



Retlif Testing Laboratories

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August 24, 2006

Symbol Technologies, Inc.
One Symbol Plaza
Holtsville, NY 11742

Dear Mr. Mark Luksich:

Enclosed you will find Retlif Testing Laboratories Report Number R-11560-1 covering the FCC Certification testing which was performed on your 2.4 to 2.48 GHz Phaser RF Cradle Base, Model Number: PL370-1000FBR, Serial Number: MXAOJU98, FCC ID Number: H9PL470. This testing was performed and test report generated against your Purchase Order Number: 4500581539.

The following table is a brief description of the test methods and results that were performed on the 2.4 to 2.48 GHz Phaser RF Cradle Base, please refer to the Test Program Summary page for an overview of all testing performed.

Test Method	Test Results
Conducted Emissions	Complied
Radiated Emissions, Fundamental and Harmonics	Complied
Radiated Emissions, Spurious Case	Complied
Duty Cycle Determination	Complied
Occupied Bandwidth	Complied

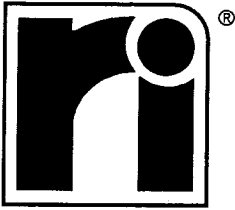
Thank you for the opportunity to be of service to you. Should you have any questions regarding the enclosed report or the actual testing of your sample, please do not hesitate to contact me.

Sincerely,

Retlif Testing Laboratories

Robert Porrello
Publications Supervisor
rporrello@retlif.com

Enc. (as stated)



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FCC Certification Test Report
On
Symbol Technologies, Inc.
2.4 to 2.48 GHz Phaser RF Cradle Base
Model Number: PL370-1000FBR
Serial Number: MXAOJU98
FCC ID Number: H9PL470

Customer Name: Symbol Technologies, Inc.

Customer P.O: 4500581539

Date of Report: August 11, 2006

Test Report No: R-11560-1

Test Start Date: July 26, 2006

Test Finish Date: July 31, 2006

Test Technician: R. Soodoo

Test Engineer: D. Lerner

Supervisor: R. J. Reitz

Report Prepared By: D. Harter

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Certification and Signatures

We certify that this report is a true report of the results obtained from the tests of the equipment stated and relates only to the equipment tested. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



Donald C. Lerner
EMC Test Engineer



Richard J. Reitz
Corporate Laboratory Manager

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the U.S. Government.



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Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

Revision	Date	Pages Affected
-	August 11, 2006	Original Release



Retlif Testing Laboratories

Test Report No. R-11560-1

Test Program Summary

Report Number:	R-11560-1
Customer:	Symbol Technologies, Inc.
Address:	1 Symbol Plaza
	Holtsville, NY 11742
Test Sample:	2.4 to 2.48 GHz Phaser RF Cradle Base
Brand Name:	Symbol Technologies, Inc.
Model Number:	PL370-1000FBR
Serial Number:	MXAOJU98
FCC ID No.:	H9PL470

Test Specification:

FCC Rules and Regulation Part 15, Subpart C, Section 15.249.

Mode of Operation:

During the performance of all testing specified herein:

- The EUT was continuously transmitting an RF signal from Channel 1 at 2.402 GHz, Channel 2 at 2.445 GHz and Channel 3, 2.480 GHz.



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Test Methods:

The test methods performed on the 2.4 to 2.48 GHz Phaser RF Cradle Base and the corresponding test results are shown in Table 1:

Table 1 - Test Methods and Results

FCC Para.	Test Method	Frequency Range	Test Results
15.207(a)	Conducted Emissions	0.15 MHz to 30 MHz	Complied
15.249(a)	Radiated Emissions, Fundamental and Harmonics	2.4 GHz to 24.8 GHz	Complied
15.249(c)/15.209	Radiated Emissions, Spurious Case	30.0 MHz to 24.8 GHz	Complied
15.249(c)/15.209	Duty Cycle Determination	2.4 GHz	Complied
15.249(c)	Occupied Bandwidth	2.4 GHz	Complied

General Note:

- 15.203: The intentional radiator is designed to ensure that no antenna other than that furnished by the applicant can be used with the device.
- 15.249(a): The unit operates in the 2400-2483.5MHz band. The field strength of the fundamental did not exceed 50 mV/M average. The field strength of the harmonics did not exceed 500 μ V/M average.
- 15.249(b): Field strength readings were taken at three meters unless otherwise noted.
- 15.249(c): Emissions radiated outside the specified frequency band were attenuated in accordance with the general radiated emissions limits of 15.209.
- 15.249(d): The peak field strength of any emission did not exceed the maximum permitted average field strength by more than 20 dB under any condition of modulation.



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1.0 Scope

This test report documents the methods used in measuring the conducted and radiated emissions produced by a 2.4 to 2.48 GHz Phaser RF Cradle Base, Model Number: PL370-1000FBR, Serial Number: MXAOJU98 and is manufactured by Symbol Technologies, Inc.. This report further serves to fully record the details of the sample tested including all interconnecting cables and support equipment. The objective of this test report is to demonstrate compliance of the 2.4 to 2.48 GHz Phaser RF Cradle Base to the requirements for an Intentional Radiator as set forth in Part 15, Subpart C, of the Rules and Regulations of the Federal Communications Commission. The 2.4 to 2.48 GHz Phaser RF Cradle Base hereafter is referred to as EUT.

2.0 Applicable Documents

The following documents form a part of this test report to the extent specified herein:

RCM-001	- Retlif Testing Laboratories Calibration Manual.
RQM-001	- Retlif Testing Laboratories Quality Assurance Manual.
ISO/IEC 17025	- General Requirements for the Competence of Testing and Calibration Laboratories.
ANSI/NCSL Z-540-1	- Calibration Laboratories and Measuring and Test Equipment - General Requirements.
MIL-PRF-15733H	- Filters, Radio Frequency Interference, General Specifications for.
IEEE-Std-299	- Attenuation Measurements for Enclosures, Electromagnetic Shielding for Electronic Test Purposes.
FCC Part 15	- Federal Communications Commissions Part 15, Radio Frequency Devices, Subpart C, Intentional Radiators.
ANSI C63.4:2003	- American National Standard, Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.



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3.0 Acronyms and Definitions

The following acronyms may be used within this test report:

BIT:	Built-In Test
BCI:	Bulk Cable Injection
CE:	Conducted Emissions
CS:	Conducted Susceptibility
dB:	Decibel
dBpT:	Decibels Relative to One Picotesla
dB μ A:	Decibels Relative to One Microampere
dB μ V:	Decibels Relative to One Microvolt
dB μ V/m:	Decibels Relative to One Microvolt per Meter
EMC:	Electromagnetic Compatibility
EME:	Electromagnetic Environment
EMI:	Electromagnetic Interference
EMICP:	Electromagnetic Interference Control Procedures
EMITP:	Electromagnetic Interference Test Procedures
EMITR:	Electromagnetic Interference Test Report
ERP:	Effective Radiated Power
EUT:	Equipment Under Test
GFE:	Government Furnished Equipment
GHz:	Gigahertz
GSI:	Government Source Inspection
Hz:	Hertz
ISM:	Industrial, Scientific and Medical
kHz:	Kilohertz
LISN:	Line Impedance Stabilization Network
mA:	Milliampere
mS:	Millisecond
m Ω :	Milliohm
MHz:	Megahertz
RE:	Radiated Emissions
RF:	Radio Frequency
RS:	Radiated Susceptibility
RMS:	Root Mean Square
TEM:	Transverse Electromagnetic
TPD:	Terminal Protection Device
μ A:	Microampere
μ F:	Microfarad
μ H:	Microhenry
μ V:	Microvolt
μ V/m:	Microvolts per Meter
V/m:	Volts per Meter
Ω :	Ohm



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4.0 General Requirements

4.1 Test Environment

All testing was performed according to each methods individual requirements. Each test method outlined herein describes the individual environment in which testing was performed. Both the conducted and radiated emissions tests described herein were performed by Retlif Testing Laboratories which is a NIST/NVLAP accredited facility. All radiated emissions testing was performed on an FCC listed open area test site (OATS).

4.1.2 Conducted Emissions

All conducted emissions testing described herein was performed on a conducting ground plane. The conducting ground plane for measuring AC power line conducted emissions consisted of a floor-earth grounded conducting surface. The conducting surface was 3.0 m x 2.5 m in size and extended at least 0.5 m beyond the vertical projection (footprint) of the EUT. The ground plane was covered by insulating material 1 mm thick.

4.1.3 Radiated Emissions

4.1.3.1 Preliminary

Where possible, preliminary radiated measurements were performed in a shielded enclosure.

4.1.3.2 Formal

Formal radiated emissions testing was performed on an open area test site (OATS). The test site measured 12.0 m x 20.0 m and was covered with a conducting ground plane constructed of one quarter inch ground cloth. The equipment under test was placed in an RF transparent enclosure on top of a 1.2 m diameter, flush mounted, metallic turntable. The test site met the test site attenuation requirements specified in ANSI C63.4 throughout the range of measurement frequencies.

4.2 Test Instrumentation

All test equipment utilized in determining compliance with the requirements specified herein was calibrated prior to use in accordance with the procedures and standards set forth in Retlif Testing Laboratories standard manuals RCM-001, RQM-001 and in ANSI/NCSL Z-540-1. See each test method for a full listing of test equipment utilized.



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4.3 Grounding of Measuring Instrument

Interference measuring instruments were physically grounded with only one connection. When an antenna was used, the measuring instrument was connected to ground with only the power ground cord (green wire).

4.4 Measurement Accuracy

The accuracy of all measurements was as follows:

Frequency Accuracy: +/- 2%

Amplitude Accuracy: +/- 2 dB

Emissions Testing

Ambient Interference Levels

Ambient interference levels were at least 6 dB below the specified limit for conducted emissions. For radiated emissions, the ambient levels were verified. If the ambient was within 6 dB of the specified limit the following procedure was performed:

The device was pre-screened in a shielded enclosure to determine its spectral content.

When measuring on OATS, if the ambient interference level was less than 6 dB below the limit, the measurement antenna was moved closer to the equipment under test. The measurement was then taken and measurement was extrapolated out to the desired test distance using a 1/D extrapolation factor.

4.5 Detector Function

For the conducted emissions testing described herein a Peak, Quasi-Peak and Average detector function was utilized as specified in CISPR 16.

For the radiated emissions testing described herein a Quasi-Peak detector function was utilized as specified in CISPR 16.

4.6 Measurement Frequencies

The entire frequency range for each applicable test method was scanned. All frequencies with emissions within 20 dB of the specified limit were recorded.



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5.0 Test Sample Description

5.1 General

The equipment under test was a 2.4 to 2.48 GHz Phaser RF Cradle Base, powered with 9 VDC, derived from the power supply adapter. The 2.4 to 2.48 GHz Phaser RF Cradle Base, hereafter is referred to as EUT. The EUT was manufactured by Symbol Technologies, Inc. of Holtsville, NY.

5.2 EUT Parameters

5.2.1 Designations

Table 2 details the equipment nomenclature, part number, model number and serial number, where applicable, of all EUT system components:

Table 2 - EUT Designations

System Component	Part Number	Model Number	Serial Number
EUT	Not Applicable	PL370-1000FBR	MXAOJU98
Power Supply Adapter	50-14000-101R	Not Applicable	060800041

5.2.2 Physical Characteristics

Table 3 details the physical characteristics of all EUT components:

Table 3 - Physical Characteristics

System Component	Depth (cm)	Width (cm)	Height (cm)	Weight (kg)
EUT	21	9	8	1.0
Power Supply Adapter	12	6	4	1.0

5.3 Configuration

The EUT had its input power leads and interconnecting cables configured as shown in Table 4:

Table 4 - EUT Cable Configuration

Cable From	Length (Meters)	S/U ¹	Cable Description	Cable Routed To
9 VDC Output from the Power Supply Adapter	1.9	U	3-Conductor	Phase Base Power Input
120 VAC, 60 Hz Source	2.3	U	3-Conductor	Power Supply Adapter Input
Data Communication, Base	1.9	S	Ethernet Cable	Laptop RS232 Port

¹Shielded or Unshielded

All ports not listed were unterminated



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5.3.1 Leads Tested

The following leads of the EUT were tested during the course of this testing program in order to ensure compliance:

- 120 VAC, 60 Hz Hot
- 120 VAC, 60 Hz Neutral
- 120 VAC, 60 Hz Ground

5.4 Modifications

No modifications were made to the EUT during the course of this testing program in order to demonstrate compliance with the specified requirements.

5.5 Mode of Operation

During the performance of all testing specified herein:

- The EUT was continuously transmitting a signal from Channel 1 at 2.402 GHz, Channel 2 at 2.445 GHz and Channel 3, 2.480 GHz.

5.5.1 Support Equipment

The EUT utilized the support equipment in Table 5 in order to attain the above operating state during the course of this testing program:

Table 5 - Support Equipment

Manufacturer	Description	Model Number	Serial Number
Laptop	IBM	T42P	L3-C1279



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5.6 Report of Measurements

Applicant: Symbol Technologies, Inc.
Device: 2.4 to 2.48 GHz Phaser RF Cradle Base
FCC ID: H9PL470
Power Requirements: 9 VDC derived from external AC adapter
Applicable Rule Section: Part 15, Subpart C, Section 15.249

General Notes:

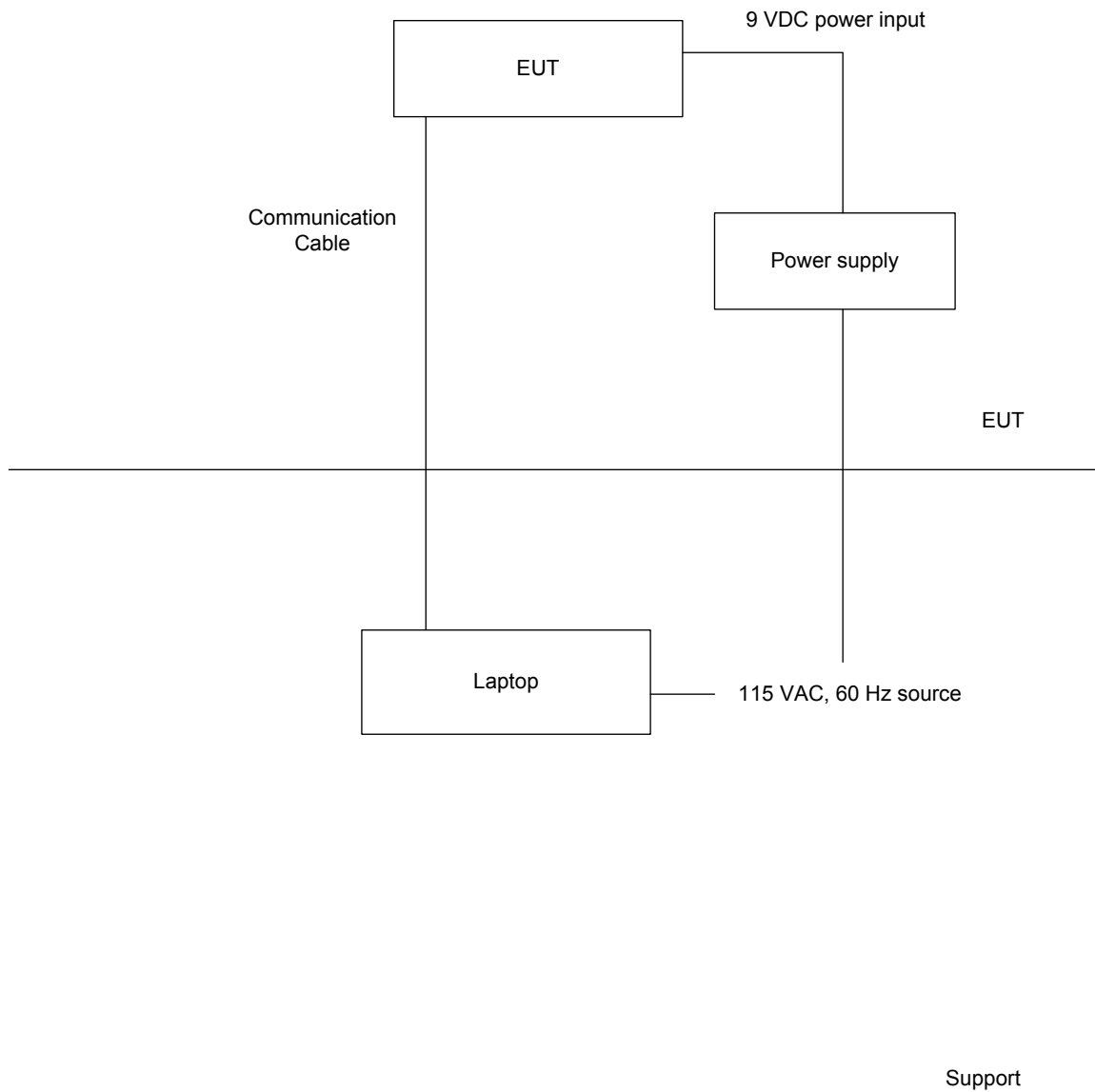
1. All user accessible controls were adjusted to produce maximum emissions. The device utilize a pulsed emission which has a worst case duty cycle of 30%. All readings above 1000 MHz were taken using a peak detector, were found to comply with the average limits.
2. The frequency range was scanned from 30 MHz to 24.82 GHz. All emissions not reported were more than 20 dB below the specified limit.



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Figure 1 - Test Sample Diagram



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6.0 Test Methods Performed

The tests outlined in Table 6 were performed in accordance with the requirements of ANSI C63.4 and FCC Rules and Regulation Part 15, Subpart C:

Table 6 - Test Sequence and Results

Testing Date(s)	FCC Para.	Test Method	Frequency Range	Test Results
July 26, 2006	15.249(a)	Radiated Emissions, Fundamental and Harmonics	2.402 GHz to 24.8 GHz	Complied
July 27, 2006	15.249(c)/15.209	Radiated Emissions, Spurious Case	30.0 GHz to 24.8 GHz	Complied
July 31, 2006	15.207(a)	Conducted Emissions	0.15 MHz to 30 MHz	Complied
July 31, 2006	15.249(c)/15.209	Duty Cycle Determination	2.4 GHz	Complied
July 31, 2006	15.249(c)	Occupied Bandwidth	2.4 GHz	Complied



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Conducted Emissions
FCC Part 15, Subpart C, Paragraph 15.207(a)



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Test Photographs Conducted Emissions



Test Setup



Test Setup, Rear View



Retlif Testing Laboratories

Test Report No. R-11560-1

EQUIPMENT LIST

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
078	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	6/29/2006	6/29/2007
079	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	6/29/2006	6/29/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/23/2006	9/23/2006
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	2/9/2006	2/9/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/17/2006	9/17/2006
333	Attenuator	Narda	DC - 11 GHz	768-10	8/3/2005	8/3/2006
456	LISN	Solar Electronics	DC - 60 Hz	9409-50-R-24	10/28/2005	10/28/2006



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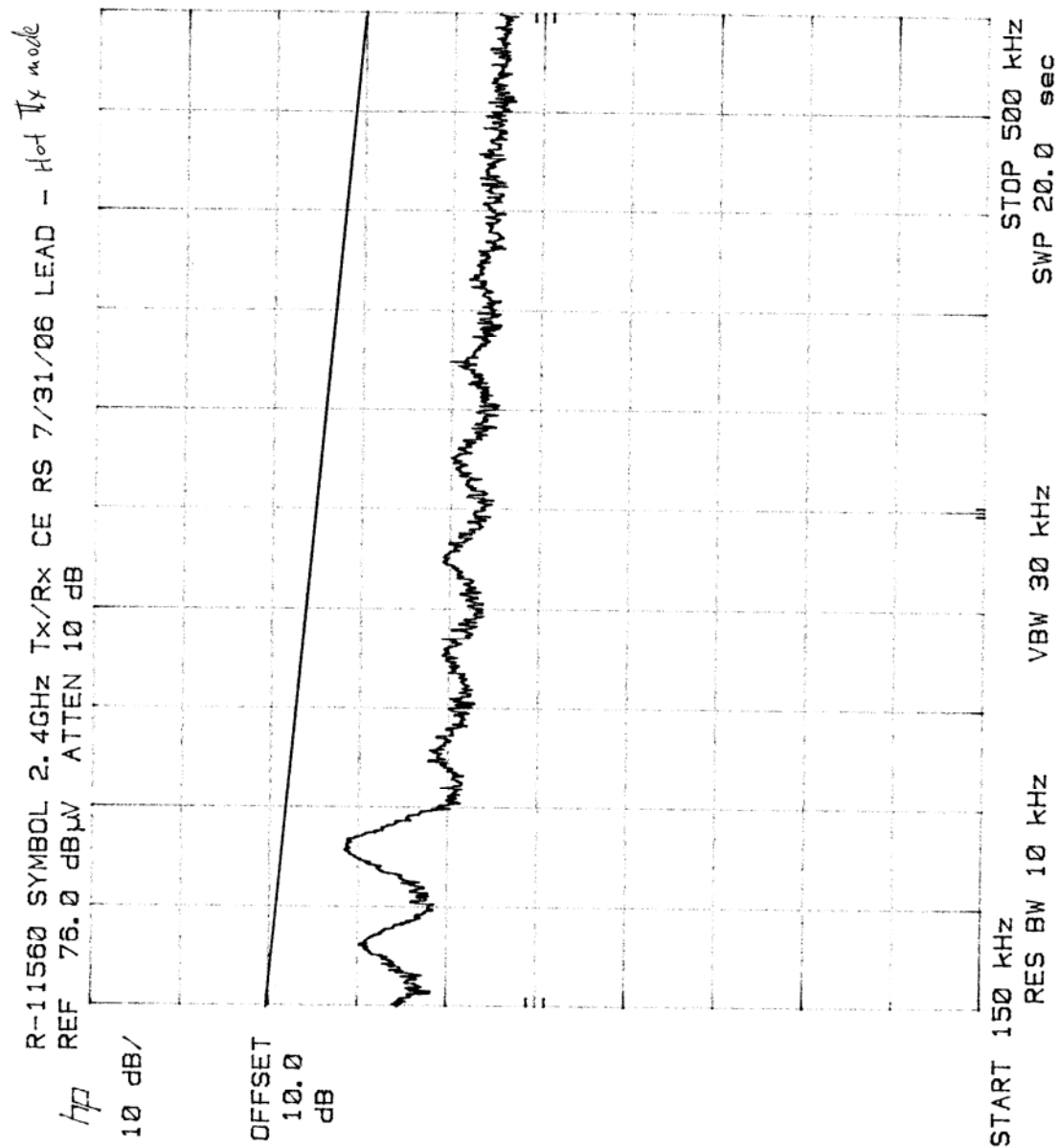
Test Report No. R-11560-1

Conducted Emissions, AC Power Leads, 150 kHz to 30 MHz
Test Data



Retlif Testing Laboratories

Test Report No. R-11560-1



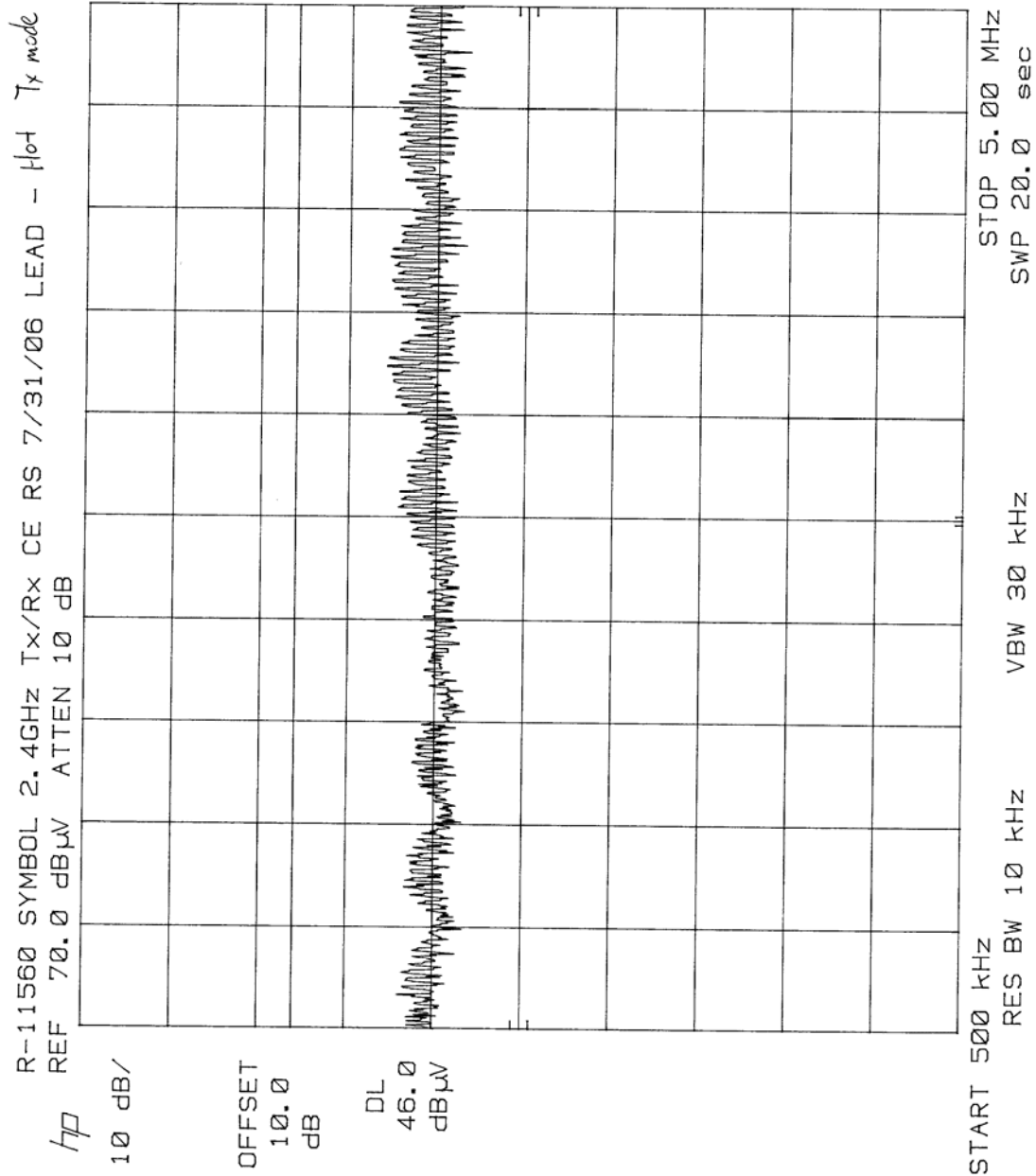
FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads
 Lead Tested: 120 VAC, 60 Hz Hot input to EUT.
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 1 of 6



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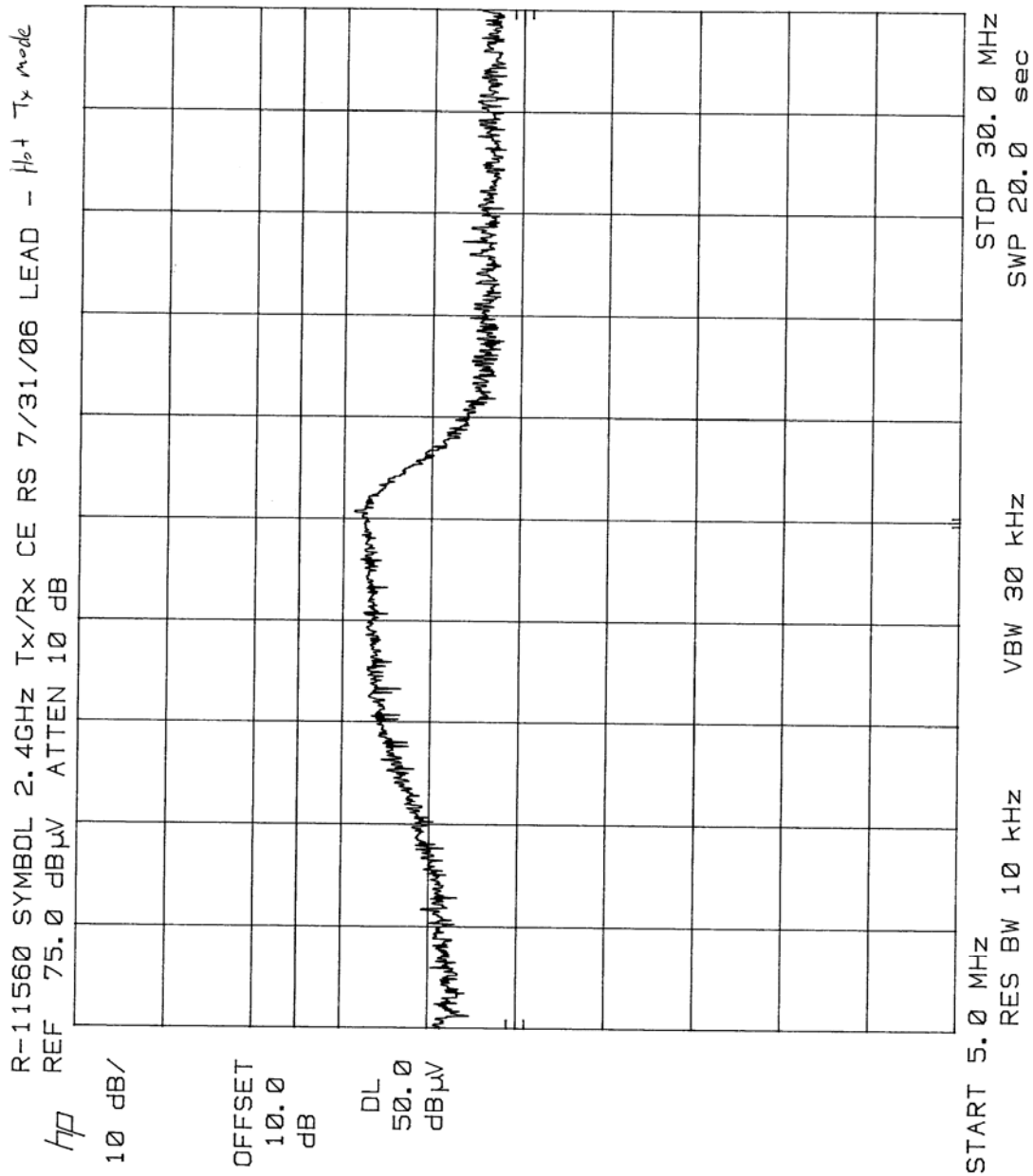
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 Lead Tested: 120 VAC, 60 Hz Hot input to EUT.
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 2 of 6



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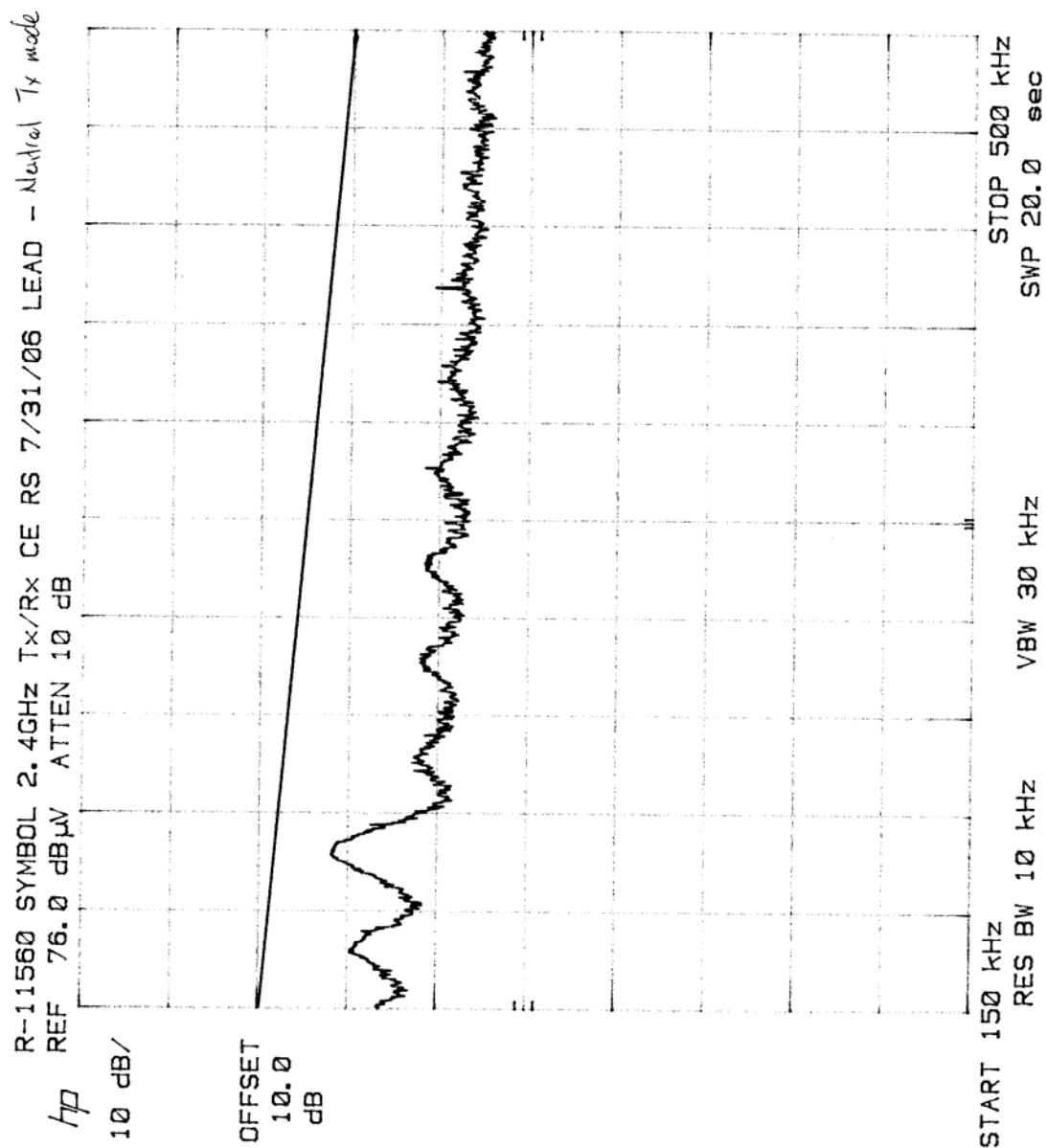
FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads
 Lead Tested: 120 VAC, 60 Hz Hot input to EUT.
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 3 of 6



Retlif Testing Laboratories

Test Report No. R-11560-1



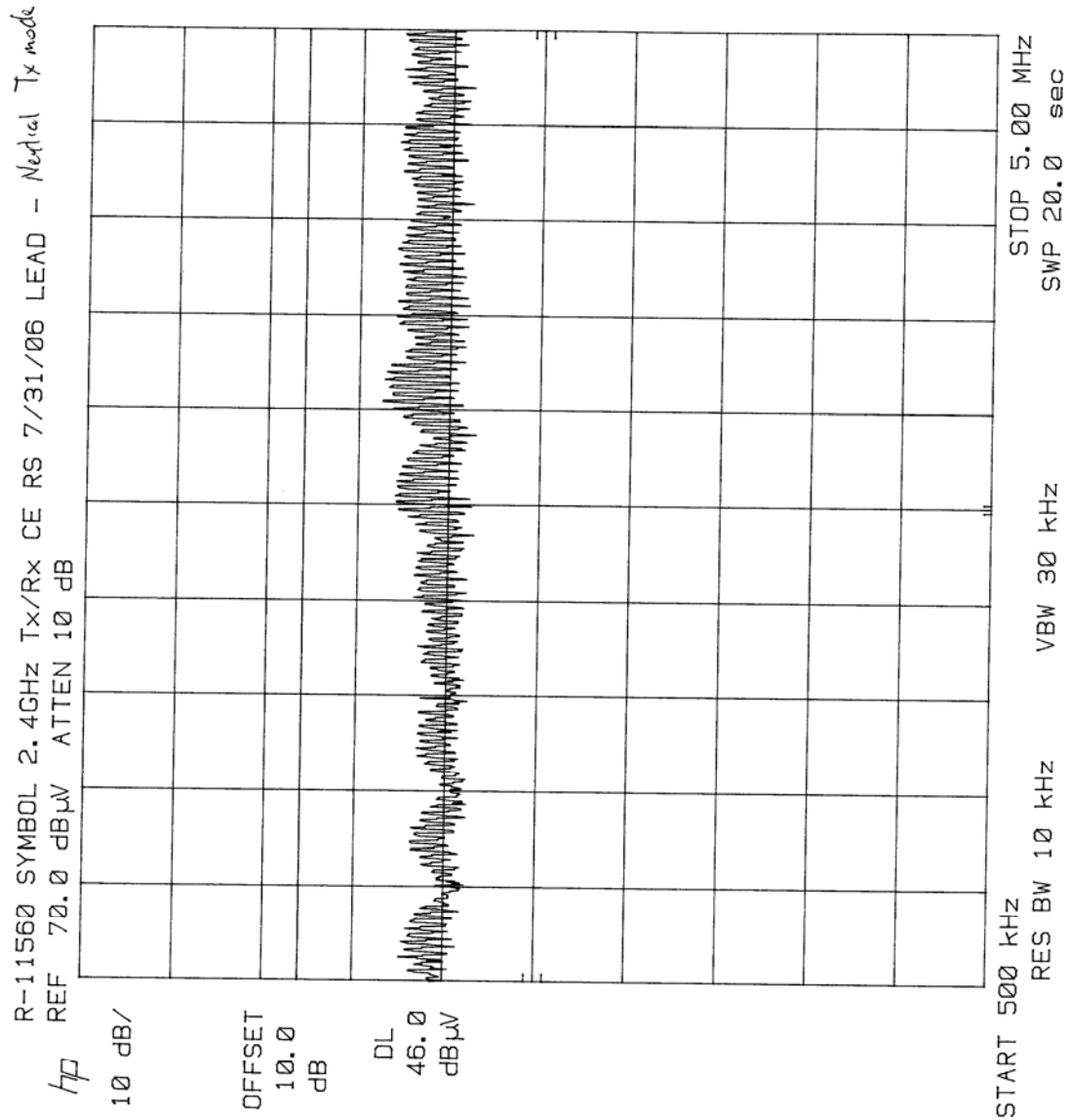
FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads
 Lead Tested: 120 VAC, 60 Hz Neutral input to EUT.
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 4 of 6



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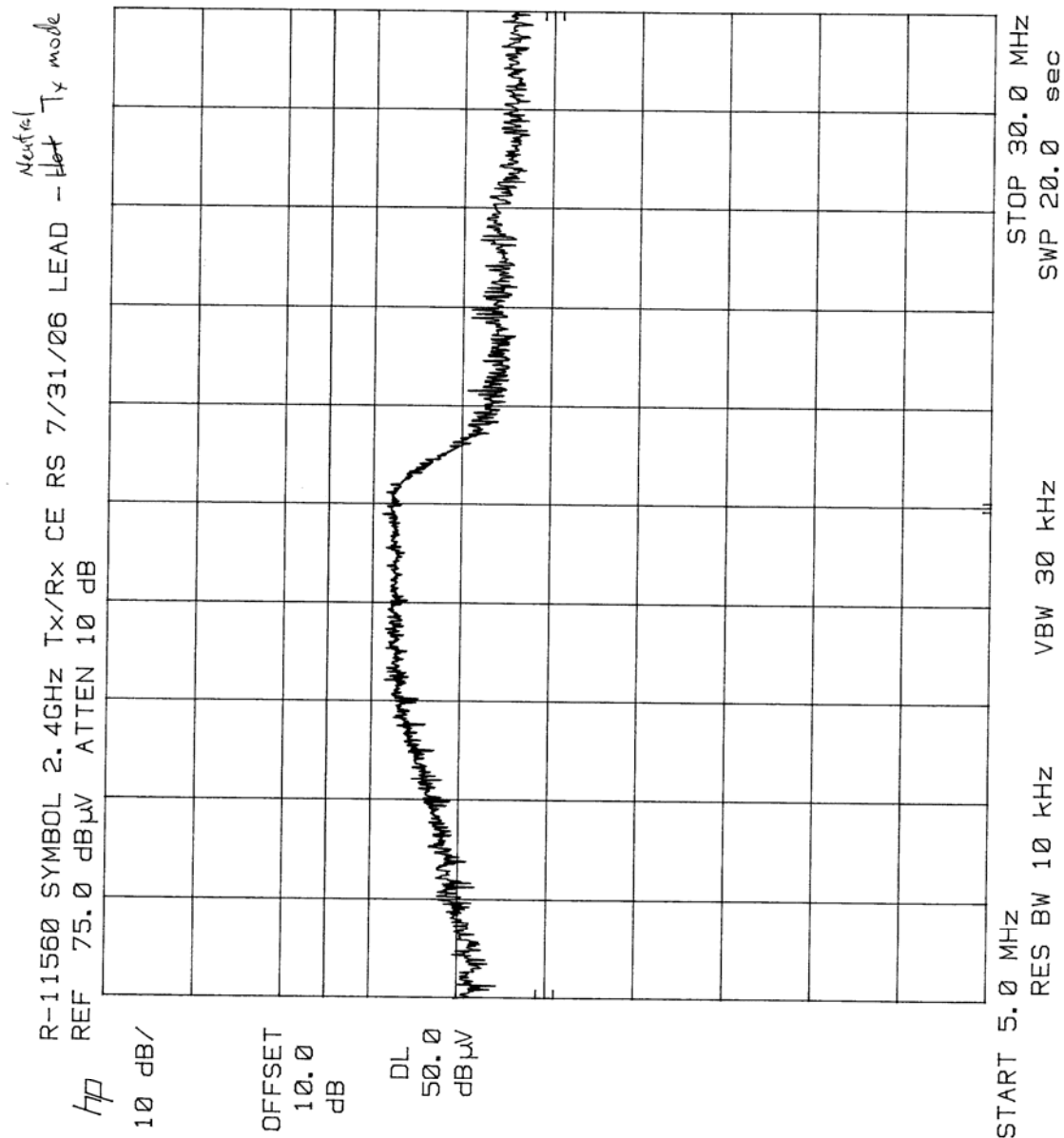
FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads
 Lead Tested: 120 VAC, 60 Hz Neutral input to EUT.
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 5 of 6



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Test Report No. R-11560-1



FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads
 Lead Tested: 120 VAC, 60 Hz Neutral input to EUT
 Detector Function: Peak passes average limit

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model No.:	PL370-1000FBR / FCC ID: H9PL470	
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 6 of 6



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Radiated Emissions, Fundamental & Harmonics
FCC Part 15, Subpart C, Paragraph 15.249(a)



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Test Report No. R-11560-1

Test Photographs
Radiated Emissions, Fundamental & Harmonics



Test Setup, Front View



Test Setup, Rear View



Retlif Testing Laboratories

Test Report No. R-11560-1

EQUIPMENT LIST

FCC Part 15, Subpart C, Fundamental and Harmonics

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	10/1/2003	10/1/2006
129E	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/16/2005	9/16/2006
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/27/2006	6/27/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/23/2006	9/23/2006
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	2/9/2006	2/9/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/17/2006	9/17/2006
141C	Cable	Retlif	1 GHz ~ 18 GHz	1 METER, BLUE	1/4/2006	1/4/2007
141D	Cable	Retlif	1 GHz ~ 18 GHz	10 METER, BLACK	1/4/2006	1/4/2007
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2006	6/27/2007
4003	Double Ridge Guide	Tensor	1 GHz - 18 GHz	4015	3/27/2006	3/27/2007
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	10/31/2005	10/31/2006
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	9/29/2003	9/29/2006
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	2/21/2006	2/21/2007
767	Biconilog	EMCO	26 - 2000 MHz	3142B	10/7/2005	10/7/2006
885	H.P. Filter	Mini-Circuits	3.0 GHz	VHP-26	2/24/2006	2/24/2007



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Radiated Emissions, Fundamental & Harmonics
Test Data



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Test Method:	FCC Part 15, Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:	Symbol Technologies.				Job No.	R-11560-1	
Test Sample:	2.4 – 2.48 GHz Phaser RF Cradle Base.				Paragraph:	15.249(a)	
Model No.:	PL370-1000FBR				FCC ID:	H9PL470	
Operating Mode:	Continuously Transmitting a 2402 MHz Signal.						
Technician:	R. Soodoo				Date:	July 26, 2006.	
Notes:	Test Distance: 3 Meters Detector: Peak, unless otherwise specified				Duty Cycle: 30% Duty Cycle Correction: -10.5 dB		
Frequency	Antenna Pol./Height	EUT Orientation	Peak Reading	Correction Factor	Corrected Reading	Converted Reading	Avg. Limit
MHz	(V/H)-Meters	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
2.402	V / 1.0	180.0	101.3	-10.5	90.8	34673.7	50000
2.402	H / 1.0	180.0	96.7	-10.5	86.2	20417.4	50000
4.804	V / 1.0	180.0	59.8	-10.5	49.3	291.7	500
4.804	H / 1.0	180.0	55.2	-10.5	44.7	171.8	500
7.206	V / 1.0	180.0	48.5	-10.5	38	*79.4	500
7.206	H / 1.0	180.0	48.5	-10.5	38	*79.4	500
9.608	V / 1.0	180.0	52.0	-10.5	41.5	*118.9	500
9.608	H / 1.0	180.0	52.0	-10.5	41.5	*118.9	500
12.010	V / 1.0	180.0	55.9	-10.5	45.4	*186.2	500
12.010	H / 1.0	180.0	55.9	-10.5	45.4	*186.2	500
14.412	V / 1.0	180.0	58.0	-10.5	47.5	*237.1	500
14.412	H / 1.0	180.0	58.0	-10.5	47.5	*237.1	500
16.814	V / 1.0	180.0	55.9	-10.5	45.4	*186.2	500
16.814	H / 1.0	180.0	55.9	-10.5	45.4	*186.2	500
19.216	V / 1.0	180.0	58.0	-10.5	47.5	*237.1	500
19.216	H / 1.0	180.0	58.0	-10.5	47.5	*237.1	500
21.618	V / 1.0	180.0	60.0	-10.5	49.5	*298.5	500
21.618	H / 1.0	180.0	60.0	-10.5	49.5	*298.5	500
24.020	V / 1.0	180.0	61.0	-10.5	50.5	*335.0	500
24.020	H / 1.0	180.0	61.0	-10.5	50.5	*335.0	500
	The frequency range was scanned from 30 MHz to 24.020 GHz.						
	All emissions not recorded were more than 20 dB below the specified limit.						
	Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements (minimum system sensitivity).						

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Occupied Bandwidth
FCC Part 15, Subpart C, Paragraph 15.249(c)



Retlif Testing Laboratories

Test Report No. R-11560-1

EQUIPMENT LIST

FCC Part 15, Subpart C, Occupied Bandwidth

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
128B	Double Ridge Guide	AEL	2 GHz - 18 GHz	H1498	9/16/2005	9/16/2006
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/23/2006	9/23/2006
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	2/9/2006	2/9/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/17/2006	9/17/2006



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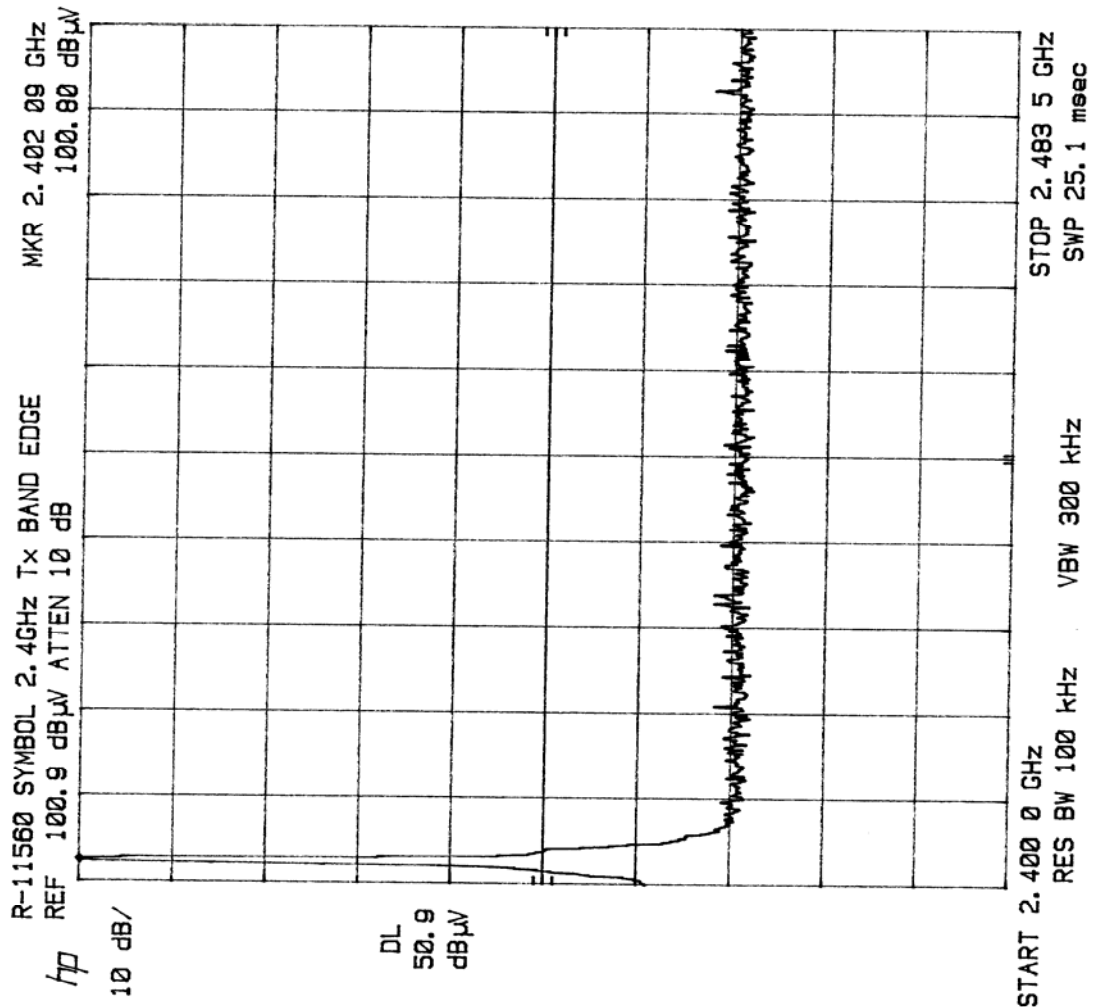
Test Report No. R-11560-1

Occupied Bandwidth
Para. 15.249(c)
Test Data



Retlif Testing Laboratories

Test Report No. R-11560-1



FCC Part 15, Subpart C, 15.249(c) Occupied Bandwidth, 2400 to 2483.5 MHz Band

Note: The emissions radiating outside the band are attenuated by >50dB.

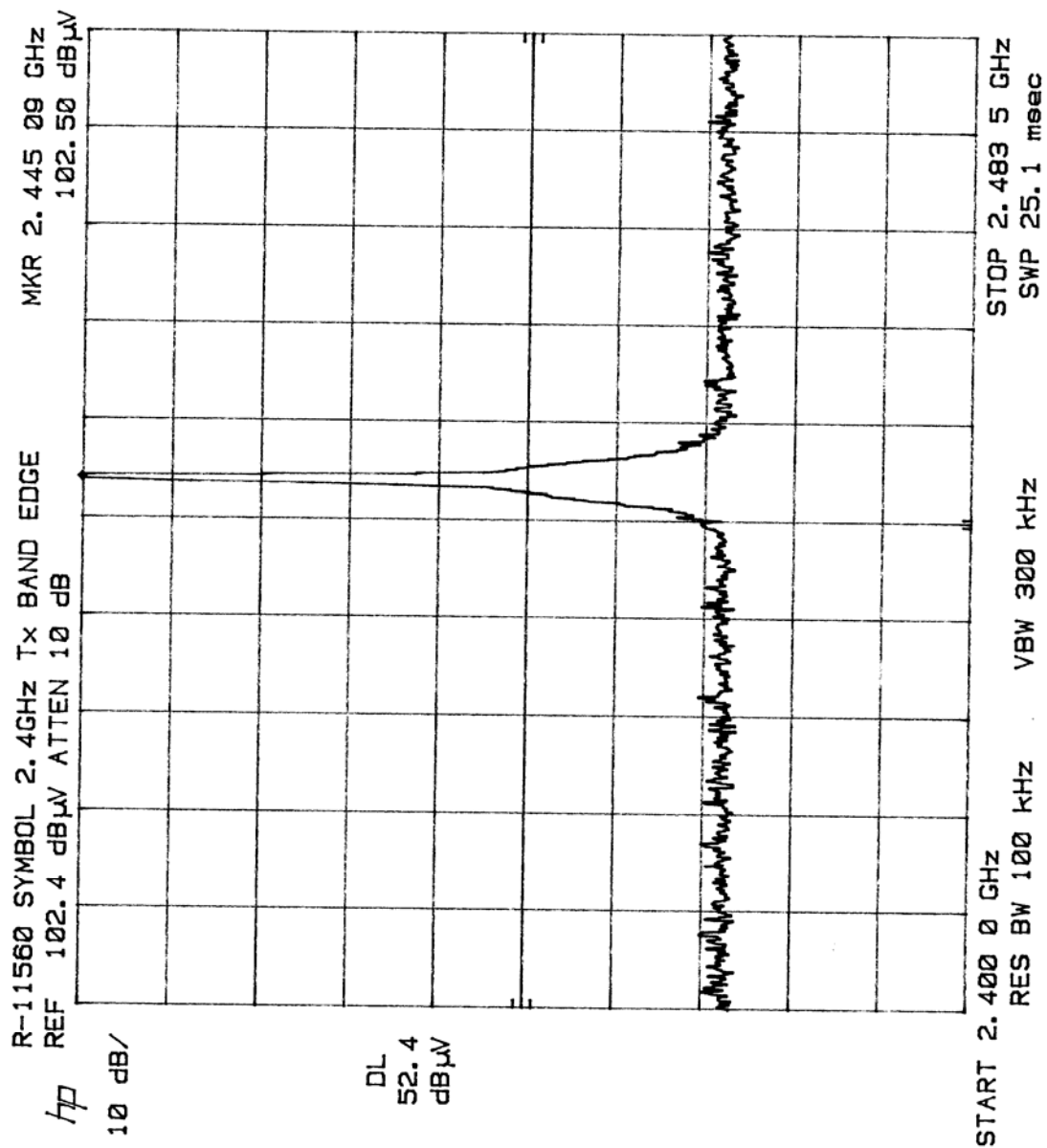
Note: Continuously Transmitting a 2402 MHz Signal.

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model Number	PL-370-1000FBR	FCC ID: H9PL470
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 1 of 3



Retlif Testing Laboratories

Test Report No. R-11560-1



FCC Part 15, Subpart C, 15.249(c) Occupied Bandwidth, 2400 to 2483.5 MHz Band

Note: The emissions radiating outside the band are attenuated by >50dB.

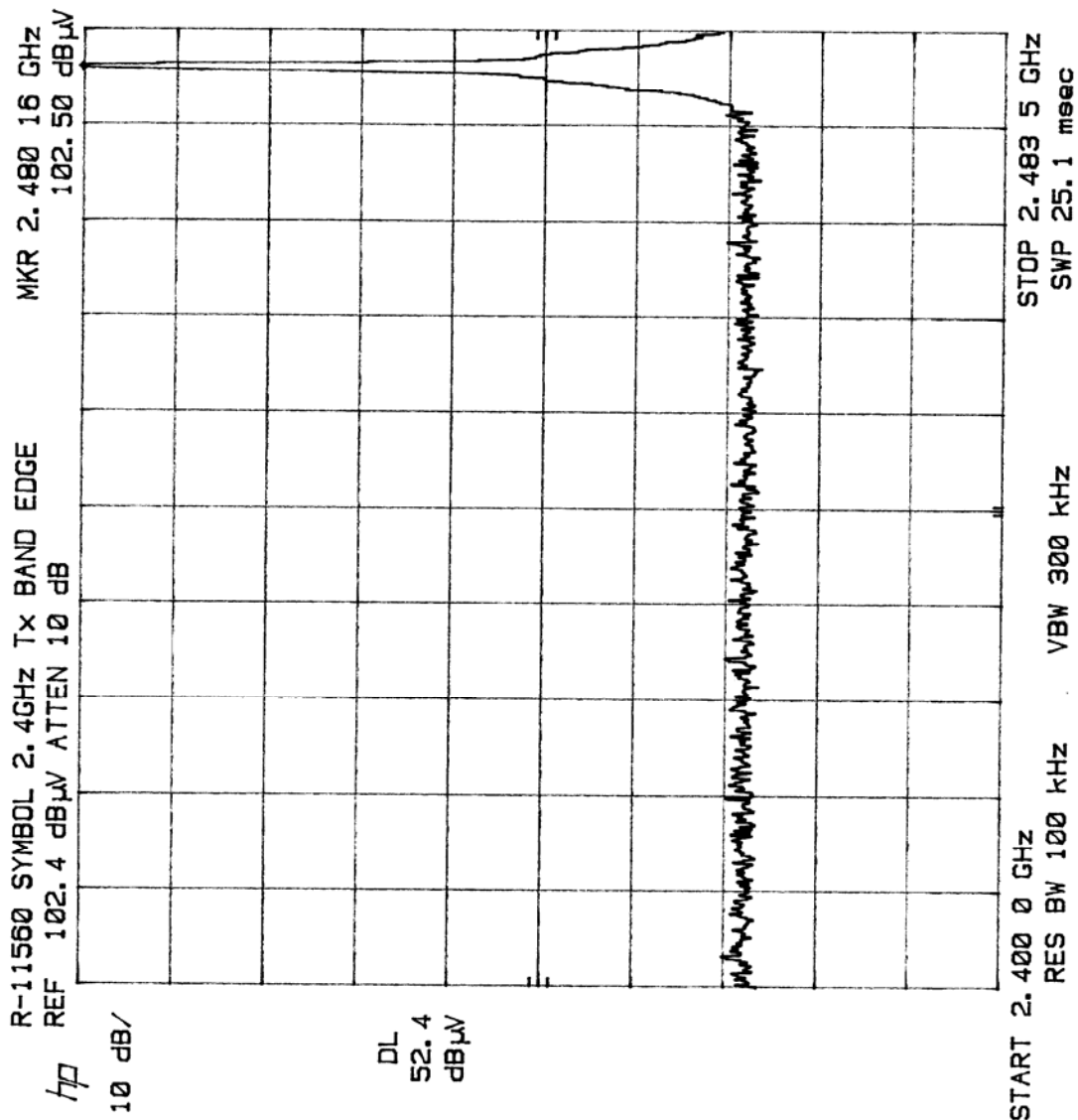
Note: Continuously Transmitting a 2445 MHz Signal.

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model Number	PL-370-1000FBR	FCC ID: H9PL470
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 2 of 3



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FCC Part 15, Subpart C, 15.249(c) Occupied Bandwidth, 2400 to 2483.5 MHz Band

Note: The emissions radiating outside the band are attenuated by >50dB.

Note: Continuously Transmitting a 2480 MHz Signal.

Customer	Symbol Technologies.	
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.	
Model Number	PL-370-1000FBR	FCC ID: H9PL470
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 3 of 3



Retlif Testing Laboratories

Test Report No. R-11560-1

Spurious Emissions
FCC Part 15, Subpart C, Paragraph 15.249 (c)/15.209



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Test Report No. R-11560-1

Test Photographs Spurious Emissions



Test Setup, Front View



Test Setup, Rear View



Retlif Testing Laboratories

Test Report No. R-11560-1

EQUIPMENT LIST

FCC Part 15, Subpart C, Spurious Emissions

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	10/1/2003	10/1/2006
129E	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/16/2005	9/16/2006
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/27/2006	6/27/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/23/2006	9/23/2006
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	2/9/2006	2/9/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/17/2006	9/17/2006
141C	Cable	Retlif	1 GHz ~ 18 GHz	1 METER, BLUE	1/4/2006	1/4/2007
141D	Cable	Retlif	1 GHz ~ 18 GHz	10 METER, BLACK	1/4/2006	1/4/2007
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2006	6/27/2007
4003	Double Ridge Guide	Tensor	1 GHz - 18 GHz	4015	3/27/2006	3/27/2007
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	10/31/2005	10/31/2006
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	9/29/2003	9/29/2006
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	2/21/2006	2/21/2007
767	Biconilog	EMCO	26 - 2000 MHz	3142B	10/7/2005	10/7/2006
885	H.P. Filter	Mini-Circuits	3.0 GHz	VHP-26	2/24/2006	2/24/2007



Retlif Testing Laboratories

Test Report No. R-11560-1

Spurious Emissions
Test Data



Retlif Testing Laboratories

Test Report No. R-11560-1

Test Method:	FCC Part 15, Subpart C, Spurious Case Radiated Emissions, Para. 15.209(a) & 15.249(c)						
Customer:	Symbol Technologies.				Job No.	R-11560-1	
Test Sample:	2.4 – 2.48 GHz Phaser RF Cradle Base.				FCC ID:	H9PL470	
Model No.:	PL370-1000FBR				Serial No.:	MXAOJ498	
Operating Mode:	Continuously Transmitting a 2402 MHz Signal.						
Technician:	R. Soodoo				Date:	July 27, 2006.	
Notes:	Test Distance: 3 Meters				Temp: 26°C		Humidity: 23%
	Detector: Quasi-Peak from 30 MHz to 1 GHz, Peak above 1 GHz						
Frequency	Antenna Position	EUT Orientation	Meter Readings	Correction Factor	Corrected Reading	Converted Reading	LIMIT
MHz	(V/H) / Meters	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
30.00							100
51.00	V / 1.0	90.0	14.0	9.8	23.8	15.5	
88.00							100
88.00							150
133.0	V / 1.0	0.0	12.0	9.6	21.6	12.0	
200.0	V / 10.	90.0	22.0	12.3	34.3	51.9	
216.0							150
216.0							200
264.0	H / 1.0	158.0	12.0	15.0	27.0	22.4	
312.0	H / 1.0	90.0	21.0	16.8	37.8	77.6	
397.0	H / 1.0	293.0	10.0	19.7	29.7	30.5	
960.0							200
960.0							500
24020.0							500
The frequency range was scanned from 30 MHz to 24.020 GHz.							
The emissions observed from the EUT do not exceed the specified limits.							
Emissions not recorded were more than 20dB under the specified limit.							



Retlif Testing Laboratories

Test Report No. R-11560-1

Test Method:	FCC Part 15, Subpart C, Spurious Case Radiated Emissions, Para. 15.209(a) & 15.249(c)						
Customer:	Symbol Technologies.				Job No.	R-11560-1	
Test Sample:	2.4 – 2.48 GHz Phaser RF Cradle Base.				FCC ID:	H9PL470	
Model No.:	PL370-1000FBR				Serial No.:	MXAOJ498	
Operating Mode:	Continuously Transmitting a 2445 MHz Signal.						
Technician:	R. Soodoo				Date:	July 27, 2006.	
Notes:	Test Distance: 3 Meters				Temp: 26°C		Humidity: 23%
	Detector: Quasi-Peak from 30 MHz to 1 GHz, Peak above 1 GHz						
Frequency	Antenna Position	EUT Orientation	Meter Readings	Correction Factor	Corrected Reading	Converted Reading	LIMIT
MHz	(V/H) / Meters	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
30.00							100
51.00	V / 1.0	90.0	14.0	9.8	23.8	15.5	
88.00							100
88.00							150
133.0	V / 1.0	0.0	12.0	9.6	21.6	12.0	
200.0	V / 10.	90.0	22.0	12.3	34.3	51.9	
216.0							150
216.0							200
264.0	H / 1.0	158.0	12.0	15.0	27.0	22.4	
312.0	H / 1.0	90.0	21.0	16.8	37.8	77.6	
397.0	H / 1.0	293.0	10.0	19.7	29.7	30.5	
960.0							200
960.0							500
24450.0							500
The frequency range was scanned from 30 MHz to 24.445 GHz.							
The emissions observed from the EUT do not exceed the specified limits.							
Emissions not recorded were more than 20dB under the specified limit.							



Retlif Testing Laboratories

Test Report No. R-11560-1



Test Report No. R-11560-1

Duty Cycle Determination
FCC Part 15, Subpart C, Paragraph 15.249(c)/15.209



Retlif Testing Laboratories

Test Report No. R-11560-1

EQUIPMENT LIST

FCC Part 15, Subpart C, Duty Cycle

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
128B	Double Ridge Guide	AEL	2 GHz - 18 GHz	H1498	9/16/2005	9/16/2006
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/23/2006	9/23/2006
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	2/9/2006	2/9/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/17/2006	9/17/2006



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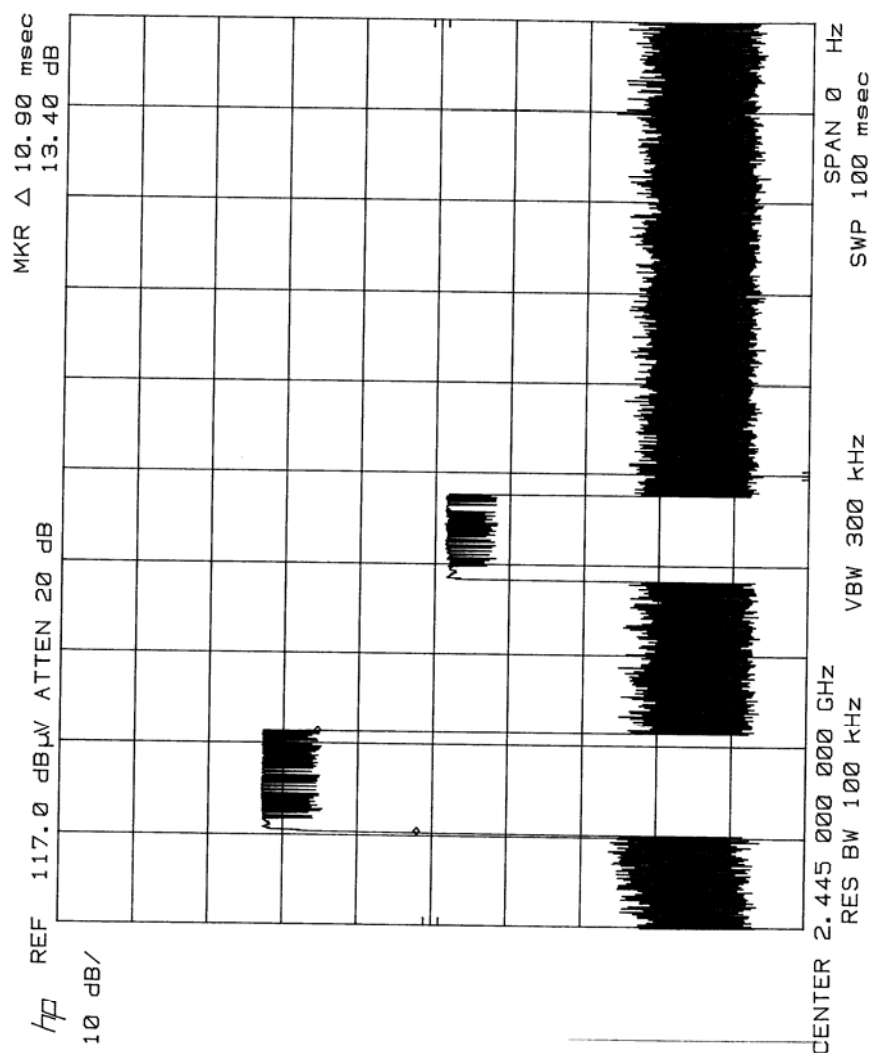
Test Report No. R-11560-1

Duty Cycle Determination
Test Data



Retlif Testing Laboratories

Test Report No. R-11560-1



Test Method: FCC Part 15.35, Duty Cycle Determination.

Notes: Measurement of cycle time = 10.90mSec.

Notes: Duty cycle = $20 \log 0.109 = -19.3\text{dB}$

Customer	Symbol Technologies.		
Test Sample	2.4 – 2.48 GHz Phaser RF Cradle Base.		
Model Number	PL-370-1000FBR / FCC ID: H9PL470		
Date: July 31, 2006.	Tech: R. Soodoo	Sheet 1 of 1	



Retlif Testing Laboratories

Test Report No. R-11560-1