MEASUREMENT/TECHNICAL REPORT

JRS Technology, Inc.- Model:C232120RS501 & C232120RS502
FCC ID:NWM501
May 1998

This report concerns (check one:) Original Grant__X__ Class II Change____

Equipment Type:__Consumer RF Lighting Ballasts__(example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes____ No_X__

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes____ No_X__

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-1-96 Edition] provision.

Report prepared by:

Andrew J. Bellezza
Intertek Testing Services NA Inc.
70 Codman Hill Road
Boxborough, MA 01719
Phone: 978-263-2662
FAX: 978-263-7086

Technical description:

Product description: 120Volt rapid start dimming high frequency electronic ballast for operation of two lamp 32W, 25W or 17W T8 fluorescent lamps. The lamp operating frequency is in the range of 45-75Khz.

Similarities: The 2 ballasts have the same printed circuit board (mother board)

Model C232120RS501, a standard 120 volt, rapid start, 0-10 volt dimming ballasts has a 1.2" x 2.0" daughter card oriented perpendicular to the main printed circuit board and connected by a right angle header. The dimming interface exits the ballast through two 18GA solid conductor wires permanently attached to two positions of a 6 position wire trap connector at the input end of the ballast.

Model C232120RS502, the daughter card that is used above contains 6 additional passive components. The dimming interface is through 4 wires exiting the input of the ballast through a 4 position RJ11 connector. This ballast adds one function to the model C232120RS501 in that it turns the lamps on and off without having to remove the AC power from the ballast. (an isolated 5V signal is used)

Electrical Rating: 120volt 60Hz, single phase, 0.49 amps.

JRS Technology, Inc.
1061 Perimeter Rd. West
Building 11
Endicott, NY 13760
Phone: 607-748-4800
Fax: 607-748-7949

To :Jody Zarnowiec- ITS
From: Michael Neary

Re: Information to user §18.213 of CFR 47

We intend to print the information to the user on the packaging material. Each electronic ballast will be enclosed in a self contained carton. Each carton will be labeled with:

This product may cause interference with other electrical/electronic products. If interference occurs, relocate the ballast or discontinue use. The ballast does not require and maintainence from the user, If a problem occurs please contact the manufacturer.

Regards,

Michael Neary
Staff Engineer

1.2 Related Submittal(s) Grants

This is a single Application for Certification. No simultaneous filings under Part 18.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (1992). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. For each scan, the procedure for maximizing emissions in Appendices D and E were followed. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 593 Massachusetts Avenue, Boxborough, Massachusetts. The East site was used. This test facility has been fully described in a report dated November 20, 1996 submitted to your office. Please reference the site filing number: 31040/SIT 1300F2, dated January 16, 1997. Each test site is accredited by the NVLAP program.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it). During testing, all cables were manipulated to produce worst case emissions.

Radiated emissions test was not performed as the unit operates below 1.705 MHz.

2.2 EUT Exercising Software

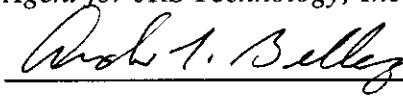
There was no special software to exercise the device.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

Confirmed by:

Andrew J. Bellezza
Engineering Team Leader, ITE
Intertek Testing Services NA Inc.
Agent for JRS Technology, Inc.



Signature

5-12-98

Date

2.4 Equipment Modification

Any modifications installed previous to testing by JRS Technology, Inc. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services NA Inc.

Confirmed by:

Andrew J. Bellezza
Engineering Team Leader, ITE
Intertek Testing Services NA Inc.
Agent for JRS Technology, Inc.

Andrew J. Bellezza Signature

5-12-98 Date

2.5 Support Equipment List and Description

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system (included inserted cards, which have grants) are:

This unit is a standalone.

Cables:

(1) AC Power Cord (2m, unshielded)

EXHIBIT 3

EMISSION RESULTS

3.0 Emission Results

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs, data tables and graphical representations of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD - AV

where

FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV/m
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
FS = 52 + 7.4 + 1.6 - 29 + 0 - 10 = 32 dBμV/m
Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

3.2 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Not Applicable

*All readings are peak unless stated otherwise

TEST PERSONNEL:

Andrew T. Bellezza FOR K.P.S.
Tester Signature

Kouma P. Sinn, Emissions Compliance Engineer
Typed/Printed Name

5-12-98
Date

3.3 Line Conducted Configuration Photograph

Worst Case Line Conducted Emissions

Front View

Model C232120RS501 - 29.99 MHz
Model C232120RS502 - 29.52 MHz

3.3 Line Conducted Configuration Photograph (cont)

Worst Case Line Conducted Emissions

Rear View

Model C232120RS501 - 29.99 MHz
Model C232120RS502 - 29.52 MHz

3.4 Line Conducted Emission Configuration Data

The data on the following page lists the significant emission frequencies, the limit, and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement:

Model C232120RS501 - Passed by 17 dB
Model C232120RS502 - Passed by 12 dB

* All readings are peak unless stated otherwise.

TEST PERSONNEL:

Andrew T. Bellezza FOR K.P.S.
Tester Signature

Kouma P. Sinn, Emissions Compliance Engineer
Typed/Printed Name

5-13-98
Date

Emissions Site 1 Boxborough, MA

Table:1

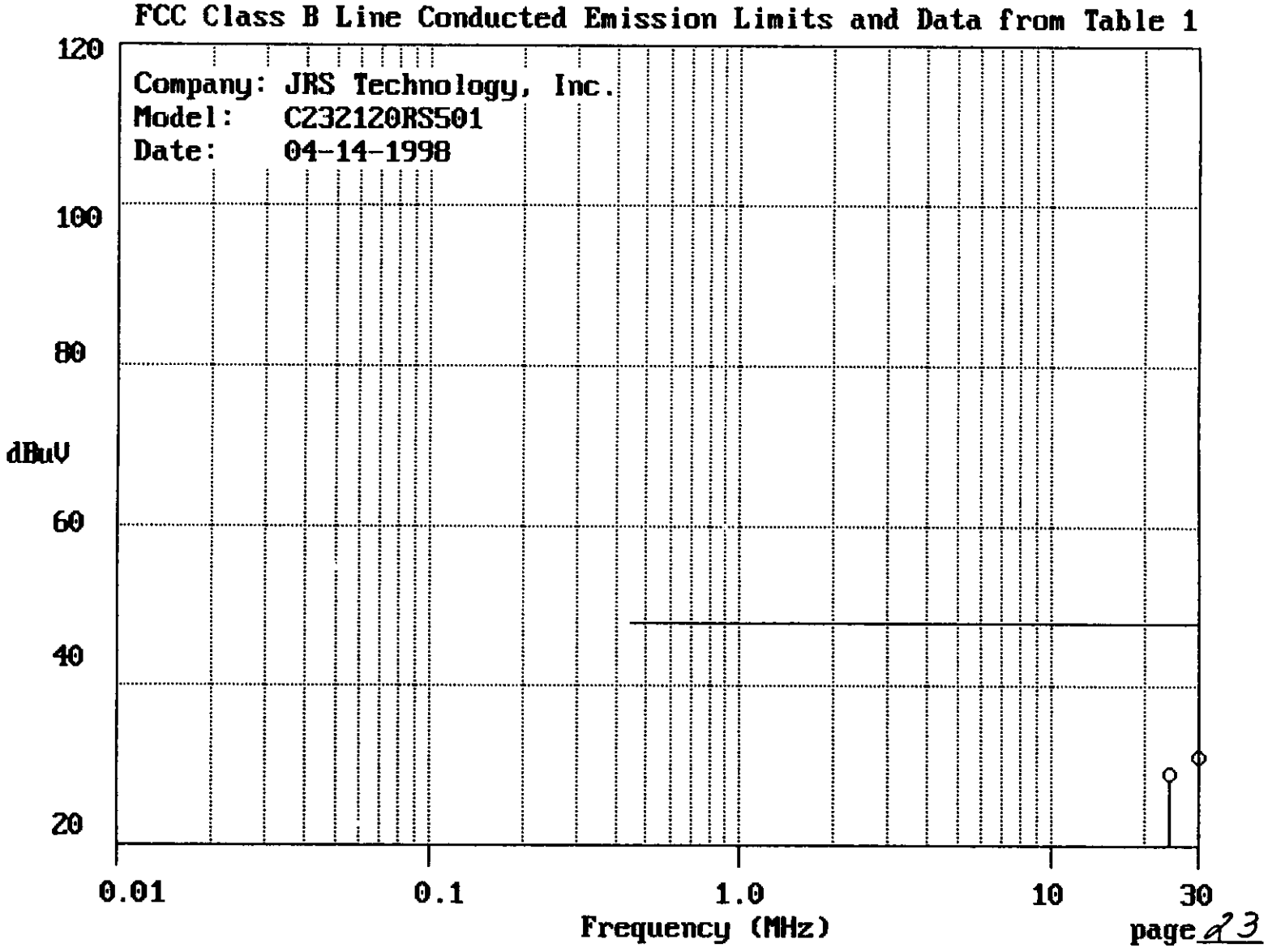
Company: JRS Technology, Inc. Model: C232120RS501

Notes: Line conducted scan (0-10V, Fully bright)

FCC Class B Conducted Emissions

Frequency (MHz)	Reading Side A (dBuV)	Reading Side B (dBuV)	Class B Limit (dBuV)	Margin (dB)
24.04	29	21	48	-19
29.99	31	28	48	-17

Test Engineer: Kouma Sinn Test Date: 04-14-1998


FCC Class B Line Conducted Emission Limits and Data from Table 1
Company: JRS Technology, Inc.
Model: C232120RS501
Date: 04-14-1998
120
100
80
60
40
20
dBuV
0.01
0.1
1.0
10
30
Frequency (MHz)

Emissions Site 1 Boxborough, MA

Table:2

Company: JRS Technology, Inc. Model: C232120RS502

Notes: Line conducted scan (0-10V Plus, Fully bright)

FCC Class B Conducted Emissions

Frequency (MHz)	Reading Side A (dBuV)	Reading Side B (dBuV)	Class B Limit (dBuV)	Margin (dB)
1.125	30	30	48	-18
22.49	20	26	48	-22
29.52	36	31	48	-12

Test Engineer: Kouma Sinn Test Date: 04-14-1998

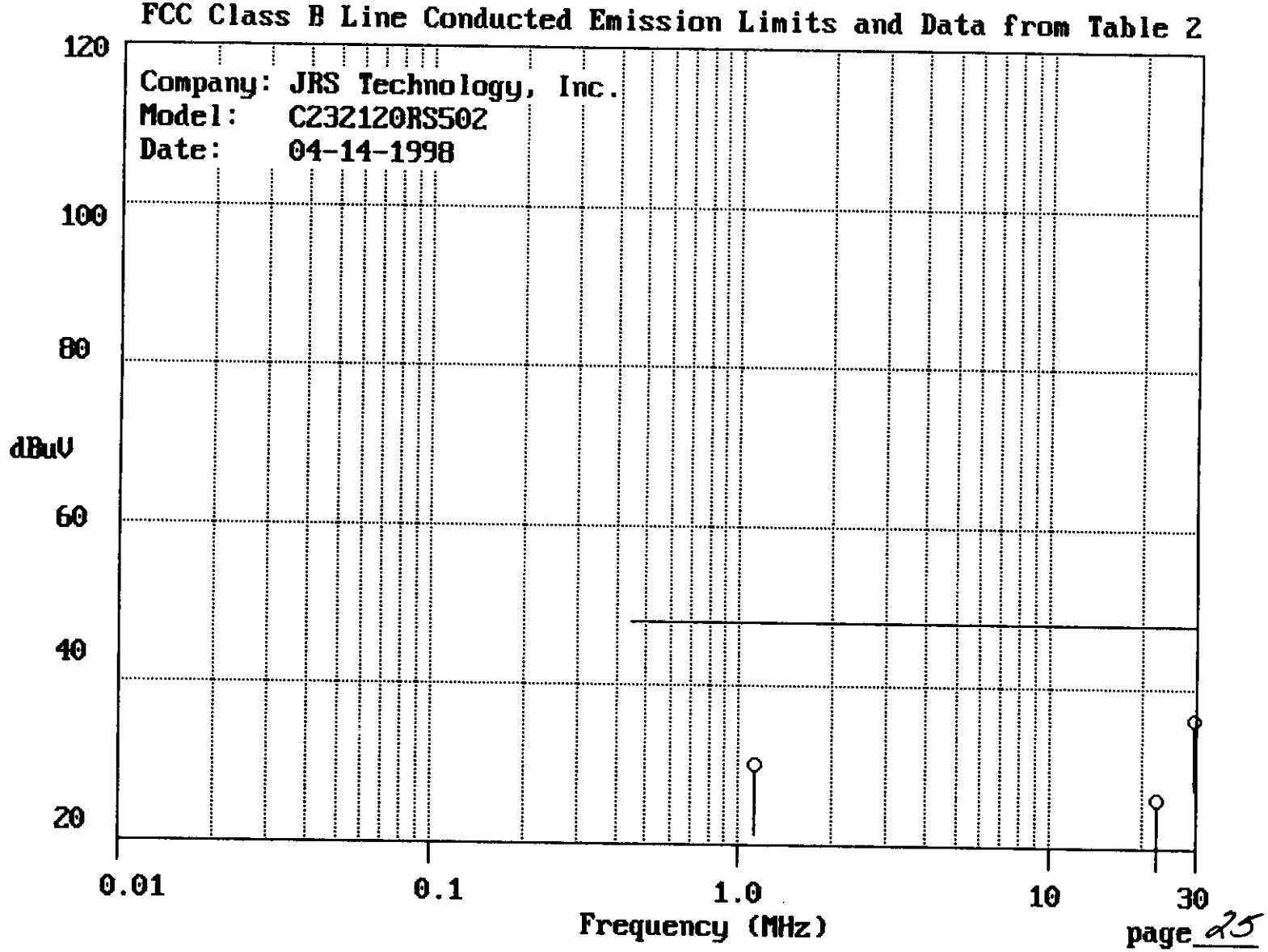

FCC Class B Line Conducted Emission Limits and Data from Table 2
Company: JRS Technology, Inc.
Model: C232120RS502
Date: 04-14-1998
120
100
80
dBuV
60
40
20
0.01
0.1
1.0
10
30
Frequency (MHz)

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 Equipment Photographs

Photographs of the EUT are attached.

EXHIBIT 6

TECHNICAL SPECIFICATIONS

Figure 6.2 Consumer RF Lighting Ballasts Schematic Diagram

6.0 Technical Specifications

The block diagram and schematic diagram of the Consumer RF Lighting Ballasts are attached.

Figure 6.1 Consumer RF Lighting Ballasts Block Diagram

EXHIBIT 7

INSTRUCTION MANUAL

7.0 Instruction Manual

Attached is a preliminary copy of the Instruction Manual.

The information to the User shown on the attached page will be inserted into the packaging.

This manual will be provided to the end-user with each unit sold/leased in the United States.