UltraTech
Group of Labs

Ultratech's Accreditations:

ANSI American National Standards Institute
0685

31040/SIT

C-1376

Canada
46390-2049

NVLAP
200093-0

BSMI
SL2-IN-E-1119R

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Email: vic@ultratech-labs.com

May 26, 2006

Elprotronic Inc.
91 Alpine Crescent
Richmond Hill, Ontario
Canada, L4S 1V9

Attn.: **Dr. Gregory Czajkowski**

Subject: **Verification Testing under CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003, Class B - Information Technology Equipment.**

Product: **Flash Programming Adapter**
Model No.: **USB-MSP430-FPA & USB-FPA**

Dear Dr. Czajkowski,

The product sample, as provided by you, has been tested and found to comply with **CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003, Class B - Information Technology Equipment.**

Enclosed you will find copies of the engineering report. If you have any queries, please do not hesitate to contact us.

Yours truly,

Tri Minh Luu, P. Eng.,
V.P., Engineering

Encl

VERIFICATION CERTIFICATE

NOT TRANSFERABLE

This Verification Certificate is hereby issued to the named GRANTEE and is VALID ONLY for the equipment identified hereon for use under the rules and regulations listed below:

GRANTEE:	Elprotronic Inc.
Address:	91 Alpine Crescent Richmond Hill, Ontario Canada, L4S 1V9
Contact Person:	Dr. Gregory Czajkowski Phone #: 905-780-5789 Fax #: 905-780-2414 Email Address: gregory@elprotronic.com
Equipment Type:	Class B - Information Technology Equipment
Product Name:	Flash Programming Adapter
Model No.:	USB-MSP430-FPA & USB-FPA
The above product was tested by UltraTech Engineering Labs Inc. and found to comply with:	European CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003

- **Note(s):** *See attached report, UltraTech's File No.: ELP-004-CISPR22B, dated* May 26, 2006 *for details and conditions of Verification Compliance.*

Approved by: Tri M. Luu, P.Eng.
V.P. – Engineering

UltraTech

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ANSI	FC	VCI	Canada	NVLAP	BSMI
0685	31040/SIT	C-1376	46390-2049	200093-0	SL2-IN-E-1119R

ENGINEERING TEST REPORT

Flash Programming Adapter
Model No.: USB-MSP430-FPA & USB-FPA

Applicant: **Elprotronic Inc.**
91 Alpine Crescent
Richmond Hill, Ontario
Canada, L4S 1V9

Tested in Accordance With

INTERNATIONAL ELECTROTECHNICAL COMMISSION
(International Special Committee on Radio Interference)
CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003, CLASS B
Information Technology Equipment - Radio Disturbance Characteristics

UltraTech's File No.: ELP-004-CISPR22B

This Test report is Issued under the Authority of Tri M. Luu, Professional Engineer, Vice President of Engineering UltraTech Group of Labs Date: May 26, 2006	
Report Prepared by: Lien M. Trinh Issued Date: May 26, 2006	Tested by: Phuong Luu & Quan Ngo, EMI/EMC Technicians Test Dates: May 12, 15, 2006

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government.*

UltraTech

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EXHIBIT 1. INTRODUCTION

1.1. SCOPE

Reference:	CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003
Title	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
Purpose of Test:	To gain Verification Compliance with CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003 - Class B.
Test Procedures	Both conducted and Electromagnetic Radiation Disturbance measurements were conducted in accordance with the European Standards CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003 - Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement.
Class B Classification:	Class B ITE is a category of apparatus which satisfies the Class B ITE disturbance limits. Class B is intended primarily for use in domestic environment; the environment where the use of broadcast radio and television receivers may be expected within a distance of 10m of the apparatus concerned, and may include: • Equipment with no fixed place of use; for example portable equipment powered by built-in batteries. • Telecommunication terminal equipment powered by a telecommunication network. • Personal computers and auxiliary connected equipment.

The CISPR standard defines the acceptable levels of Conducted Disturbance at Mains Ports and Radiated Disturbance emanated from electronic products. Countries are known to require CISPR compliance are ***Australia, Austria, Belgium, Ireland, France, Italy, Spain, Germany, Netherlands, Portugal, Denmark, Luxembourg, Switzerland, Finland, Norway, Sweden, Iceland, Greenland, New Zealand, Japan, United Kingdom, The United States, Canada and etc*** ….

1.2. RELATED SUBMITTAL(S)/GRANT(S)

None

1.3. NORMATIVE REFERENCES

Publication	Year	Title
CISPR 22 EN 55022 CISPR 22 +A1 CISPR 22 +A2 CISPR 22 +A1	2003-04-10 1998 2000 2003 2004	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
ANSI C63.4	2004	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz
CISPR 16-1-1	2003	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-1: Measuring Apparatus
CISPR 16-2-1	2004	Specification for radio disturbance and immunity measuring apparatus and methods. Part 2-1: Conducted disturbance measurement

EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1. CLIENT INFORMATION

APPLICANT:	
Name:	Elprotronic Inc.
Address:	91 Alpine Crescent Richmond Hill, Ontario Canada, L4S 1V9
Contact Person:	Dr. Gregory Czakkowski Phone #: 905-780-5789 Fax #: 905-780-2414 Email Address: gregory@elprotronic.com

MANUFACTURER:	
Name:	Elprotronic Inc.
Address:	90 Alpine Crescent Richmond Hill, Ontario Canada, L4S 1V9
Contact Person:	Dr. Gregory Czakkowski Phone #: 905-780-5789 Fax #: 905-780-2414 Email Address: gregory@elprotronic.com

2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

TEST SAMPLE #1: USB-MSP430-FPA

Brand Name	Elprotronic Inc.
Product Name	Flash Programming Adapter
Model Name or Number	USB-MSP430-FPA
Part Number	USB-MSP430-FPA
Serial Number	200600251
Type of Equipment	Information Technology Equipment
Oscillators' Frequencies	12.00 MHz
CPUs' Frequencies	48.00 MHz (CPU)
Power input source:	DC derived from host (from PC via USB)

TEST SAMPLE #2: USB-FPA

Brand Name	Elprotronic Inc.
Product Name	Flash Programming Adapter
Model Name or Number	USB-FPA
Part Number	USB-FPA
Serial Number	20060361
Type of Equipment	Information Technology Equipment
Oscillators' Frequencies	24.00 MHz
CPUs' Frequencies	48.00 MHz (CPU), 480.0 MHz (SIE)
Power input source:	DC derived from host (from PC via USB)

2.3. LIST OF COMPONENTS/PARTS OF THE EUT

Please refer to the parts list provided by manufacturer.

2.4. LIST OF EUT'S PORTS

Port Number	EUT's Port Description	Number of Identical Ports	Connector Type	Cable Type (Shielded/Non-shielded)
TEST SAMPLE #1: USB-MSP430-FPA				
1	USB	1	USB type B	Shielded
2	Ribbon cable	1	14 pins header	Non-shielded
TEST SAMPLE #2: USB-FPA				
1	USB	1	USB type B	Shielded
2	Ribbon cable	1	14 pins header	Non-shielded

2.5. ANCILLARY EQUIPMENT

The EUT was tested while connected to the following representative configuration of ancillary equipment necessary to exercise the ports during tests:

Ancillary Equipment # 1	
Brand name:	HP Pavillion 763n
Serial Number:	MX24818639
Connected to EUT's Port:	Card edge connector

Ancillary Equipment # 2	
Brand name:	Flash Programming Adapter
Model Name or Number:	USB-MSP430-FPA
Serial Number:	20060251
Cable Type:	Shielded
Connected to PC Port:	USB

Ancillary Equipment # 3	
Brand name:	Flash Programming Adapter
Model Name or Number:	USB-FPA
Serial Number:	20060361
Cable Type:	Shielded
Connected to PC Port:	USB

Ancillary Equipment # 4	
Brand name:	IBM Monitor
Model Name or Number:	6554-673
Cable Type:	Shielded
Connected to PC Port:	HD15

Ancillary Equipment # 5	
Brand name:	HP Keyboard
Serial Number:	SC023102458
Cable Type:	Shielded
Connected to PC Port:	6 Pins

Ancillary Equipment # 6	
Brand name:	Compaq Mouse
Model Number:	M042KC
Serial Number:	030250666
Cable Type:	Shielded
Connected to EUT's Port:	6 Pins

EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

Temperature:	21°C
Humidity:	51%
Pressure:	102 kPa
Power input source:	DC derived from host (from PC via USB)

3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TEST SIGNALS

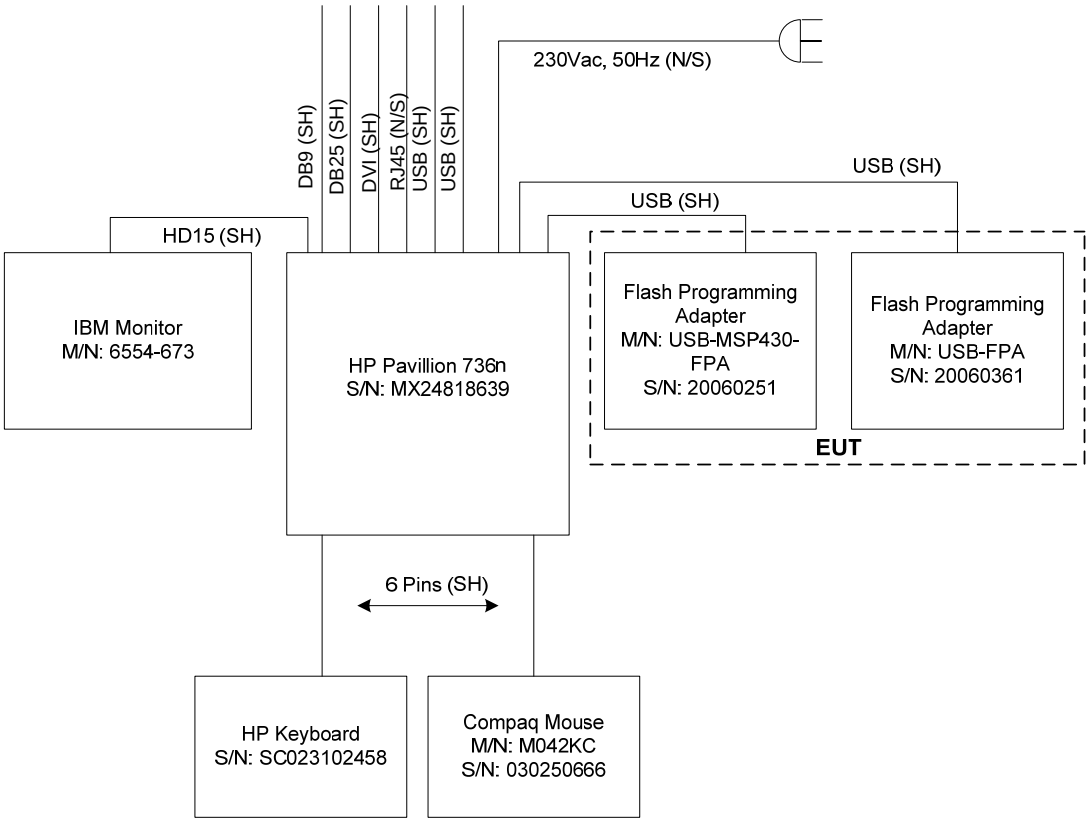
Test Sample #1:

The USB-MSP430-FPA Flash Programming Adapter, powered by a PC via USB cable, is dedicated to program the microcontroller's flash memory or communicate with the microcontroller's for debugging purpose. PC software is making communication with the USB-MSP430-FPA during the test.

Test Sample #2:

The USB-FPA Flash Programming Adapter, powered by a PC via USB cable, is dedicated to program the microcontroller's flash memory or communicate with the microcontroller's for debugging purpose. PC software is making communication with the USB-FPA during the test.

3.3. BLOCK DIAGRAM OF TEST SETUP FOR AC POWERLINE CONDUCTED EMISSION & RADIATED EMISSION MEASUREMENTS



3.4. PHOTOGRAPHS OF TEST SETUP FOR AC CONDUCTED EMISSION MEASUREMENTS

3.5. PHOTOGRAPHS OF TEST SETUP FOR RADIATED EMISSION MEASUREMENTS

EXHIBIT 4. SUMMARY OF TEST RESULTS

4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- AC Powerline Conducted Emissions were performed in UltraTech's shielded room, 16'(L) by 12'(W) by 12'(H).

- Radiated Emissions were performed at the Ultratech's 3-10 Meter Open Field Test Site (OFTS) situated in the Town of Oakville, province of Ontario. This test site has been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville Open Field Test Site has been filed with FCC office (FCC File No.: 31040/SIT 1300B3) and Industry Canada office (Industry Canada File No.: IC2049). Last Date of Site Calibration: Feb. 01, 2006.

4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

CISPR 22 EN 55022	TEST REQUIREMENTS	MARGIN BELOW (-) / ABOVE (+) THE LIMITS	COMPLIANCE (YES/NO)
5.1, Table 2, Class B	AC Mains Terminal Disturbance Voltage in the frequency band 150 kHz to 30 MHz	- 10.2 dB @ 1.34 MHz	Yes
6, Table 6, Class B	Electromagnetic Radiation Disturbance in the frequency band 30 MHz to 1000 MHz	- 1.6 dB @ 96.0 MHz	Yes

4.3. MODIFICATIONS REQUIRED FOR COMPLIANCE

None

4.4. DEVIATION OF THE STANDARD TEST PROCEDURES

None

EXHIBIT 5. MEASUREMENTS, EXAMINATIONS & TEST DATA FOR EMC EMISSIONS

5.1. TEST PROCEDURES

Please refer to Ultratech Test Procedures, File# ULTR-P001-2004, CISPR 22 / EN 55022, CISPR 16-1-2 and CISPR 16-2-3 for Test Procedures.

5.2. MEASUREMENT UNCERTAINTIES

The measurement uncertainties stated were calculated in accordance with requirements of UKAS Document LAB 34 with a confidence level of 95%. Please refer to Exhibit 6 for Measurement Uncertainties.

5.3. MEASUREMENT EQUIPMENT USED:

The measurement equipment used complied with the requirements of the Standards referenced in the Methods & Procedures ANSI C63.4, and CIPSR 16-1-1,

5.4. AC MAINS TERMINAL DISTURBANCE VOLTAGE IN FREQUENCY BAND 150 KHZ TO 30 MHZ @ CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003 [5.1, TABLE 2]

5.4.1. Limits

The equipment shall meet the limits of the following table:

	CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003 CLASS B LIMITS		
Test Frequency Range (MHz)	**Quasi-Peak (dBµV)**	**Average* (dBµV)**	**Measuring Bandwidth**
0.15 to 0.5	66 to 56*	56 to 46*	RBW = 9 kHz VBW ≥ 9 kHz for QP VBW = 1 Hz for Average
0.5 to 5	56	46	RBW = 9 kHz VBW ≥ 9 kHz for QP VBW = 1 Hz for Average
5 to 30	60	50	RBW = 9 kHz VBW ≥ 9 kHz for QP VBW = 1 Hz for Average

- Decreasing linearly with logarithm of frequency

5.4.2. Method of Measurements

Refer to Test Procedures ULTR P001-2004, CISPR 22 / EN 55022, ANSI C63-4

5.4.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
EMI Receiver System/Spectrum Analyzer	Hewlett Packard	HP 8546A	3520A00248	9KHz-5.6GHz, 50 Ohms
Transient Limiter	Hewlett Packard	11947A	310701998	9 kHz – 200 MHz 10 dB attenuation
L.I.S.N.	EMCO	3825/2	89071531	9 kHz – 200 MHz 50 Ohms / 50 µH
12'x16'x12' RF Shielded Chamber	RF Shielding	…	..	…

5.4.4. Test Data

The emissions were scanned from 150 KHz to 30 MHz at AC mains Terminal via a LISN, and all emissions less than 20 dB below the limits were recorded.

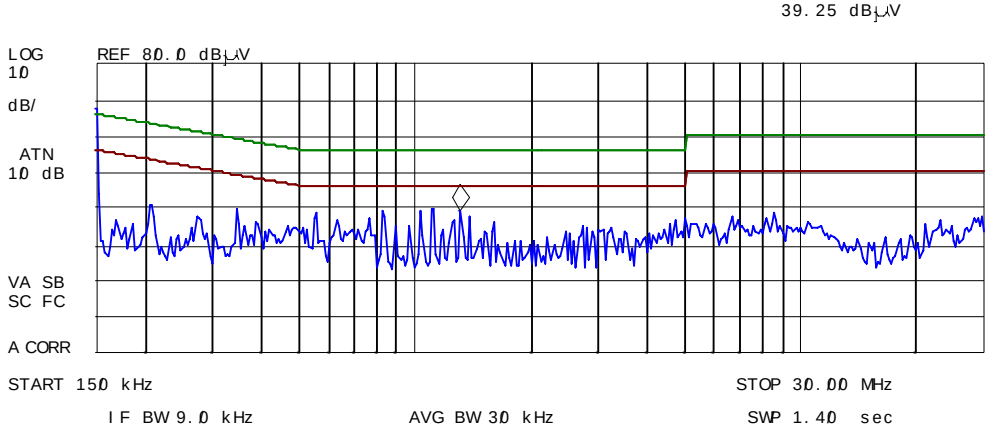
FREQUENCY (MHz)	RF LEVEL (dBuV)	RECEIVER DETECTOR (P/QP/AVG)	QP LIMIT (dBuV)	AVG LIMIT (dBuV)	MARGIN (dB)	PASS/ FAIL	LINE TESTED (L1/L2)
0.21	38.8	QP	63.1	53.1	-24.3	PASS	L1
0.21	34.7	AVG	63.1	53.1	-18.4	PASS	L1
0.84	38.2	QP	56.0	46.0	-17.8	PASS	L1
0.84	34.6	AVG	56.0	46.0	-11.4	PASS	L1
1.33	38.8	QP	56.0	46.0	-17.2	PASS	L1
1.33	35.1	AVG	56.0	46.0	-10.9	PASS	L1
29.31	30.8	QP	60.0	50.0	-29.2	PASS	L1
29.31	20.5	AVG	60.0	50.0	-29.5	PASS	L1
0.21	36.2	QP	63.3	53.3	-27.1	PASS	L2
0.21	31.9	AVG	63.3	53.3	-21.4	PASS	L2
0.85	31.4	QP	56.0	46.0	-24.6	PASS	L2
0.85	28.2	AVG	56.0	46.0	-17.8	PASS	L2
1.34	39.0	QP	56.0	46.0	-17.0	PASS	L2
1.34	35.8	AVG	56.0	46.0	-10.2	PASS	L2
29.94	37.2	QP	60.0	50.0	-22.8	PASS	L2
29.94	27.0	AVG	60.0	50.0	-23.0	PASS	L2

UltraTech Group of Labs	
Applicant:	Elprotronic Inc.
Product	Flash Programming Adapter
Models:	USB-MSP430-FPA & USB-FPA

AC POWER LINE CONDUCTED EMISSIONS MEASUREMENT PLOT

Detector: [X] PEAK [X] QUASI-PEAK [X] AVERAGE		Temp: 23°C	Humidity: 20%
Line Tested: L1	Line Voltage: 230Vac	Test Tech: Quan Ngo	Test Date: May 15/06
Standard: CISPR 22 Class B			

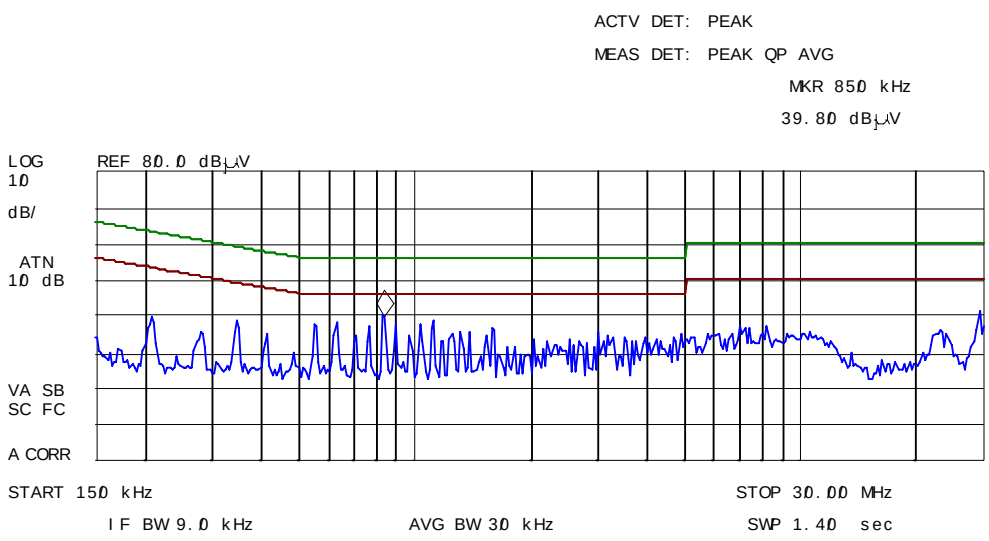
Signal	Freq (MHz)	PK Amp	QP Amp	AV Amp	AV△L2
1	0.211625	41.3	38.8	34.7	-18.5
2	0.842250	40.1	38.2	34.6	-11.4
3	1.334425	40.6	38.8	35.1	-10.9
4	29.308275	36.2	30.8	20.5	-29.5



UltraTech Group of Labs	
Applicant:	Elprotronic Inc.
Product	Flash Programming Adapter
Models:	USB-MSP430-FPA & USB-FPA

AC POWER LINE CONDUCTED EMISSIONS MEASUREMENT PLOT			
Detector: [X] PEAK [X] QUASI-PEAK [X] AVERAGE		Temp: 23°C	Humidity: 20%
Line Tested: L2	Line Voltage: 230Vac	Test Tech: Quan Ngo	Test Date: May 15/06
Standard: CISPR 22 Class B			

Signal	Freq (MHz)	PK Amp	QP Amp	AV Amp	AV△L2
1	0.207375	39.4	36.2	31.9	-21.5
2	0.849125	34.5	31.4	28.2	-17.8
3	1.336000	40.7	39.0	35.8	-10.2
4	29.936250	41.2	37.2	27.0	-23.0



5.5. ELECTROMAGNETIC RADIATION DISTURBANCE FROM 30 TO 1000 MHZ @ CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003 [6, TABLE 6]

5.5.1. Limits

Test Frequency Range (MHz)	Class B Limits @10 M (dBµV/m)	EMI Detector Used	Measuring Bandwidth (kHz)
30 – 230	30	Quasi-Peak	RBW = 120 kHz, VBW ≥ 120 kHz
230 – 1000	37	Quasi-Peak	RBW = 120 kHz, VBW ≥ 120 kHz

5.5.2. Method of Measurements

Refer to Exhibit 7 of this report, CISPR 22:2003 +A1:2004 / EN55022:1998 +A1:2000 +A2:2003, CISPR 16-1-1 and ANSI C63.4
The EUT shall be scanned from 30 MHz to 1000 MHz.

5.5.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
EMI Receiver System/Spectrum Analyzer	Hewlett Packard	HP 8546A	3520A00248	9KHz-5.6GHz, 50 Ohms
Spectrum Analyzer/ EMI Receiver	Rohde & Schawrz	FSEK20/B4/B21	834157/005	9 kHz – 40 GHz with external mixer
Microwave Amplifier	Hewlett Packard	HP 83017A	311600661	1 GHz to 26.5 GHz
Biconilog Antenna	EMCO	3143	1029	20 MHz to 2 GHz
Horn Antenna	EMCO	3155	9701-5061	1 GHz – 18 GHz

5.5.4. Test Data

The emissions were scanned from 30 MHz to 1000 MHz at 10 Meters distance and all emissions less than 20 dB below the limits were recorded.

FREQUENCY (MHz)	RF LEVEL (dBuV/m)	DETECTOR USED (PEAK/QP)	ANTENNA PLANE (H/V)	LIMIT (dBuV/m)	MARGIN (dB)	PASS/ FAIL
33.3	25.1	PEAK	V	30.0	-4.9	PASS
33.3	23.0	PEAK	H	30.0	-7.0	PASS
37.2	21.1	PEAK	H	30.0	-8.9	PASS
45.8	24.8	PEAK	V	30.0	-5.2	PASS
48.3	23.8	PEAK	V	30.0	-6.2	PASS
57.5	20.2	PEAK	V	30.0	-9.8	PASS
66.8	20.8	PEAK	V	30.0	-9.2	PASS
85.5	20.6	PEAK	H	30.0	-9.4	PASS
96.0	28.4	QP	V	30.0	-1.6	PASS
96.0	23.1	PEAK	H	30.0	-6.9	PASS
192.4	23.5	PEAK	V	30.0	-6.5	PASS
192.4	16.4	PEAK	H	30.0	-13.6	PASS
288.4	24.6	PEAK	H	37.0	-12.4	PASS
337.3	25.7	PEAK	H	37.0	-11.3	PASS
402.5	29.1	PEAK	H	37.0	-7.9	PASS
433.0	24.4	PEAK	V	37.0	-12.6	PASS
433.0	28.3	PEAK	H	37.0	-8.7	PASS
531.2	26.4	PEAK	H	37.0	-10.6	PASS

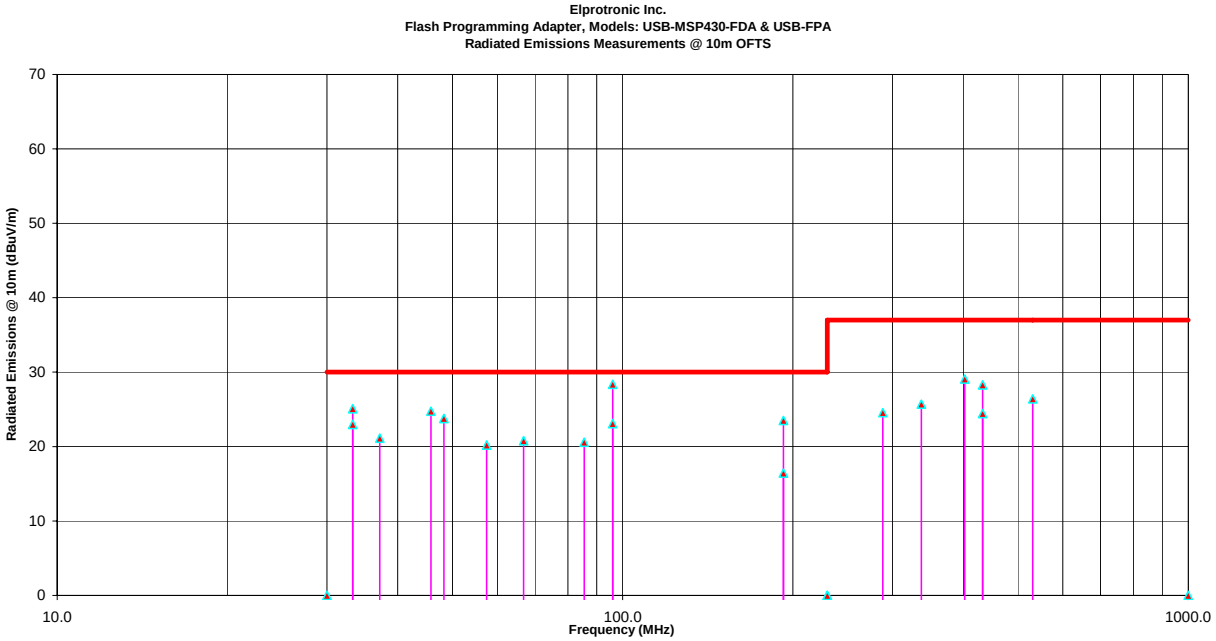


EXHIBIT 6. MEASUREMENT UNCERTAINTY

The measurement uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 and LAB 34

6.1. LINE CONDUCTED EMISSION MEASUREMENT UNCERTAINTY

CONTRIBUTION (Line Conducted)	PROBABILITY DISTRIBUTION	UNCERTAINTY (dB)	
		9-150 kHz	0.15-30 MHz
EMI Receiver specification	Rectangular	±1.5	±1.5
LISN coupling specification	Rectangular	±1.5	±1.5
Cable and Input Transient Limiter calibration	Normal (k=2)	±0.3	±0.5
Mismatch: Receiver VRC Γ_1 = 0.03 LISN VRC Γ_R = 0.8(9 kHz) 0.2 (30 MHz) Uncertainty limits 20Log(1±$\Gamma_1\Gamma_R$)	U-Shaped	±0.2	±0.3
System repeatability	Std. deviation	±0.2	±0.05
Repeatability of EUT	--	--	--
Combined standard uncertainty	Normal	±1.25	±1.30
Expanded uncertainty U	Normal (k=2)	±2.50	±2.60

Sample Calculation for Measurement Accuracy in 150 kHz to 30 MHz Band:

$u_c(y) = \sqrt{\sum_{I=1}^{m} u_i^2(y)} = \pm \sqrt{(1.5^2 + 1.5^2)/3 + (0.5/2)^2 + (0.05/2)^2 + 0.35^2} = \pm 1.30$ dB

$U = 2u_c(y) = \pm 2.6$ dB

6.2. RADIATED EMISSION MEASUREMENT UNCERTAINTY

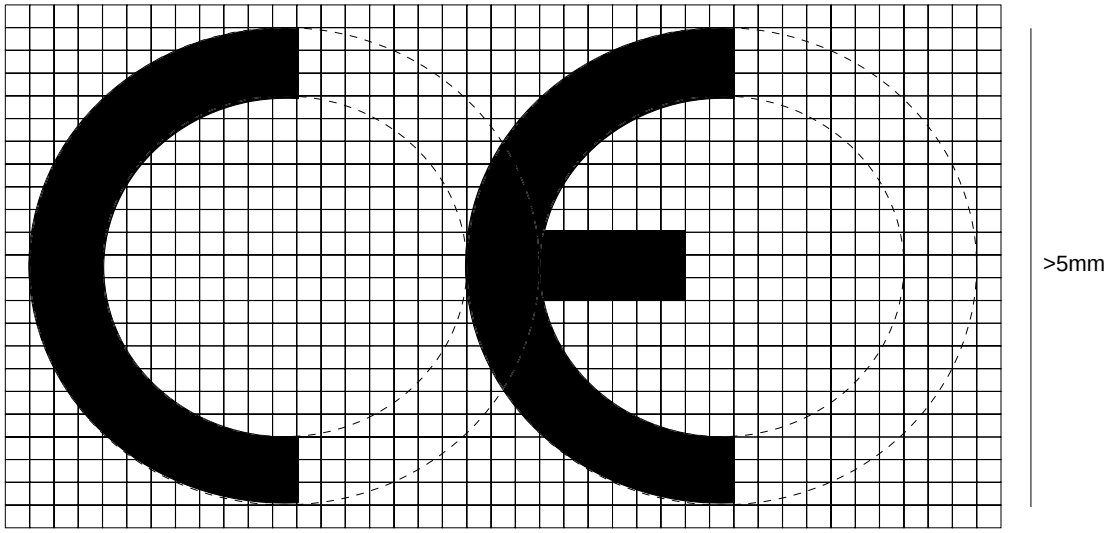
CONTRIBUTION (Electromagnetic Radiation Disturbance)	PROBABILITY DISTRIBUTION	Uncertainty (dB)	
		3 M	10 M
Antenna Factor Calibration	Normal (k=2)	±1.0	±1.0
Cable Loss Calibration	Normal (k=2)	±0.3	±0.5
EMI Receiver specification	Rectangular	±1.5	±1.5
Antenna Directivity	Rectangular	+0.5	+0.5
Antenna factor variation with height	Rectangular	±2.0	±0.5
Antenna phase center variation	Rectangular	0.0	±0.2
Antenna factor frequency interpolation	Rectangular	±0.25	±0.25
Measurement distance variation	Rectangular	±0.6	±0.4
Site imperfections	Rectangular	±2.0	±2.0
Mismatch: Receiver VRC Γ_1 = 0.2 Antenna VRC Γ_R = 0.67(Bi) 0.3 (Lp) Uncertainty limits 20Log(1±$\Gamma_1\Gamma_R$)	U-Shaped	+1.1 -1.25	±0.5
System repeatability	Std. Deviation	±0.5	±0.5
Repeatability of EUT		-	-
Combined standard uncertainty	Normal	+2.19 / -2.21	+1.74 / -1.72
Expanded uncertainty U	Normal (k=2)	+4.38 / -4.42	+3.48 / -3.44

Calculation for maximum uncertainty when 10 M biconical antenna including a factor of k=2 is used:

U = $2u_c(y)$ = 2x(+2.19)= +4.38 dB And U = $2u_c(y)$ = 2x(-2.21)= -4.42 dB

EXHIBIT 7. LABELLING REQUIREMENTS

The CE Mark with respect to the EMC Directive 89/336/EEC



The CE mark shall consist of the initials "CE" taking the following form

- If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.
- Where apparatus is the subject of other Directives covering other aspects and which also provide for the CE conformity marking, the latter shall indicate that the appliances are also presumed to conform to those other Directives.
- However, where one or more of these Directives allow the manufacturer, during a transitional period, to choose which arrangements to apply, the CE mark shall indicate conformity only to the Directives applied by the manufacturer. In this case, particulars of the Directive applied, as published in the Official Journal of the European Communities, must be given in the documents, notices or instructions required by the Directives and accompanying such apparatus.

The various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5mm.