

Exhibit V: Spurious Radiated Emissions

FCC ID: P6I-COPYCAM203

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:

Low

Mid

High

Operating Modes Investigated:

No Hop

Antennas Investigated:

gigaAnt Titanis

Data Rates Investigated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120 VAC, 60 Hz.

Frequency Range Investigated

Start Frequency

30 MHz

Stop Frequency

25 GHz

Software\Firmware Applied During Test

Exercise software

Special Test Software

Version

3.04

Description

The system was tested using special software developed to test all functions of the device during the test. The software allowed the lowest, middle, and highest channels to be selected.

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT - Bluetooth Radio	Polyvision Corp.	CopyCam	A0200415
Host Device	Polyvision Corp.	CopyCam Arm	A0200415
Controller	Polyvision Corp.	CopyCam Controller	A0200415
Remote notebook PC	Dell	PPL	DPDL3
Remote DSL Router	LinkSys	BEFSR41	C211A052833K
EUT Power Adapter	AULT Inc.	P48151000A050G	0203

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Cat 5 E-net	No	5.0	No	Host Device	Controller
DC Cable	No	7	Two	Host Device	EUT Power Adapter
Cat 5 E-net	No	8.0	No	Host Device	Remote DSL Router

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	03/19/2002	12 mo
Antenna, Biconilog	EMCO	3141	AXE	12/31/2001	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P	AOP	07/09/2002	12 mo
Pre-Amplifier	Amplifier Research	LN1000A	APS	12/03/2001	12 mo
Antenna, Horn	EMCO	3115	AHC	08/12/2002	12 mo
Spectrum Analyzer	Tektronix	2784	AAO	03/08/2001	24 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	07/09/2002	12 mo
Antenna, Horn	EMCO	3160-09	AHG	01/15/2000	36 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	01/17/2000	36 mo
High Pass Filter	RLC Electronics	F-100-4000-5-R (HPF>	HFF	02/04/2002	12 mo

Test Description

Requirement: The field strength of any spurious emissions or modulation products that fall in a restricted band, as defined in 47 CFR 15.205, is measured. The peak level must comply with the limits specified in 47 CFR 15.35(b). The average level (taken with a 10Hz VBW) must comply with the limits specified in 15.209.

Configuration: The antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. The EUT was transmitting at its maximum data rate in a no hop mode. For each configuration, the spectrum was scanned from 30 MHz to 25 GHz. In addition, measurements were made in the restricted band of 2.4835 to 2.5 GHz to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:1992). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Bandwidths Used for Measurements

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 – 0.15	1.0	0.2	0.2
0.15 – 30.0	10.0	9.0	9.0
30.0 – 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
<i>Measurements were made using the bandwidths and detectors specified. No video filter was used.</i>			

Completed by:



NORTHWEST

REV
d3.01
09/20/2002

EMC

OATS DATA SHEET

EUT: CopyCAM

Work Order: POLV0019

Serial Number: A0200415

Date: 10/4/02 11:27

Customer: Polyvision Corp.

Temperature: 72

Attendees: Terry Skelton

Humidity: 42%

Cust. Ref. No.:

Barometric Pressure: 30.11

Tested by: Greg Kiemel

Power: 120 V, 60 Hz

Job Site: EV01

TEST SPECIFICATIONS

Specification: FCC Part 15.247(c)

Year: 2001

Method: ANSI C63.4

Year: 1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

see notes

EUT OPERATING MODES

Modulated by "FFFF" at maximum data rate. No hop mode.

DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS

Test Distance (m)

Run #

Pass

3

2

Other

Tested By:

dBuV/m

80.0

70.0

60.0

50.0

40.0

30.0

20.0

10.0

0.0

1000.000

10000.000

MHz

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.500	28.7	0.6	359.0	1.4	3.0	20.0	V-Horn	AV	0.0	49.3	54.0	-4.7	"high channel"
2483.500	27.5	0.6	218.0	2.3	3.0	20.0	H-Horn	AV	0.0	48.1	54.0	-5.9	"high channel"
1149.808	34.1	-6.2	193.0	1.2	3.0	20.0	V-Horn	AV	0.0	47.9	54.0	-6.1	"low channel"
2390.000	25.5	0.4	300.0	1.2	3.0	20.0	V-Horn	AV	0.0	45.9	54.0	-8.1	"low channel"
2390.000	25.5	0.4	332.0	1.3	3.0	20.0	H-Horn	AV	0.0	45.9	54.0	-8.1	"low channel"
1124.870	32.1	-6.5	234.0	1.2	3.0	20.0	V-Horn	AV	0.0	45.6	54.0	-8.4	"low channel"
1174.860	31.3	-6.0	201.0	1.2	3.0	20.0	V-Horn	AV	0.0	45.3	54.0	-8.7	"low channel"
1140.332	30.8	-6.3	206.0	1.2	3.0	20.0	V-Horn	AV	0.0	44.5	54.0	-9.5	"low channel"
1149.920	30.0	-6.2	221.0	1.5	3.0	20.0	H-Horn	AV	0.0	43.8	54.0	-10.2	"low channel"
1124.870	29.7	-6.5	220.0	1.6	3.0	20.0	H-Horn	AV	0.0	43.2	54.0	-10.8	"low channel"
1174.860	27.0	-6.0	218.0	1.2	3.0	20.0	H-Horn	AV	0.0	41.0	54.0	-13.0	"low channel"
1140.320	27.0	-6.3	284.0	1.3	3.0	20.0	H-Horn	AV	0.0	40.7	54.0	-13.3	"low channel"
7440.000	26.5	10.7	58.0	1.3	3.0	0.0	H-Horn	AV	0.0	37.2	54.0	-16.8	"high channel"
7323.000	26.5	10.5	156.0	1.3	3.0	0.0	H-Horn	AV	0.0	37.0	54.0	-17.0	"mid channel"
7440.000	26.1	10.7	95.0	1.2	3.0	0.0	V-Horn	AV	0.0	36.8	54.0	-17.2	"high channel"
7323.000	26.2	10.5	152.0	1.2	3.0	0.0	V-Horn	AV	0.0	36.7	54.0	-17.3	"mid channel"
4882.000	24.7	7.3	174.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.0	54.0	-22.0	"mid channel"
4882.000	24.7	7.3	164.0	2.6	3.0	0.0	V-Horn	AV	0.0	32.0	54.0	-22.0	"mid channel"
4804.000	24.8	7.1	341.0	1.2	3.0	0.0	V-Horn	AV	0.0	31.9	54.0	-22.1	"low channel"
4804.000	24.7	7.1	123.0	1.8	3.0	0.0	H-Horn	AV	0.0	31.8	54.0	-22.2	"low channel"
4960.000	23.9	7.6	158.0	1.2	3.0	0.0	V-Horn	AV	0.0	31.5	54.0	-22.5	"high channel"
4960.000	23.7	7.6	63.0	1.3	3.0	0.0	H-Horn	AV	0.0	31.3	54.0	-22.7	"high channel"
2483.500	45.6	0.6	359.0	1.4	3.0	20.0	V-Horn	PK	0.0	66.2	74.0	-7.8	"high channel"
2483.500	42.4	0.6	218.0	2.3	3.0	20.0	H-Horn	PK	0.0	63.0	74.0	-11.0	"high channel"
2390.000	39.3	0.4	300.0	1.2	3.0	20.0	V-Horn	PK	0.0	59.7	74.0	-14.3	"low channel"
2390.000	38.5	0.4	332.0	1.3	3.0	20.0	H-Horn	PK	0.0	58.9	74.0	-15.1	"low channel"
1149.920	42.8	-6.2	193.0	1.2	3.0	20.0	V-Horn	PK	0.0	56.6	74.0	-17.4	"low channel"
1174.860	41.4	-6.0	201.0	1.2	3.0	20.0	V-Horn	PK	0.0	55.4	74.0	-18.6	"low channel"
1124.870	41.7	-6.5	234.0	1.2	3.0	20.0	V-Horn	PK	0.0	55.2	74.0	-18.8	"low channel"
1140.320	41.3	-6.3	206.0	1.2	3.0	20.0	V-Horn	PK	0.0	55.0	74.0	-19.0	"low channel"
1149.920	40.9	-6.2	221.0	1.5	3.0	20.0	H-Horn	PK	0.0	54.7	74.0	-19.3	"low channel"
1124.870	41.1	-6.5	220.0	1.6	3.0	20.0	H-Horn	PK	0.0	54.6	74.0	-19.4	"low channel"
1140.320	40.7	-6.3	284.0	1.3	3.0	20.0	H-Horn	PK	0.0	54.4	74.0	-19.6	"low channel"
1174.860	40.1	-6.0	218.0	1.2	3.0	20.0	H-Horn	PK	0.0	54.1	74.0	-19.9	"low channel"
7440.000	39.8	10.7	58.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.5	74.0	-23.5	"high channel"
7323.000	39.9	10.5	152.0	1.2	3.0	0.0	V-Horn	PK	0.0	50.4	74.0	-23.6	"mid channel"
7440.000	39.4	10.7	95.0	1.2	3.0	0.0	V-Horn	PK	0.0	50.1	74.0	-23.9	"high channel"
7323.000	39.6	10.5	156.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.1	74.0	-23.9	"mid channel"
4882.000	38.4	7.3	174.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.7	74.0	-28.3	"mid channel"
4882.000	38.4	7.3	164.0	2.6	3.0	0.0	V-Horn	PK	0.0	45.7	74.0	-28.3	"mid channel"
4804.000	38.2	7.1	123.0	1.8	3.0	0.0	H-Horn	PK	0.0	45.3	74.0	-28.7	"low channel"
4804.000	38.1	7.1	341.0	1.2	3.0	0.0	V-Horn	PK	0.0	45.2	74.0	-28.8	"low channel"
4960.000	37.0	7.6	158.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.6	74.0	-29.4	"high channel"
4960.000	36.9	7.6	63.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.5	74.0	-29.5	"high channel"