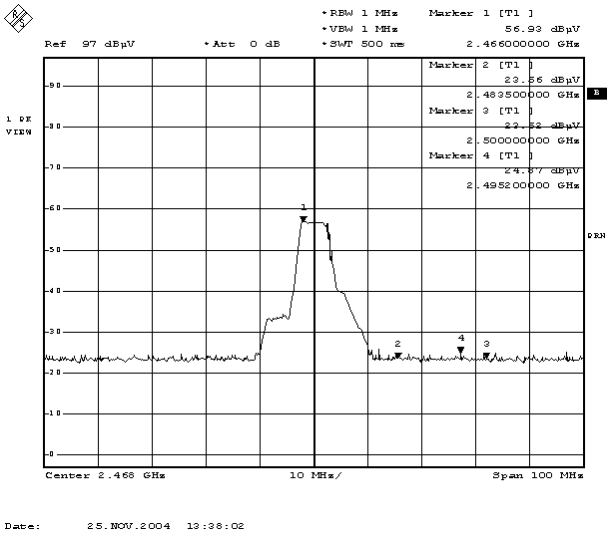
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Band Edge		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/25	Test Site	No.1 OATS

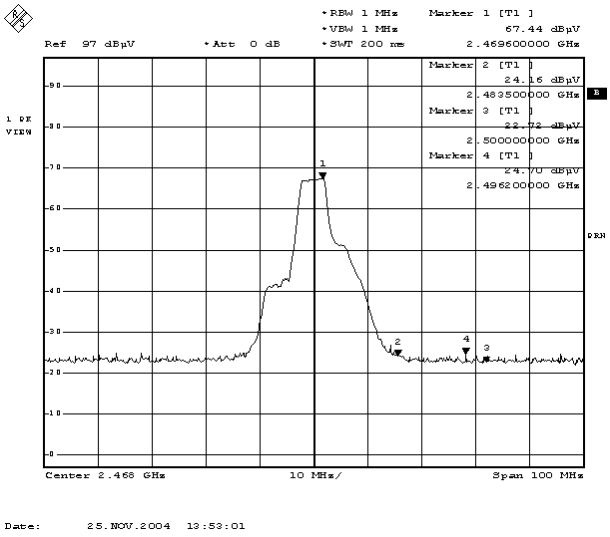
RF Radiated Measurement: (Peak Detector)

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
4(Horizontal)	2495.20	24.87	27.58	2.91	00.00	55.36	74.00	Pass
4(Vertical)	2496.20	24.70	27.44	2.89	00.00	55.03	74.00	Pass

Horizontal



Vertical



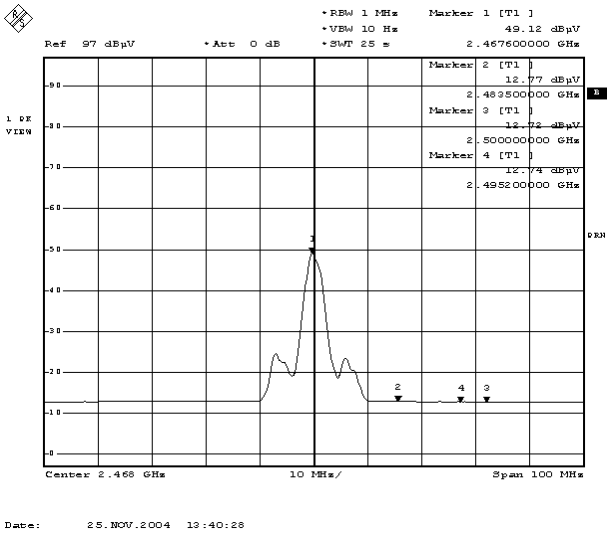
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless vehicle safety video system		
Test Item	Band Edge		
Test Mode	Mode 1: 2.4 GHz Transmit		
Date of Test	2004/11/25	Test Site	No.1 OATS

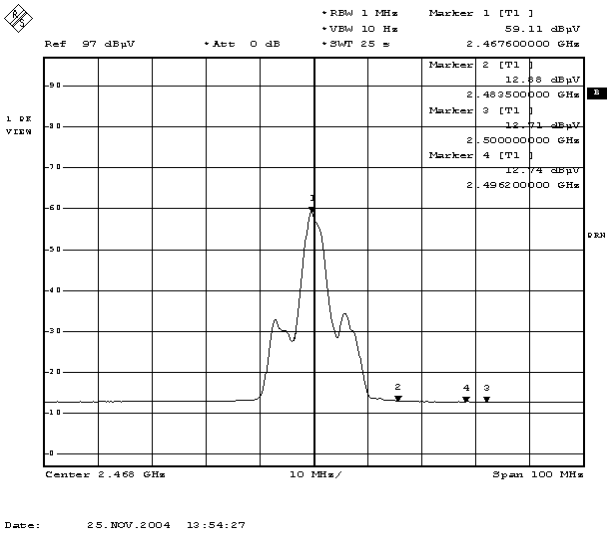
RF Radiated Measurement: (Average Detector)

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
4(Horizontal)	2495.20	12.74	27.58	2.91	00.00	43.33	54.00	Pass
4(Vertical)	2496.20	12.74	27.44	2.89	00.00	43.07	54.00	Pass

Horizontal



Vertical



Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

5. Occupied Bandwidth

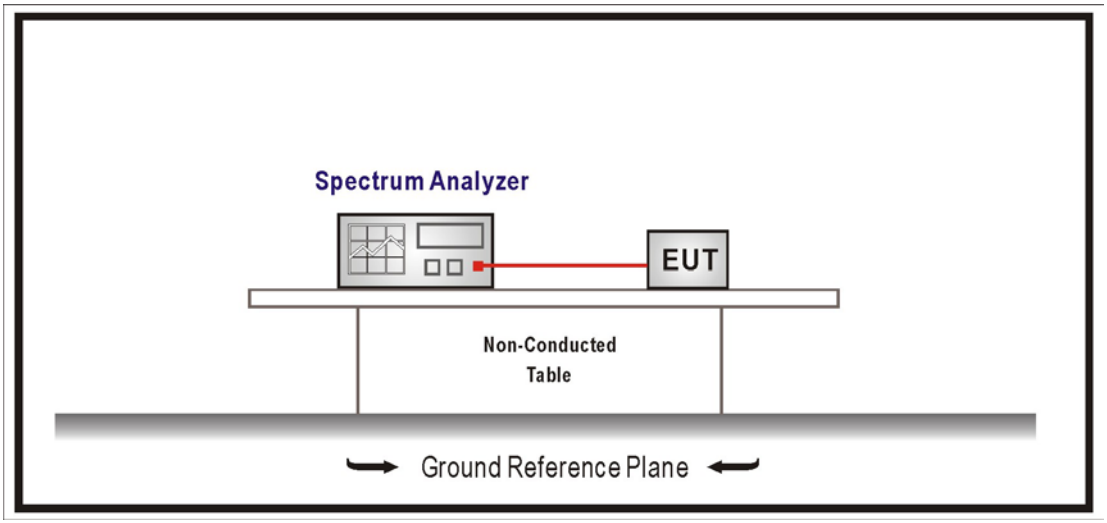
5.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer	R & S	FSP / 100561	Mar., 2004
2	No.1 OATS			Sep., 2004

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup



5.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. For devices operating above 900MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

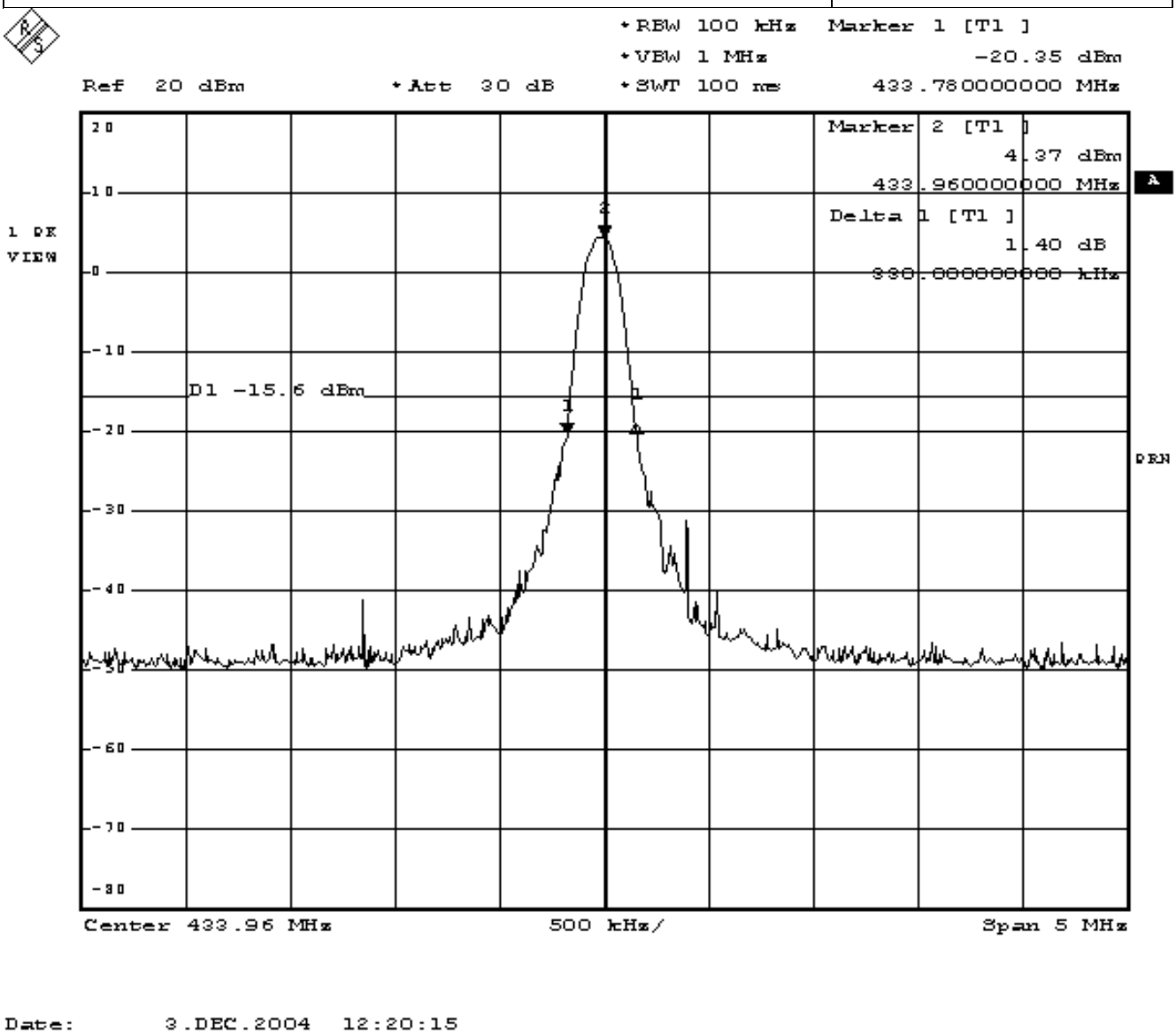
5.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231: 2003

5.5. Test Result

Product	Wireless vehicle safety video system		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/03	Test Site	No.1 OATS

Center Frequency	433.96 MHz
Allowable Bandwidth (70-900 MHz:0.25%, Above 900MHz: 0.5%)	1.0849 MHz
Bandwidth at 20dB down (Max)	330 kHz
Result	Complied with regulation



6. Duty Cycle

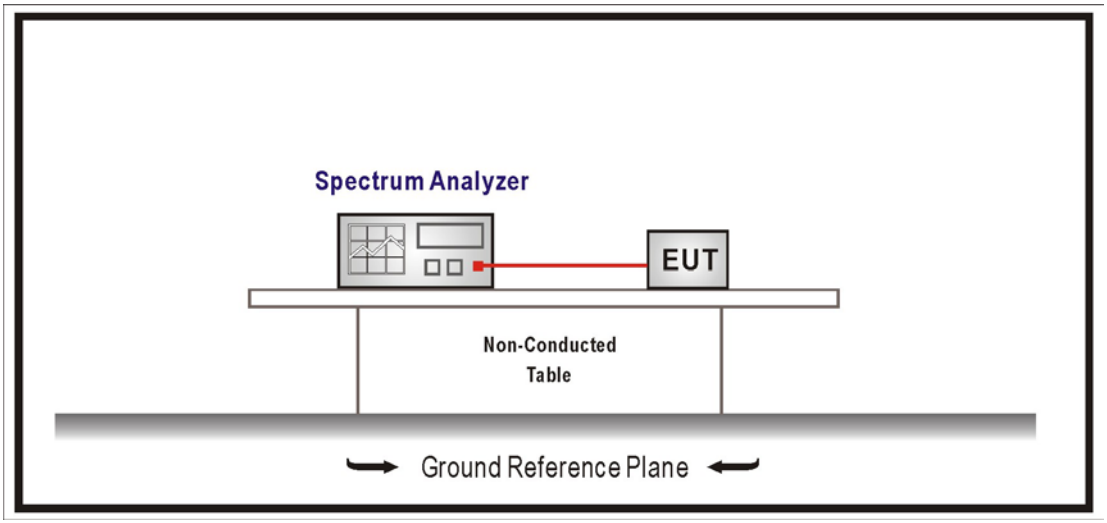
6.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer	R & S	FSP / 100561	Mar., 2004
2	No.1 OATS			Sep., 2004

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



6.3. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231: 2003

6.4. Test Result

Product	Wireless vehicle safety video system		
Test Item	Duty Cycle		
Test Mode	Mode 2: 433 MHz Transmit		
Date of Test	2004/12/03	Test Site	No.1 OATS

$(T_{ON}+T_{OFF})=2.19$ (s) - 104 (ms)$=2.086$ (s) $T_{ON}=2.19$ (s) **–** 2.094 (s)$=0.096$ (s) $T_{ON} / (T_{ON}+T_{OFF})=0.096 / 2.086=0.046$	
Result	Duty Cycle$=0.046$