

Report No.: 010645US
Client: Technical Consumer Products, Inc.015



NVLAP LAB CODE: 200413-0

June 19, 2001

Test Record

Product Verification

According to FCC Part 18
for

Technical Consumer Products, Inc.

MODEL: ET-27W

This report contains confidential information. The owner of this report may make duplicates of it, provided **all** pages are copied.

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Introduction – Test Plan

This report describes the results of conducted emission measurements made on an fluorescent lamp which falls under the class of unintentional radiator by the FCC Rules and Regulations.

As per customer request only conducted emission test was applied to the EUT.

This EUT is designated:

Compact Fluorescent Lamp

Model:

ET –27W

The **ET –27W** is designed and manufactured by **Technical Consumer Products,Inc.**

The EUT should be in full compliance with the FCC Part 18 Regulations using the methods of ANSI C63.4.

1.0 CERTIFICATION OF TEST DATA

Verification statement.

The data, data evaluation and equipment configuration represented herein are a true and accurate representation of the test sample (EUT), and EMC characteristics and measurements obtained as of the dates and the times of the test under the conditions specified and to the methods of ANSI C63.4: 1992.

All measurements are traceable to the National Institute of Standards and Technology (NIST).

The test results provided with this report, indicate that the equipment tested:

Compact Fluorescent Lamp Model: ET-27W

is compliant with the following Rules and Regulations without any modifications of the design:

- A. 47 Code of Federal Regulations, Part 18, Subpart 18.307 Conduction limits.
- B. ANSI C63.4: 1992

Tests performed by:

Mike Chechelnik
EMC Engineer

Report prepared by:

Mike Chechelnik
EMC Engineer

Report approved by:

Leon Kogan
Technical Director,

JMR Compliance Engineering, 20400 Plummer Street, Chatsworth CA 91311.
E-mail:emc@jmr.com

2.0 GENERAL INFORMATION

2.1 Client Information

Company Name:	Technical Consumer Products, Inc.
Contact:	Paul Fisher
Company Address:	300 Lena Drive Aurora, OH 44202
Phone:	(330)-995-6111

2.2 Administrative Data

Device tested:	Compact Fluorescent Lamp
Model:	ET-27W
Accessories:	N/A
Expository Statement:	This device is intended for use in residential and commercial environments.
Purpose of test:	Demonstrate compliance with FCC Rules, Part 18
Date of test:	06/18/01
Place of the test:	JMR Electronics, Inc. Compliance Engineering Laboratory 20400 Plummer Street Chatsworth, CA 91311 Phone: 818 993-4801

3.0 Description of Equipment Under Test (EUT)

3.1 Brief Description of the EUT

The EUT is a compact fluorescent lamp.

Power Supply: 110V AC

3.2 Cabling Configuration

Power Cords:

Unit	EUT
MFG	Generic
Shielded	No

3.3 Photographs of the EUT



3.4 EUT Modifications

None

3.5 Photographs of EUT Modifications

N/A

4.0 Conducted Emissions

4.1 Test Specifications

Specification:	ANSI C63.4: 1992
Title:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
Specification:	FCC 47 CFR, Part 18 Title:
	Code of Federal Regulations
Specification:	JMR Work Procedure W090-5205
Title:	Conducted Emission Test

4.1.1 Test Requirements.

The EUT must meet FCC 47 CFR, Part 18 requirements.

4.2 Conducted Emissions Test

4.2.1 Procedures of Conducted Emission Test

Conducted emission test is done in the "Peak Detector" mode for Line 1, which is high line to ground. Then the RFI emissions are measured from Line 2, or neutral to ground. When Peak amplitudes are found to be above the limits, or within 10 dB of the limits, a Quasi-Peak Detector Mode and Average Detector Mode for the line or lines with excessive RFI is then performed.

For AC power line conducted tests, the following option may be exercised if the EUT Peak Mode emissions exceed the average limit when performing the tests. If the level of the emission measured using instrumentation with Quasi-Peak detection is 6 dB, or more, higher than the level of the same emission measured with instrumentation having an Average Detector with a 9 kHz minimum bandwidth, that emission is considered to be broadband and the level obtained with the Quasi-Peak detector may be reduced by 13 dB for comparison to the limit.

The EUT is configured as a system with peripherals connected, so that at least one interface port of each type is connected to one external peripheral when tested for conducted emissions according to ANSI C63.4.

The test data was obtained using a Hewlett Packard 8546A EMI Receiver (9 kHz - 6.5 GHz) and HP 85876A EMI Measurement Software.

The conducted test for table-top configurations is performed on a 1.0 X 2.5 X 0.8 meter non-metallic test table which is set up inside a shielded test room, measuring 12

feet by 10 feet by 9 feet tall. The separation between the EUT and screen room wall is 0.4 m, according to ANSI C63.4.

The EUT is powered through an appropriate Line Impedance Stabilization Network (LISN), bonded to the ground plane as described in CISPR 16.

The power input cables to the LISN and the RFI measurement system are arranged so that they will not influence the measurement results. To ensure that RFI from the auxiliary instrumentation or support equipment does not influence the test readings, the LISN power is isolated from other power by RFI filters. Excess power cord is folded back and forth to form a non-inductive bundle.

4.3 Test Equipment Used

4.3.1 Conducted Emission Test

Device	Model No.	Serial No.	Last Cal.	Next Cal
Cable 1	RG-214/U	CBL-001	06/21/00	06/21/01
Analyzer	HP85462A	3325A00120	03/22/01	03/22/02
Preselector	HP85460A	3330A00117	03/22/01	03/22/02
QPeak Adapter	HP85462 Internal	Internal	03/22/01	03/22/02
Pre-Amplifier	None			
LISN	3825/2 LISN	9406-2232	08/25/00	08/25/01
Switch 1	N/A	N/A	N/A	N/A
Attenuator 1	33-10-34	BA9146	06/21/00	06/21/01
Temperature and Humidity Recorder	Dickson TH8-24C	5097755	09/21/00	09/21/01

4.4 Photographs of Test Set-Up



Conducted Emission Test (Front View)



Conducted Emission Test (Rear View)

4.5 Test Results

4.5.1 Conducted Emissions Test Results

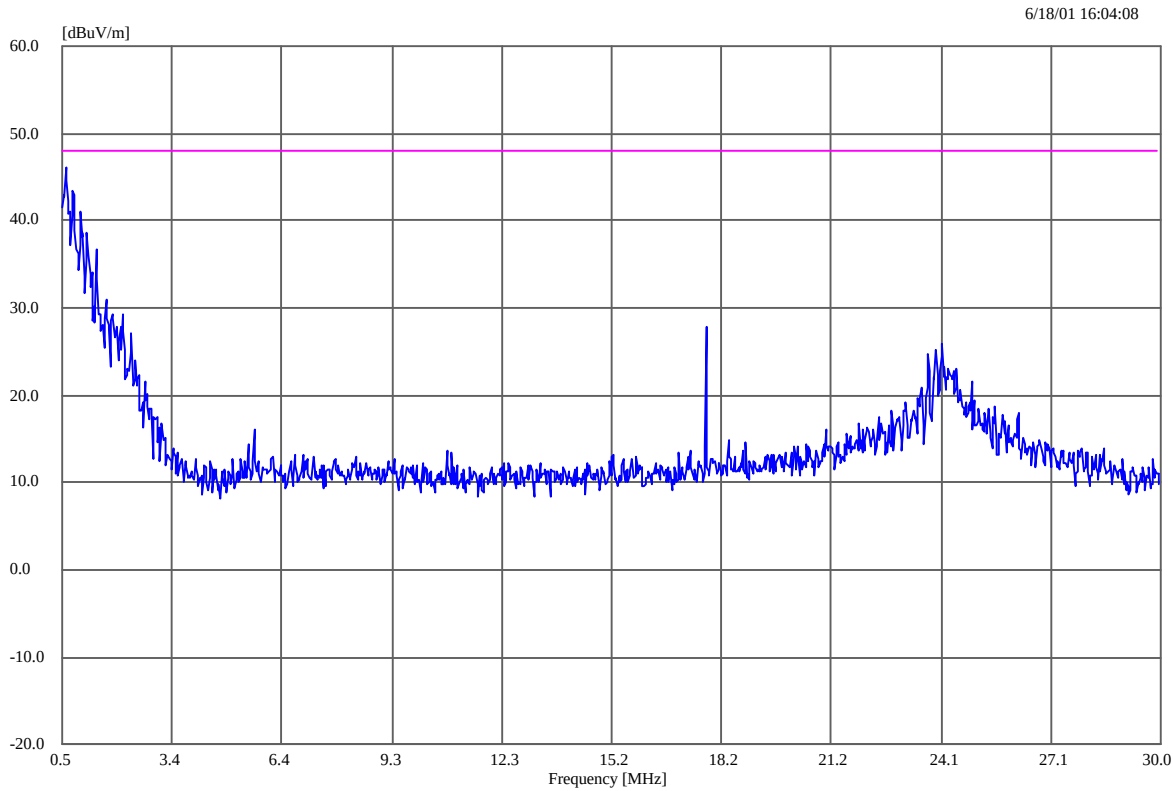
Measurements expanded uncertainty equals 2.62 dB with 95% confidence level.

Room Ambient Temperature: 21°C±1°C
Relative Humidity: 47%±5%

Line 1

Frequency MHz	QP dBuV/m	QP Lmt dBuV/m	DeLLim-QP dB	Status
0.466154	38.45	47.95	-9.50	PASS
0.522881	43.76	47.95	-4.19	PASS
0.648084	38.51	47.95	-9.44	PASS
0.731910	40.92	47.95	-7.03	PASS
0.768091	33.78	47.95	-14.17	PASS
0.929179	36.07	47.95	-11.88	PASS

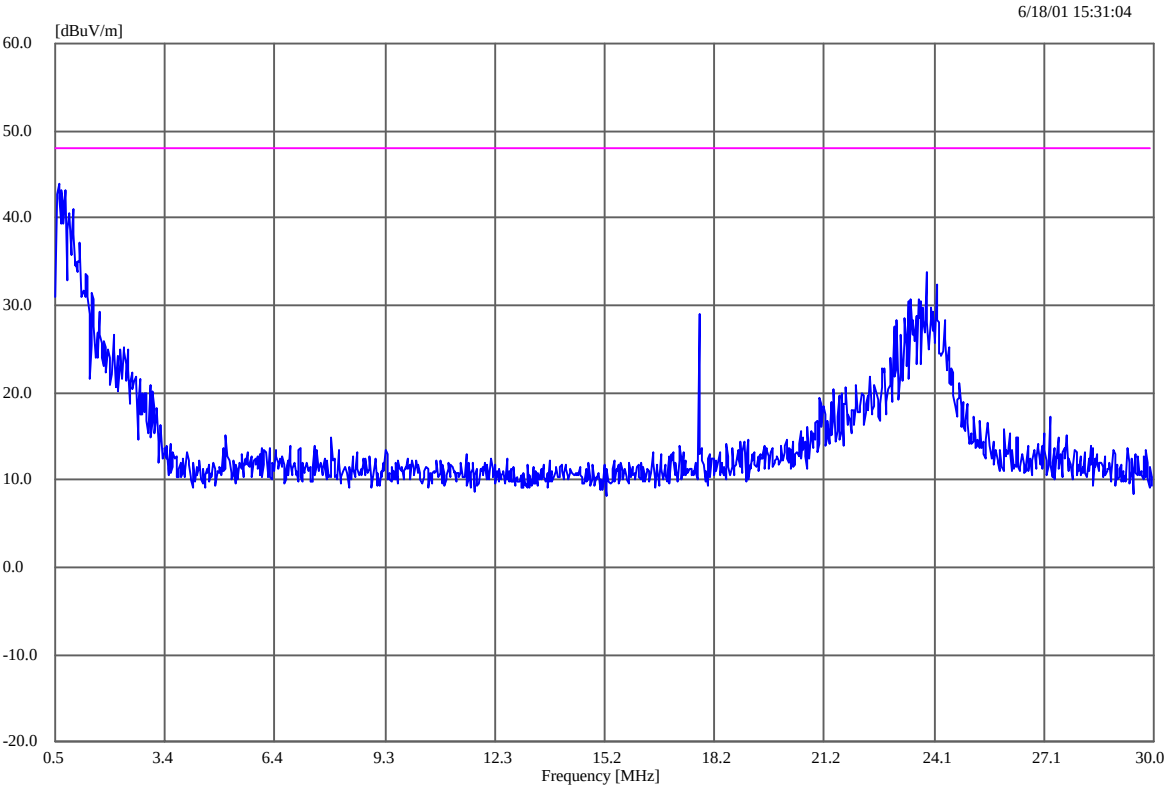
Composite Trace



Line 2

Frequency MHz	QP dBuV/m	QP Lmt dBuV/m	DeLLim-QP dB	Status
0.434801	43.06	47.95	-4.89	PASS
0.534843	41.07	47.95	-6.88	PASS
0.636384	38.78	47.95	-9.17	PASS
0.718933	42.68	47.95	-5.27	PASS
0.900056	34.05	47.95	-13.90	PASS

Composite Trace



Appendix A.

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

JMR COMPLIANCE ENGINEERING
CHATSWORTH, CA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

March 31, 2002
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 200413-0

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2050

August 20, 1998

IN REPLY REFER TO
31040/SIT
1300F2

JMR Electronics Inc.
20400 Plummer Street
Chatsworth, CA 91311

Attention: Leon Kogan

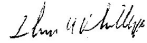
Re: Measurement facility located at Chatsworth
(3 meter anechoic chamber)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has also been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list is available on the Internet at the FCC Website www.fcc.gov under Electronic Filing.

Sincerely,



Thomas W. Phillips
Electronics Engineer
Customer Service Branch