



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

FCC Rules and Regulations / Intentional Radiators

Operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands

Part 15, Subpart C, Section 15.247

(Limited Modular Approval)

THE FOLLOWING **"MEETS"** THE ABOVE TEST SPECIFICATION

Formal Name: PWA Bluetooth module MtPxxx

Kind of Equipment: Bluetooth interface

Test Configuration: Limited Modular Approval / Bluetooth interface (Tested at 120 vac, 60 Hz)

Model Number(s): 6072

Model(s) Tested: 6072

Serial Number(s): 52192-0508-002 & 52192-0508-0033

Date of Tests: August 17, 18, & 22, 2005

Test Conducted For: Printek, Inc.
1517 Townline Road
Benton Harbor, Michigan 49022

NOTICE: "This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government". Please see the "Additional Description of Equipment Under Test" page listed inside of this report. This report must not be reproduced (except in full), without the approval of D.L.S. Electronic Systems.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

SIGNATURE PAGE

Report By:

Arnom C. Rowe
Test Engineer
EMC-001375-NE

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager

Company Official:

Printek, Inc.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

TABLE OF CONTENTS

i.	Cover Page	1
ii.	Signature Page	2
iii.	Table of Contents	3
iv.	NVLAP Certificate of Accreditation	5
v.	NVLAP Scope of Accreditation	6
1.0	Summary of Test Report	18
2.0	Introduction	18
3.0	Object	18
4.0	Test Set-Up	19
5.0	Test Equipment	20
6.0	Ambient Measurements	21
7.0	Description of Test Sample	22
8.0	Additional Description of Test Sample	23
9.0	Photo Information and Test Set-Up	24
10.0	Radiated Photos Taken During Testing	25
10.0	Conducted Photos Taken During Testing	31
11.0	Results of Tests	32
12.0	Conclusion	32
	TABLE 1 – EQUIPMENT LIST	33



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

TABLE OF CONTENTS

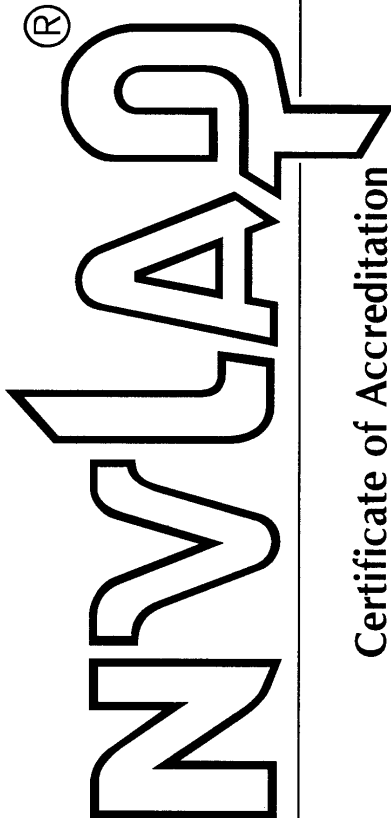
Appendix A – Electric Field Radiated Emissions Test.....	35
1.0 Conducted Emission Measurements	36
1.0 Transmit Conducted Data and Graph(s) taken during testing	37
1.0 Transmit Conducted Data and Graph(s) taken during testing	42
2.0 Spurious Emissions at the Antenna Terminals	47
2.0 Conducted Emission Data and Charts made at the Antenna Terminals	48
3.0 Conducted Emissions Photos Taken During Testing.....	64
4.0 Restricted Bands	66
5.0 Band Edge and Restrict Band Compliance.....	66
5.0 Data and Graph(s) taken showing the Band Edge and Restrict Band Compliance	67
6.0 Field Strength of Spurious Emission Measurements	70
6.0 Radiated Data and Graph(s) taken for Field Strength Spurious Emission Measurements	72
7.0 6 dB Bandwidth Graphs taken during testing.....	83
7.0 Conducted Peak Output Power Graphs Taken During testing.....	87
7.0 Peak Power Spectral Density Graphs taken during testing.....	91
7.0 Duty Cycle Graph(s) taken during testing	95
7.0 Number of Hopping Frequencies Graph(s) taken during testing.....	98



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

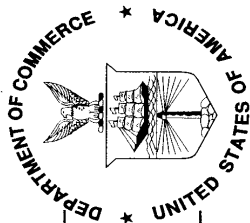
1250 Peterson Dr., Wheeling, IL 60090

United States Department of Commerce
National Institute of Standards and Technology



ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation



D.L.S. ELECTRONIC SYSTEMS, INC.
WHEELING, IL

is recognized by the National Voluntary Laboratory Accreditation Program
for satisfactory compliance with criteria set forth in NIST Handbook 150:2001,
all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994.
Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

September 30, 2005

Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 100276-0

NVLAP-01C (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 1 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

1250 Peterson Drive
Wheeling, IL 60090-6454
Mr. Brian J. Mattson
Phone: 847-537-6400 Fax: 847-537-6488
E-Mail: bmattson@dlsemc.com
URL: <http://www.dlsemc.com>

NVLAP Code Designation / Description

Emissions Test Methods:

12/160D21	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 21 - Emission of Radio Frequency Energy
12/300220a	EN 300 220-1 V1.3.1 (2000-09): Electromagnetic compatibility and Radio spectrum Matters; Short Range Devices; Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
12/300386a	EN 300 386 V.1.2.1: Electromagnetic compatibility and radio spectrum matter (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements
12/C63.17	ANSI C63.17-1998: American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices

September 30, 2005

Effective through

For the National Institute of Standards and Technology



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 2 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/C6317a	ANSI C63.17-1998: American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices
12/CIS11	IEC/CISPR 11 + A1 (1997), EN 55011 (1998), AS/NZS CISPR 11 (2002), and CNS 13803 (1997): Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
12/CIS13	IEC/CISPR 13 (2001-04), EN 55013 (2001), AS/NZS CISPR 13 (2003), and CNS 13439 (2001): Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS14	CISPR 14-1 (March 30, 2000): Limits and Methods of Measurement of Radio interference Characteristics of Household Electrical Appliances, Portable Tools and Similiar Electrical Apparatus - Part 1: Emissions
12/CIS14a	EN 55014-1 (1993), A1 (1997), A2 (1999):
12/CIS14d	IEC/CISPR 14-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emissions
12/CIS14e	EN 55014-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 3 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
-------------------	----------------------------------

12/CIS14f	AS/NZS 1044 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS14g	CNS 13783-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS15	IEC/CISPR 15 (2000) + A1 (2001): Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15a	AS/NZS CISPR 15 (2002): Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15b	CNS 13439 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS15c	EN 55015 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
12/CIS22	IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 4 of 12

**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/EM02a	IEC 61000-3-2, Edition 2.1 (2001-10), EN 61000-3-2 (2000), and AS/NZS 2279.1 (2000): Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A)
12/EM03	IEC 61000-3-3(1995); EN 61000-3-3(1995); AS/NZS 2279.3(1995): EMC - Part 3: Limits - Section 3. Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to 16A
12/F18	FCC OST/MP-5 (1986): FCC Methods of Measurement of Radio Noise Emissions for ISM Equipment (cited in FCC Method 47 CFR Part 18 - Industrial, Scientific, and Medical Equipment)
12/FCC15b	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/FCC15c	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart C: Intentional Radiators
12/FCC15d	ANSI C63.4(2001) with FCC Method 47 CFR Part 15, Subpart D: Unlicensed Personal Communications Service Devices

September 30, 2005

Effective through

For the National Institute of Standards and Technology



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 5 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/FCC15e	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart E: Unlicensed National Information Infrastructure Service Devices
12/T51	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
12/VCCIa	Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/02.04

Immunity Test Methods:

12/1089a	GR-1089-CORE, Issue 3, October 2002: Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment (sections 2, 3.3, and 3.5)
12/160D16	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 16 - Power Input
12/160D17	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 17 - Voltage Spike
12/160D18	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 18 - Audio Frequency Conducted Susceptibility - Power Inputs

September 30, 2005

Effective through

For the National Institute of Standards and Technology



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 6 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/160D19	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 19 - Induced Signal Susceptibility
12/160D20	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 20 - Radio Frequency Susceptibility (Radiated and Conducted)
12/160D22	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 22 - Lightning Induced Transient Susceptibility
12/160D25	RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 25 - Electrostatic Discharge (ESD)
12/I01	IEC 61000-4-2, Ed. 2.1 (2001), A1, A2; EN 61000-4-2: Electrostatic Discharge Immunity Test
12/I02	IEC 61000-4-3, Ed. 2.0 (2002-03); EN 61000-4-3 (2002): Radiated Radio-Frequency Electromagnetic Field Immunity Test
12/I03	IEC 61000-4-4(1995), A1(2000), A2(2001); EN 61000-4-4: Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
12/I04	IEC 61000-4-5, Ed. 1.1 (2001-04); EN 61000-4-5: Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test

September 30, 2005

Effective through

For the National Institute of Standards and Technology



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 7 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
-------------------	----------------------------------

12/I05	IEC 61000-4-6, Ed. 2.0 (2003-05); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I06	IEC 61000-4-8, Ed. 1.1 (2001); EN 61000-4-8: Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
12/I07	IEC 61000-4-11, Ed. 1.1 (2001-03); EN 61000-4-11: Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/J111324	SAE J1113/24: Immunity to radiated electromagnetic fields; 10 kHz to 200 MHz - Crawford TEM cell and 10 kHz to 5 GHz - Wideband TEM cell
12/J111341	SAE J1113/41 (1995-07): Limits and methods of measurement of radio disturbance characteristics of components and modules for the protection of receivers used on board vehicles

Radio Test Methods

12/RSS119	RSS-119, Issue 6 (March 25, 2000): Land Mobile and Fixed Radio Transmitters and Receivers, 27.41 to 960 MHz
12/RSS123	RSS-123, Issue 1, Rev. 2 (November 6, 1999): Low Power Licensed Radiocommunication Devices

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 8 of 12

**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/RSS125	RSS-125 (March 25, 2000): Land Mobile and Fixed Radio Transmitters and Receivers, 1.705 to 50.0 MHz, Primarily Amplitude Modulated
12/RSS131	RSS-131, Issue 2 (July 2003): Zone Enhancers for the Land Mobile Service
12/RSS132	RSS-132, Issue 1 (August 2002): 800 MHz Cellular Telephones Employing New Technologies
12/RSS133	RSS-133, Issue 2, Rev. 1 (November 6, 1999): 2GHz Personal Communications Services
12/RSS134	RSS-134, Issue 1, Rev. 1 (March 25, 2000): 900 MHz Narrowband Personal Communication Service
12/RSS135	RSS-135, Issue 1 (October 26, 1996): Digital Scanner Receivers
12/RSS136	RSS-136, Issue 5 (October 2002): Land and Mobile Station Radiotelephone Transmitters and Receivers Operating in the 26.960 - 27.410 MHz General Radio Service Band
12/RSS137	RSS-137, Issue 1, Rev. 1 (September 25, 1999): Location and Monitoring Service (902 - 928 MHz)
12/RSS139	RSS-139, Issue 1 (February 5, 2000): Licensed Radiocommunications Devices in the Band 2400 - 2483.5 MHz

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 9 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/RSS141	RSS-141, Issue 1 (July 2003): Aeronautical Radiocommunication Equipment in the Frequency Band 117.975 - 137 MHz
12/RSS142	RSS-142, Issue 2 (August 2002): Narrowband Multipoint Communication Systems in the 1,427 - 1,430 MHz and 1,493.5 - 1,496.5 MHz Bands
12/RSS170	RSS-170, Issue 1, Rev. 1 (November 6, 1999): Satellite Mobile Earth Stations
12/RSS191	RSS-191, Issue 2 (August 2002): Local Multipoint Communication Systems in the 28 GHz Band; Point-to-Point and Point-to-Multipoint Broadband Communication Systems in the 24 GHz and 38 GHz Bands
12/RSS192	RSS-192, Issue 1 (November 6, 1999): Fixed Wireless Access Systems in the Band 3400 - 3700 MHz
12/RSS193	RSS-193, Issue 1 (July 2003): Multipoint and Point-to-Point Communication Systems (MCS) in the Fixed Service Operating in the 2,150 - 2,160 MHz, 2,500 - 2,596 MHz and 2,686 - 2,690 MHz Bands
12/RSS210	RSS-210, Issue 5 (November 2001): Low Power Licence-Exempt Radiocommunication Devices
12/RSS212	RSS-212, Issue 1 (February 27, 1999): Test Facilities and Test Methods for Radio Equipment

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 10 of 12

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

NVLAP Code *Designation / Description*

12/RSS213 RSS-213, Issue 1 (April 24, 1999): 2 GHz Licence-Exempt Personal Communications Service Devices (PCS)

12/RSS215 RSS-215, Issue 1 (November 6, 1999): Analogue Scanner Receivers

Telecommunications Test Methods:

12/FCC2a2 TIA/EIA 603A (2001) with 47 CFR Part 2: Public Mobile Services in 47 CFR Part 22

12/FCC2b2 TIA/EIA 603A (2001) with 47 CFR Part 2: Private Land Mobile Radio Services in 47 CFR Part 90

12/FCC2d1 TIA/EIA 603A (2001) with 47 CFR Part 2: Experimental Radio, Auxiliary, Special Broadcast and Other Program Distributional Services in 47 CFR Part 74

12/FCC2e1 TIA/EIA 603A (2001) with 47 CFR Part 2: International Fixed Public Radiocommunication Services in 47 CFR Part 23

12/CIS15c EN 55015 (2000) + A1 (2001): Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

September 30, 2005

Effective through

For the National Institute of Standards and Technology



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 11 of 12

**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

NVLAP Code Designation / Description

MIL-STD-462 : Conducted Emissions:

12/A13	MIL-STD-462 Version D Method CE101
12/A14	MIL-STD-462 Version D Method CE102
12/A16	MIL-STD-461 Version E Method CE101
12/A17	MIL-STD-461 Version E Method CE102
12/A18	MIL-STD-461 Version E Method CE106

MIL-STD-462 : Conducted Susceptibility:

12/B12	MIL-STD-462 Version D Method CS101
12/B13	MIL-STD-462 Version D Method CS103
12/B25	MIL-STD-461 Version E Method CS114
12/B26	MIL-STD-461 Version E Method CS115
12/B27	MIL-STD-461 Version E Method CS116

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090



ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



Page: 12 of 12

**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100276-0

D.L.S. ELECTRONIC SYSTEMS, INC.

NVLAP Code Designation / Description

MIL-STD-462 : Radiated Emissions:

12/D04	MIL-STD-462 Version D Method RE101
12/D05	MIL-STD-462 Version D Method RE102
12/D06	MIL-STD-462 Version D Method RE103

MIL-STD-462 : Radiated Susceptibility:

12/E08	MIL-STD-462 Version D Method RS101
12/E09	MIL-STD-462 Version D Method RS103

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

1.0 SUMMARY OF TEST REPORT

It was found that the PWA Bluetooth module MtPxxx, Model Number(s) 6072, "meets" the radio interference conducted and radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands.

This test report relates only to the items tested and contains the following number of pages.

Text: 99

2.0 INTRODUCTION

On August 17, 18, & 22, 2005, a series of radio frequency interference measurements was performed on PWA Bluetooth module MtPxxx, Model Number(s) 6072, Serial Number: 52192-0508-002 & 52192-0508-0033. The tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions for Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-2003. Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency interference emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Sections 15.205, 15.209 & 15.247 for Intentional Radiators operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the American National Standards Institute, ANSI C63.4-2003, Section 8, (Figures 11a and 11b).

All radiated emissions tests were performed with the test item placed on a 80 cm high rotating non-conductive table, located in the test room. Equipment normally operated on the floor was placed on a metal covered turntable which is flush with the surrounding conducting ground plane. The ground plane has an electrical isolation layer over its surface approximately 7 mm thick. The EUT is separated from the turntable ground plane by a non-conductive layer. The equipment under test was set up according to ANSI C63.4-2003, Sections 6 and 8.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All preliminary data below 1000 MHz was automatically plotted using the HP Spectrum Analyzer or ESI 26/40 Fixed Tuned Receiver. The data was taken using Peak, Quasi-Peak or the Average Detector Functions as required. This information was then used to determine the frequencies of maximum emissions. Above 1000 MHz, final data was taken using the Average Detector.

Below 1000 MHz, final data was taken using the HP Spectrum Analyzer and/or ESI 26/40 Fixed Tuned Receiver. These plots were made using the Peak or Quasi-Peak Detector functions, with manual measurements performed on the questionable frequencies using the Quasi-Peak or the Average Detector Function of the Analyzer or ESI 26/40 Fixed Tuned Receiver as required. Above 1000 MHz, final data was taken using the Average Detector on the Spectrum Analyzer.

The bandwidths shown below are specified by ANSI C63.4-2003, Section 4.2.

Frequency Range	Bandwidth (-6 dB)
10 to 150 kHz	200 Hz
150 kHz to 30 MHz	9 kHz
30 MHz to 1 GHz	120 kHz
Above 1 GHz	1 MHz

A list of the equipment used can be found in Table 1. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

6.0 AMBIENT MEASUREMENTS

For emissions measurements, broadband antennas and an EMI Test Receiver with a panoramic spectrum display are used. First the frequency range is scanned and displayed on the test receiver display. Next the scanned frequency range is divided into smaller ranges, and then it is manually tuned through to determine the emissions from the EUT. A headset or loudspeaker is connected to the test receiver's AM/FM demodulated output as an aid in detecting ambient signals and finding frequencies of significant emission from the EUT. If there is any doubt as to the source of the emission, it is further investigated by rotating the EUT, or by disconnecting the power from the EUT.

The EUT is set up in its typical configuration and operated in its various modes. For tabletop systems, cables are manipulated within the range of likely configurations. For floor-standing equipment, the cables are located in the same manner as the user would install them and no further manipulation is made. If the manner of cable installation is not known, or if it changes with each installation, cables or wires for floor-standing equipment shall be manipulated to the extent possible to produce the maximum level of emissions. For each mode of operation, the frequency spectrum is monitored. Variations in antenna height, antenna polarization, EUT azimuth, and cable or wire placement (each variable within bounds specified elsewhere) are explored to produce the emissions that have the highest amplitude relative to the limit. These methods are performed to the specifications in MP-5 or ANSI C63.4-2003, as appropriate.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

7.0 DESCRIPTION OF TEST SAMPLE: (See also Paragraph 8.0)

7.1 Description:

Bluetooth wireless interface connecting printer to computer interface.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 35.72mm x Width: 25.4mm x Height 8mm:

7.3 LINE FILTER USED:

NA

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

NA

Clock Frequencies:

12 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

- | | |
|----------------------|---------------------|
| 1. Circuit board PWB | PN: 6072-3, 6/16/05 |
| 2. Bluetooth PWA | PN: 6072, Rev. 1 |
| 3. Antenna | PN: CAF95901 |
| 4. Antenna | PN: WIC 2450-A |



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

8.0 ADDITIONAL DESCRIPTION OF TEST SAMPLE:
(See also Paragraph 7.0)

1: There were no additional descriptions noted at the time of test.

NOTE:

The module was connected to a typical Power Supply and Board Set. The Firmware of the RF Chip has Transmit and Receive Test Mode.

I certify that the above, as described in paragraph 7.0, describes the equipment tested and will be manufactured as stated.

By: _____
Signature Title

For: _____
Company Date



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

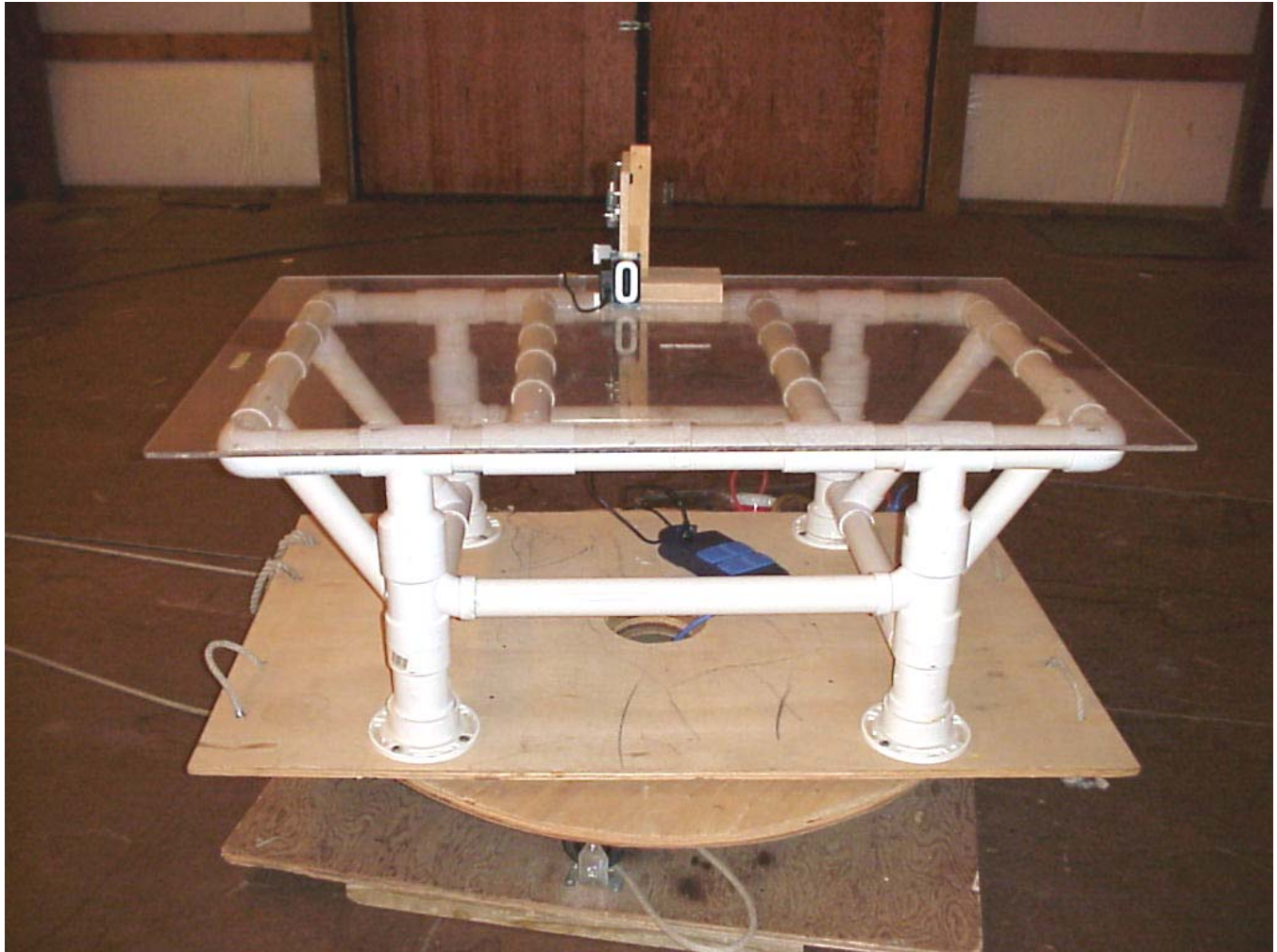
1250 Peterson Dr., Wheeling, IL 60090

9.0 PHOTO INFORMATION AND TEST SET-UP

- Item 0 PWA Bluetooth module MtPxxx
Model Number: 6072 Serial Number: 52192-0508-002 & 52192-0508-0033
- Item 1 Non-shielded AC Power Line Cord. 1.5m
- Item 2 Shielded RS-232 Cable with Metal Shells. 1.5m

1250 Peterson Dr., Wheeling, IL 60090

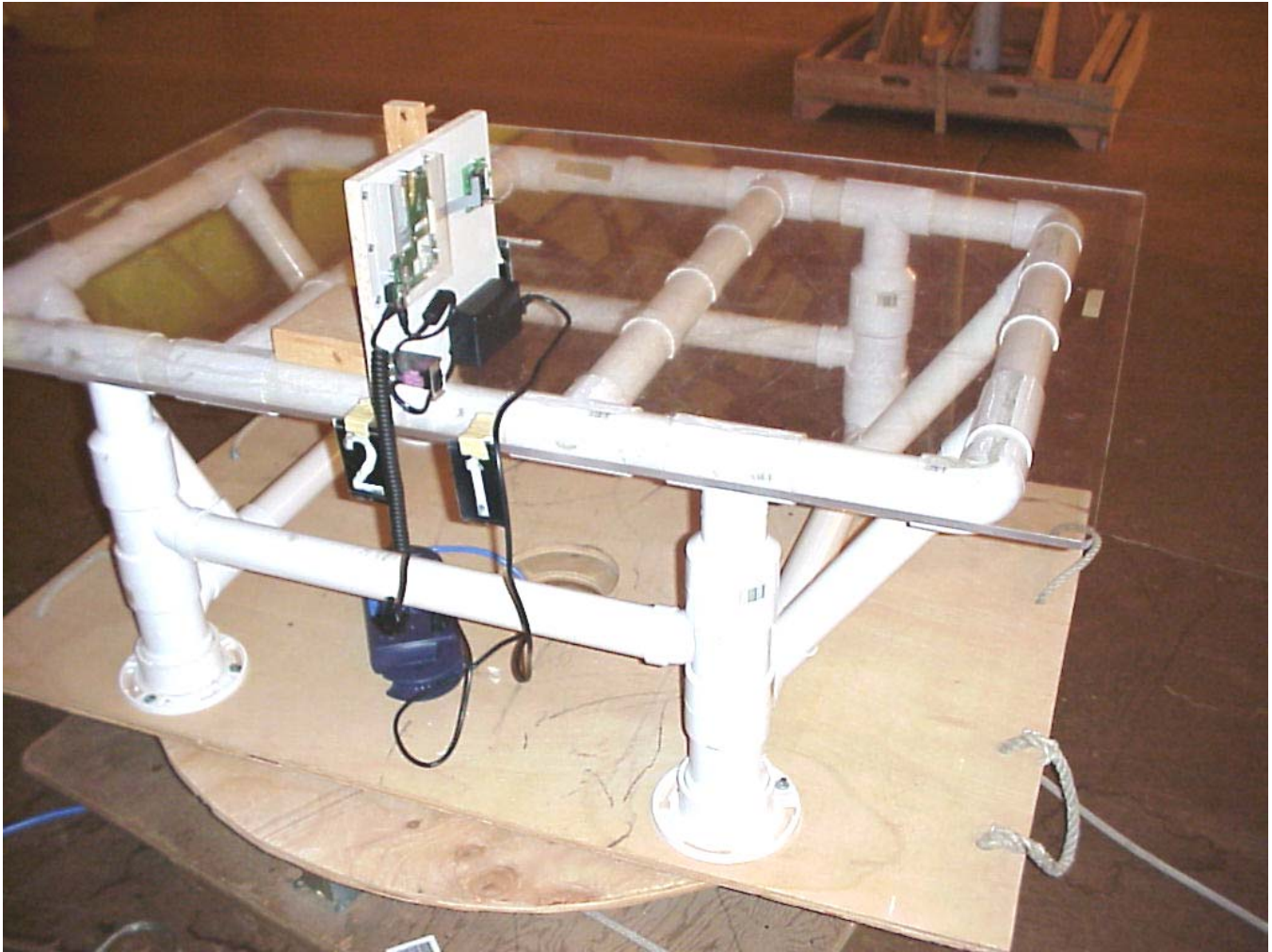
10.0 RADIATED PHOTOS TAKEN DURING TESTING



RADIATED EMISSIONS / VERTICAL SETUP / FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING: (CON'T)



RADIATED EMISSIONS / VERTICAL SETUP / REAR

1250 Peterson Dr., Wheeling, IL 60090

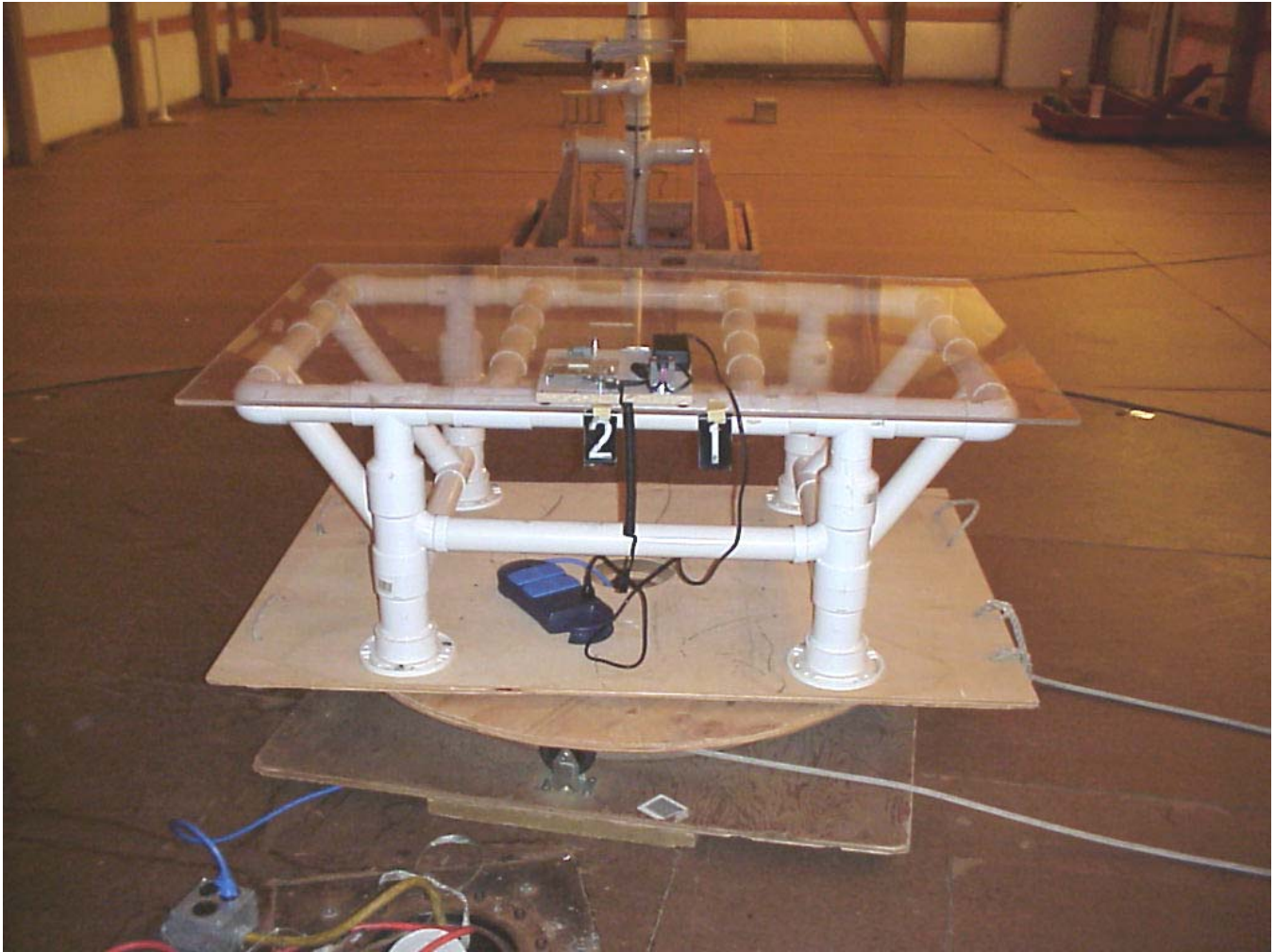
10.0 RADIATED PHOTOS TAKEN DURING TESTING: (CON'T)



RADIATED EMISSIONS / HORIZONTAL SETUP / FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING: (CON'T)



RADIATED EMISSIONS / HORIZONTAL SETUP / REAR

1250 Peterson Dr., Wheeling, IL 60090

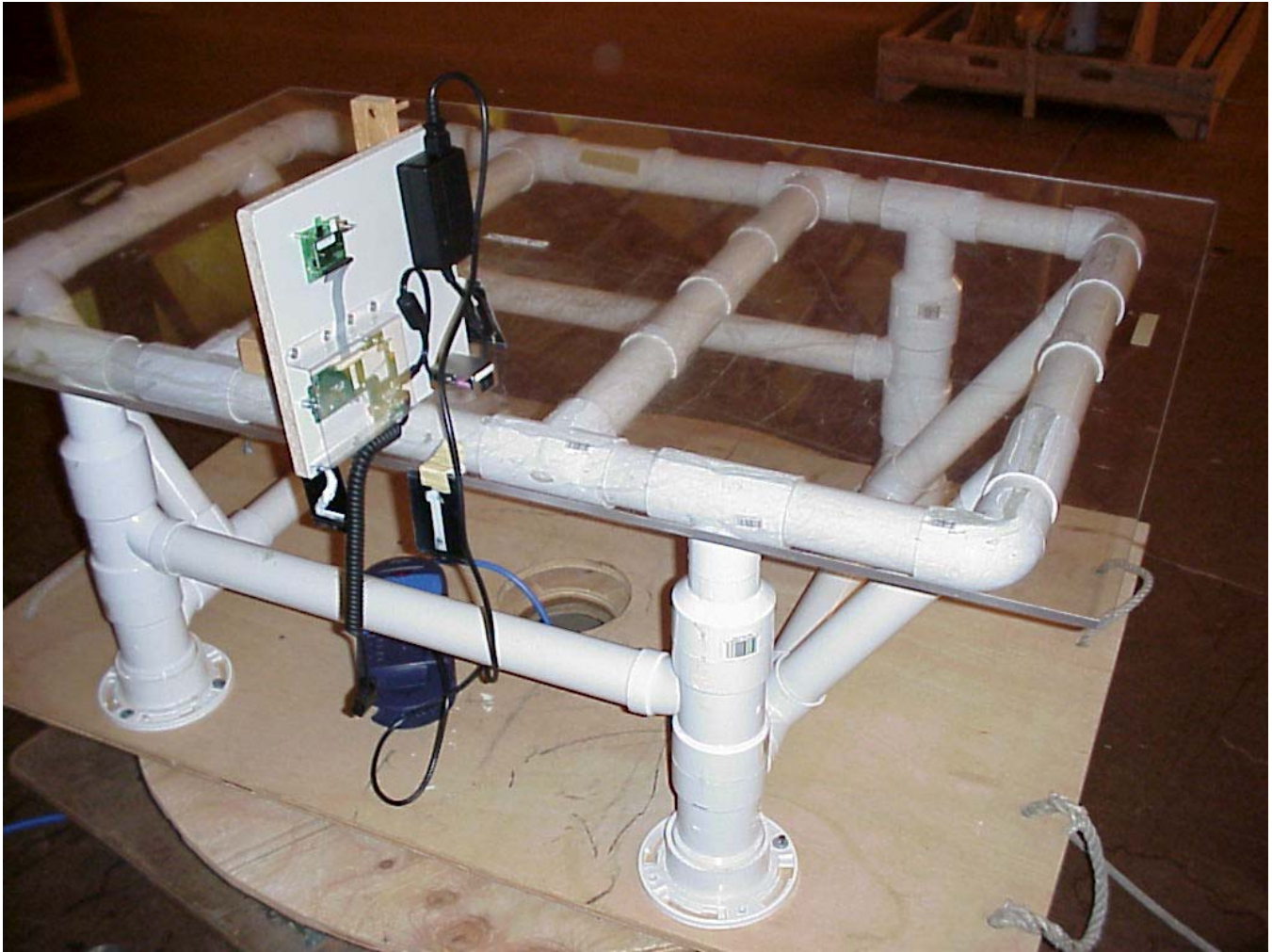
10.0 RADIATED PHOTOS TAKEN DURING TESTING: (CON'T)



RADIATED SETUP / 90 DEGREES ROTATION / FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING: (CON'T)



1250 Peterson Dr., Wheeling, IL 60090

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING





Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

11.0 RESULTS OF TESTS

The radio interference emission charts results can be seen on the pages at the end of this report. Data sheets indicating the test measurements taken during testing can also be found at the end of this report. Points on the emission charts shown with a yellow mark are background frequencies that were verified during testing.

12.0 CONCLUSION

It was found that the PWA Bluetooth module MtPxxx, Model Number(s) 6072 "**meets**" the radio interference conducted and radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands.



Company: Printek, Inc.
 Model Tested: 6072
 Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	11/05
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	12/05
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	12/05
Antenna	EMCO	3104C	00054891	20 MHz – 200 MHz	2/06
Antenna	Electrometrics	LPA-25	1114	200 MHz – 1 GHz	3/06
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	3/06
Antenna	Electrometrics	3146	1205	200 MHz – 1 GHz	3/06
Antenna	EMCO	3104C	97014785	20 MHz – 200 MHz	2/06
Antenna	EMCO	3146	97024895	200 MHz – 1 GHz	3/06
Antenna	EMCO	3115	2479	1 GHz – 18 GHz	8/06
Antenna	EMCO	3115	99035731	1 GHz – 18 GHz	4/06
Antenna	Rohde & Schwarz	HUF-Z1	829381001	20 MHz – 1 GHz	2/06
Antenna	Rohde & Schwarz	HUF-Z1	829381005	20 MHz – 1 GHz	8/06

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
LISN	Solar	8012-50-R-24-BNC	8305116	10 MHz – 30 MHz	8/06
LISN	Solar	8012-50-R-24-BNC	814548	10 MHz – 30 MHz	8/06
LISN	Solar	9252-50-R-24-BNC	961019	10 MHz – 30 MHz	12/05
LISN	Solar	9252-50-R-24-BNC	971612	10 MHz – 30 MHz	10/05
LISN	Solar	9252-50-R-24-BNC	92710620	10 MHz – 30 MHz	7/06

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

TEST PROCEDURE

Part 15, Subpart C, Section 15.247 (a-h)

**OPERATION WITHIN THE BAND 902-928 MHz, 2400-2483.5 MHz
AND 5725-5857 MHz**



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

1.0 CONDUCTED EMISSION MEASUREMENTS

If applicable, the conducted emissions were measured over the frequency range from 150 kHz to 30 MHz in accordance with the power line measurements as specified in the American National Standards Institute, ANSI C63.4-2003, Section 12. Since the device is operated from the public utility lines, the 115 Vac 60 Hz power leads, high and low sides, were to be measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. All signals were then recorded. The allowed levels for Intentional Radiators cannot exceed 250 uV (47.96 dBuV) at any frequency between 150 kHz and 30 MHz, as stated in Section 15.207a.

All conducted emissions measurements were made at a test room temperature of **78°F** at **40%** relative humidity.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DATA AND GRAPH(S) TAKEN DURING TESTING

PART 15.207

TRANSMIT CHANNEL 40 / FREQUENCY 2442 MHz

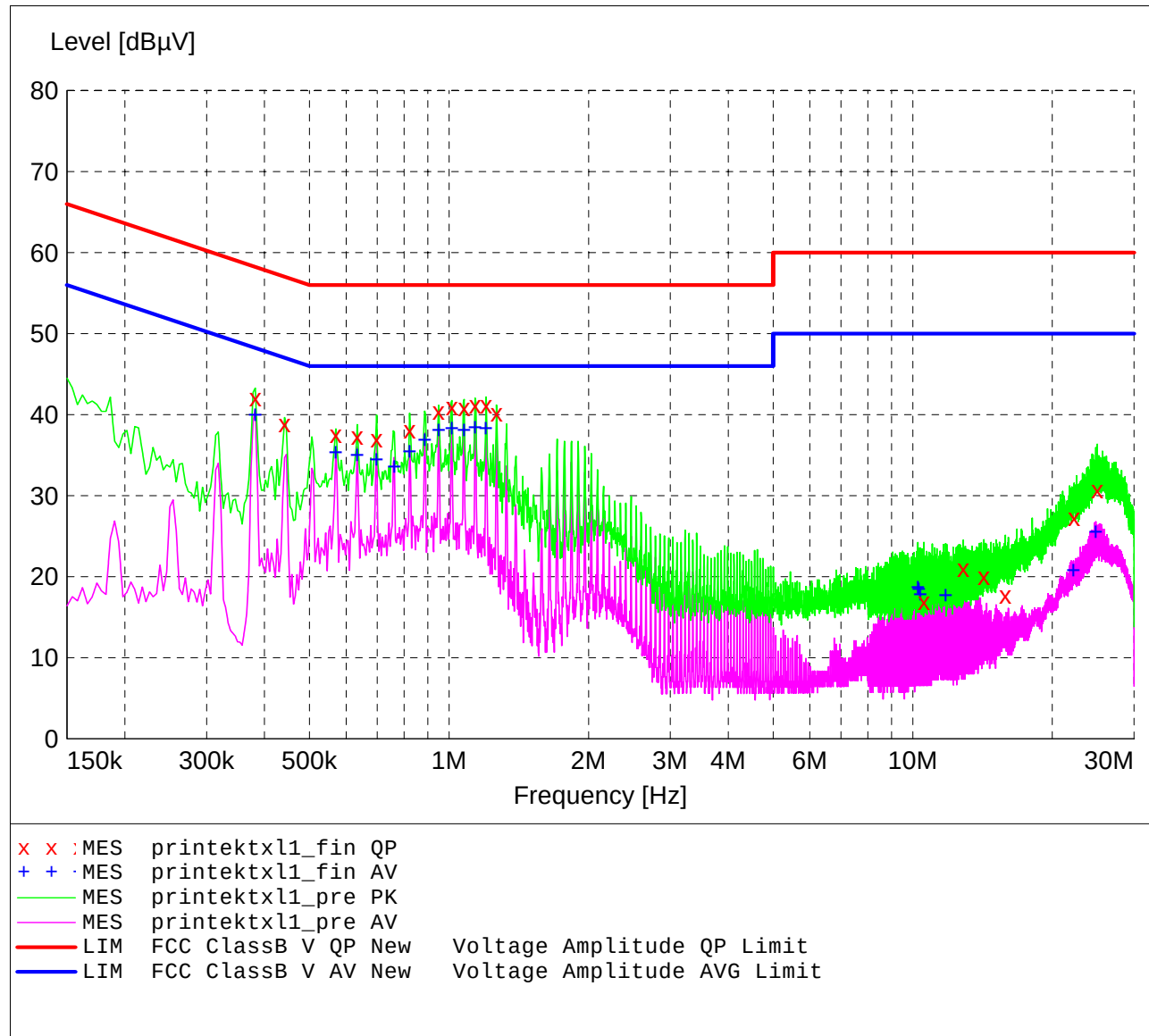
FCC Part 15 Class B

Voltage Mains Test

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 78 deg. F, 40% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Jason L
Test Specification: 120 VAC; 60 Hz
Comment: Line 1 - Transmit Channel 40 - Frequency: 2442 MHz
Date: 08-22-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description:			FCC Class B Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#126



MEASUREMENT RESULT: "printektxl1_fin QP"

8/22/2005 1:38PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.382000	42.10	10.2	58	16.1	---	---
0.442000	38.90	10.2	57	18.1	---	---
0.570000	37.60	10.2	56	18.4	---	---
0.634000	37.40	10.2	56	18.6	---	---
0.698000	37.00	10.2	56	19.0	---	---
0.822000	38.10	10.2	56	17.9	---	---
0.950000	40.50	10.1	56	15.5	---	---
1.014000	41.00	10.1	56	15.0	---	---
1.078000	40.90	10.1	56	15.1	---	---
1.138000	41.20	10.2	56	14.8	---	---
1.202000	41.20	10.2	56	14.8	---	---
1.266000	40.20	10.2	56	15.8	---	---
10.566000	17.00	10.5	60	43.0	---	---
12.850000	21.00	10.6	60	39.0	---	---
14.242000	20.10	10.7	60	39.9	---	---
15.830000	17.70	10.8	60	42.3	---	---
22.282000	27.30	10.9	60	32.7	---	---
25.006000	30.70	11.0	60	29.3	---	---

MEASUREMENT RESULT: "printektxl1_fin AV"

8/22/2005 1:38PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.382000	40.00	10.2	48	8.2	---	---
0.570000	35.40	10.2	46	10.6	---	---
0.634000	35.00	10.2	46	11.0	---	---
0.698000	34.50	10.2	46	11.5	---	---
0.762000	33.60	10.2	46	12.4	---	---
0.822000	35.50	10.2	46	10.5	---	---
0.886000	36.90	10.2	46	9.1	---	---
0.950000	38.10	10.1	46	7.9	---	---
1.014000	38.40	10.1	46	7.6	---	---
1.078000	38.10	10.1	46	7.9	---	---
1.138000	38.50	10.2	46	7.5	---	---
1.202000	38.30	10.2	46	7.7	---	---
10.254000	18.70	10.5	50	31.3	---	---
10.318000	18.50	10.5	50	31.5	---	---
10.382000	17.80	10.5	50	32.2	---	---
11.774000	17.70	10.6	50	32.3	---	---
22.222000	20.80	10.9	50	29.2	---	---
24.814000	25.60	11.0	50	24.4	---	---

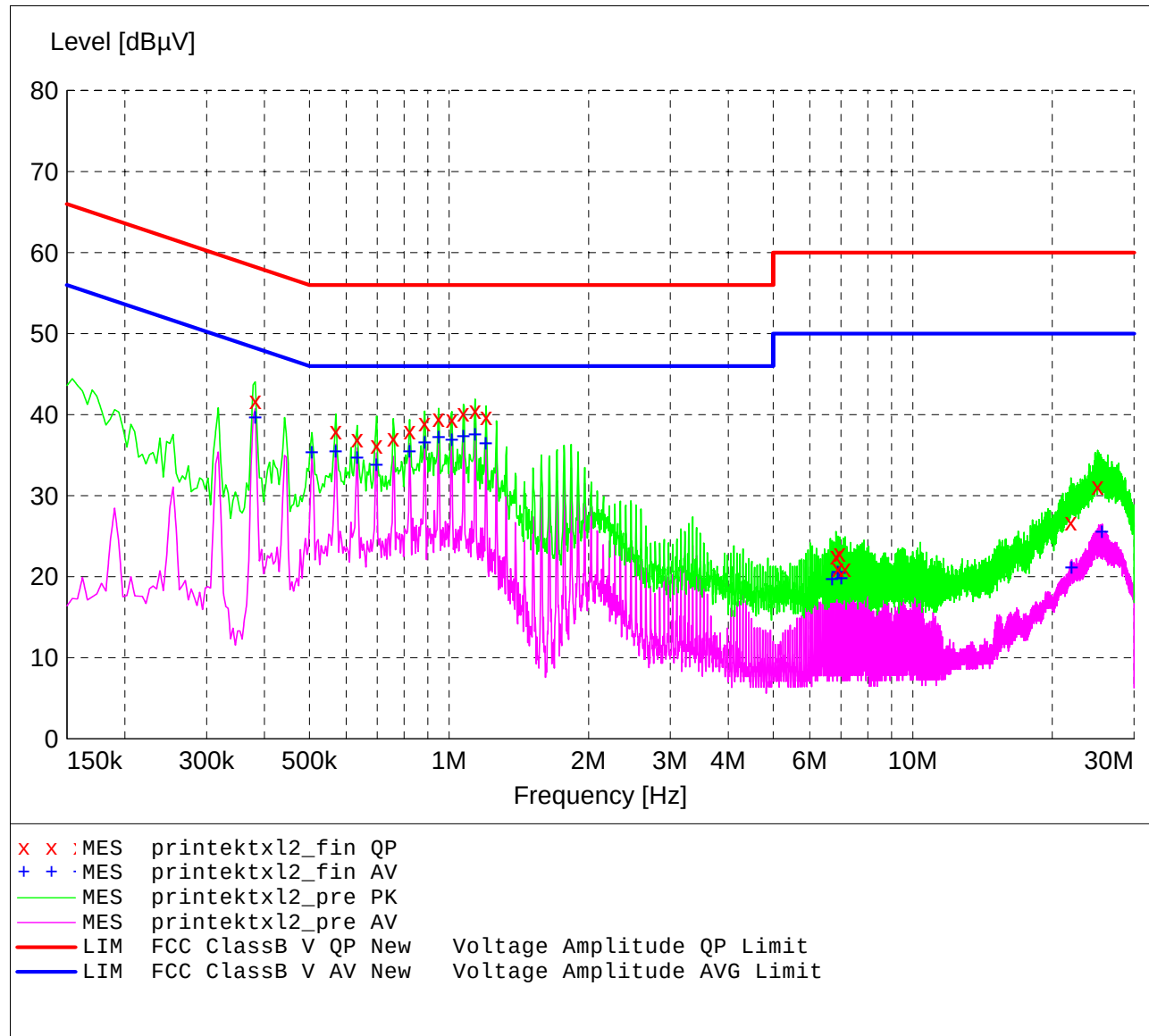
FCC Part 15 Class B

Voltage Mains Test

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 78 deg. F, 40% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Jason L
Test Specification: 120 VAC; 60 Hz
Comment: Line 2 - Transmit Channel 40 - Frequency: 2442 MHz
Date: 08-22-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description:			FCC Class B Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	LISN DLS#126



MEASUREMENT RESULT: "printektxl2_fin QP"

8/22/2005 1:50PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.382000	41.80	10.2	58	16.4	---	---
0.570000	38.00	10.2	56	18.0	---	---
0.634000	37.00	10.2	56	19.0	---	---
0.698000	36.20	10.2	56	19.8	---	---
0.758000	37.10	10.2	56	18.9	---	---
0.822000	38.00	10.2	56	18.0	---	---
0.886000	39.00	10.2	56	17.0	---	---
0.950000	39.60	10.1	56	16.4	---	---
1.014000	39.50	10.1	56	16.5	---	---
1.074000	40.20	10.1	56	15.8	---	---
1.138000	40.60	10.2	56	15.4	---	---
1.202000	39.80	10.2	56	16.2	---	---
6.830000	22.60	10.4	60	37.4	---	---
6.898000	21.00	10.4	60	39.0	---	---
6.958000	22.90	10.4	60	37.1	---	---
7.146000	21.10	10.4	60	38.9	---	---
21.946000	26.80	10.9	60	33.2	---	---
25.050000	31.20	11.0	60	28.8	---	---

MEASUREMENT RESULT: "printektxl2_fin AV"

8/22/2005 1:50PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.382000	39.70	10.2	48	8.5	---	---
0.506000	35.40	10.1	46	10.6	---	---
0.570000	35.50	10.2	46	10.5	---	---
0.634000	34.70	10.2	46	11.3	---	---
0.698000	33.80	10.2	46	12.2	---	---
0.822000	35.50	10.2	46	10.5	---	---
0.886000	36.60	10.2	46	9.4	---	---
0.950000	37.20	10.1	46	8.8	---	---
1.014000	36.90	10.1	46	9.1	---	---
1.074000	37.40	10.1	46	8.6	---	---
1.138000	37.60	10.2	46	8.4	---	---
1.202000	36.50	10.2	46	9.5	---	---
6.706000	19.70	10.4	50	30.3	---	---
6.894000	20.60	10.4	50	29.4	---	---
6.958000	20.50	10.4	50	29.5	---	---
7.022000	19.80	10.4	50	30.2	---	---
22.014000	21.20	10.9	50	28.8	---	---
25.618000	25.60	11.1	50	24.4	---	---



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DATA AND GRAPH(S) TAKEN DURING TESTING

PART 15.207

RECEIVE CHANNEL 40 / FREQUENCY 2442 MHz

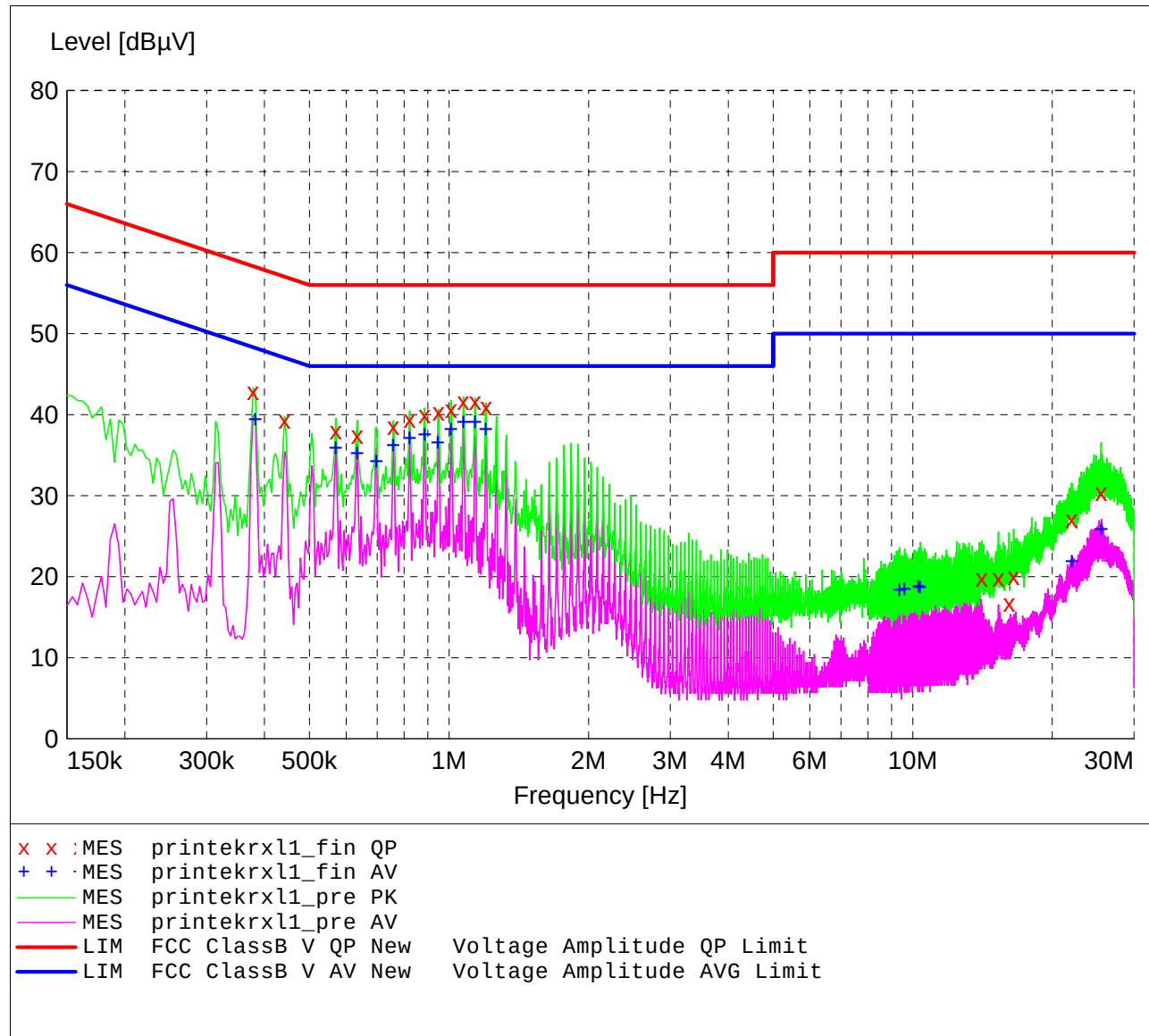
FCC Part 15 Class B

Voltage Mains Test

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 78 deg. F, 40% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Jason L
Test Specification: 120 VAC; 60 Hz
Comment: Line 1 - Receive Channel 40 - Frequency: 2442 MHz
Date: 08-22-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description:			FCC Class B Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	LISN DLS#126
			Average			



MEASUREMENT RESULT: "printekrxl1_fin QP"

8/22/2005 2:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.378000	42.90	10.2	58	15.4	---	---
0.442000	39.30	10.2	57	17.7	---	---
0.570000	38.00	10.2	56	18.0	---	---
0.634000	37.50	10.2	56	18.5	---	---
0.758000	38.60	10.2	56	17.4	---	---
0.822000	39.40	10.2	56	16.6	---	---
0.886000	40.00	10.2	56	16.0	---	---
0.950000	40.30	10.1	56	15.7	---	---
1.010000	40.70	10.1	56	15.3	---	---
1.074000	41.60	10.1	56	14.4	---	---
1.138000	41.70	10.2	56	14.3	---	---
1.202000	41.00	10.2	56	15.0	---	---
14.102000	19.80	10.7	60	40.2	---	---
15.302000	19.80	10.8	60	40.2	---	---
16.130000	16.80	10.8	60	43.2	---	---
16.502000	20.10	10.8	60	39.9	---	---
22.006000	27.10	10.9	60	32.9	---	---
25.486000	30.40	11.1	60	29.6	---	---

MEASUREMENT RESULT: "printekrxl1_fin AV"

8/22/2005 2:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.382000	39.40	10.2	48	8.9	---	---
0.570000	35.90	10.2	46	10.1	---	---
0.634000	35.30	10.2	46	10.7	---	---
0.698000	34.30	10.2	46	11.7	---	---
0.758000	36.30	10.2	46	9.7	---	---
0.822000	37.10	10.2	46	8.9	---	---
0.886000	37.60	10.2	46	8.4	---	---
0.946000	36.60	10.1	46	9.4	---	---
1.010000	38.20	10.1	46	7.8	---	---
1.074000	39.10	10.1	46	6.9	---	---
1.138000	39.10	10.2	46	6.9	---	---
1.202000	38.20	10.2	46	7.8	---	---
9.358000	18.40	10.5	50	31.6	---	---
9.610000	18.50	10.5	50	31.5	---	---
10.306000	18.80	10.5	50	31.2	---	---
10.370000	18.70	10.5	50	31.3	---	---
22.066000	21.90	10.9	50	28.1	---	---
25.542000	25.90	11.1	50	24.1	---	---

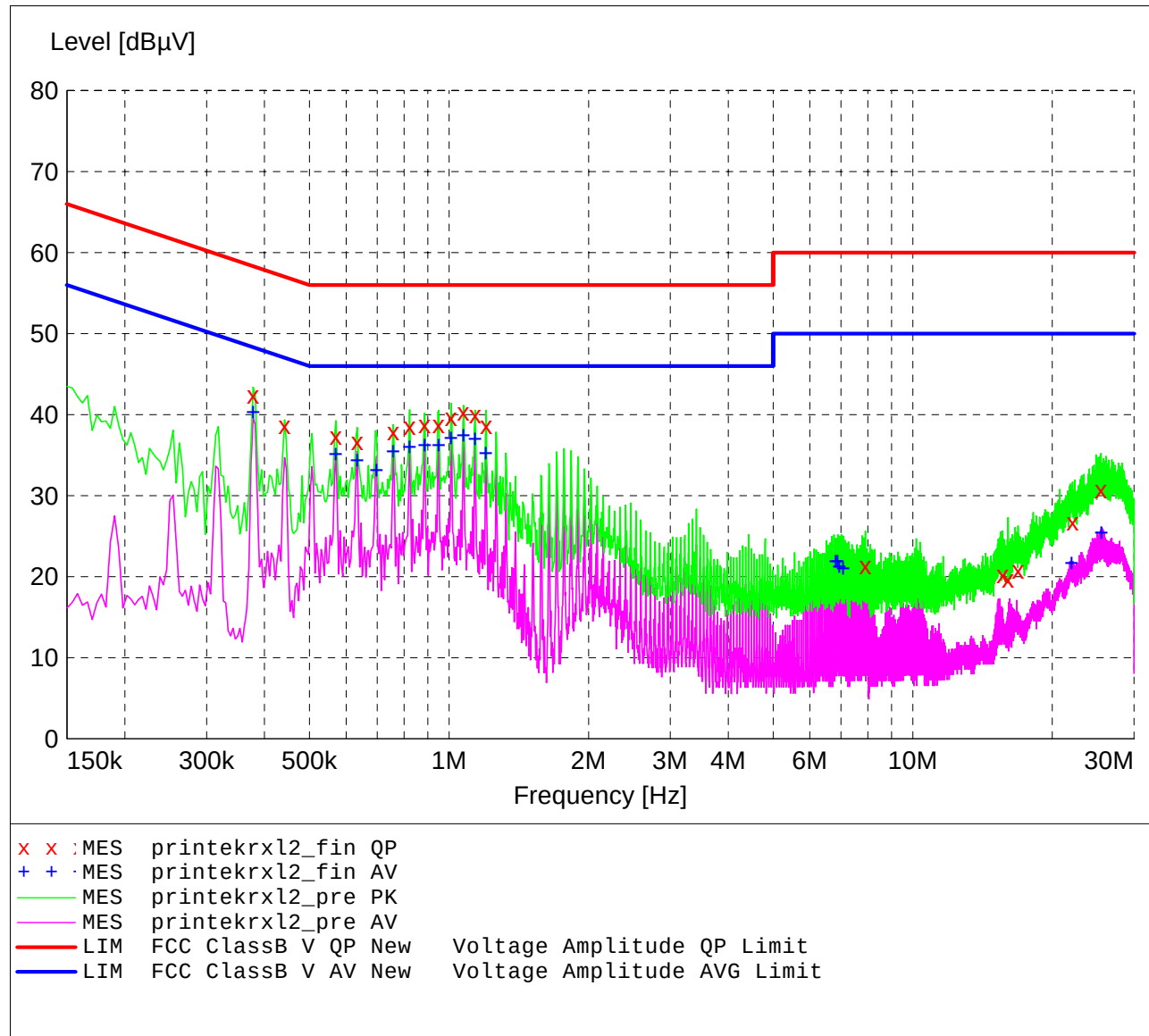
FCC Part 15 Class B

Voltage Mains Test

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 78 deg. F, 40% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Jason L
Test Specification: 120 VAC; 60 Hz
Comment: Line 2 - Receive Channel 40 - Frequency: 2442 MHz
Date: 08-22-2005

SCAN TABLE: "FCC ClassB Voltage"

Short Description:			FCC Class B Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	LISN DLS#126
			Average			



MEASUREMENT RESULT: "printekrxl2_fin QP"

8/22/2005 2:13PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.378000	42.40	10.2	58	15.9	---	---
0.442000	38.70	10.2	57	18.3	---	---
0.570000	37.40	10.2	56	18.6	---	---
0.634000	36.70	10.2	56	19.3	---	---
0.758000	37.90	10.2	56	18.1	---	---
0.822000	38.60	10.2	56	17.4	---	---
0.886000	38.80	10.2	56	17.2	---	---
0.950000	38.80	10.1	56	17.2	---	---
1.010000	39.70	10.1	56	16.3	---	---
1.074000	40.30	10.1	56	15.7	---	---
1.138000	40.00	10.2	56	16.0	---	---
1.202000	38.70	10.2	56	17.3	---	---
7.902000	21.40	10.4	60	38.6	---	---
15.614000	20.30	10.8	60	39.7	---	---
16.058000	19.70	10.8	60	40.3	---	---
16.878000	20.80	10.8	60	39.2	---	---
22.118000	26.80	10.9	60	33.2	---	---
25.474000	30.80	11.1	60	29.2	---	---

MEASUREMENT RESULT: "printekrxl2_fin AV"

8/22/2005 2:13PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.378000	40.30	10.2	48	8.0	---	---
0.570000	35.20	10.2	46	10.8	---	---
0.634000	34.40	10.2	46	11.6	---	---
0.698000	33.20	10.2	46	12.8	---	---
0.758000	35.50	10.2	46	10.5	---	---
0.822000	36.00	10.2	46	10.0	---	---
0.886000	36.30	10.2	46	9.7	---	---
0.950000	36.20	10.1	46	9.8	---	---
1.010000	37.10	10.1	46	8.9	---	---
1.074000	37.50	10.1	46	8.5	---	---
1.138000	37.00	10.2	46	9.0	---	---
1.202000	35.30	10.2	46	10.7	---	---
6.826000	21.90	10.4	50	28.1	---	---
6.890000	21.90	10.4	50	28.1	---	---
6.954000	21.30	10.4	50	28.7	---	---
7.078000	21.00	10.4	50	29.0	---	---
21.994000	21.70	10.9	50	28.3	---	---
25.534000	25.50	11.1	50	24.5	---	---



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

2.0 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – PART 15.247(c)

Spurious conducted emissions were measured at the antenna terminals. Plots were made showing the amplitude of each harmonic emission with the equipment operated. As shown by the radiated charts there was no reason to believe that there were any spurious emissions other than the harmonics that were than individually investigated when doing the conducted test at the antenna terminals. Measurements were made up to the 10th harmonic of the fundamental.

The allowed emissions for transmitters operating in the 2400 MHz to 2483.5 MHz bands for PWA Bluetooth module MtPxxx equipment are found under Part 15, Section 15.247(c). This paragraph states that in any 100 kHz bandwidth outside the frequency band which the spread spectrum intentional radiator is operating, the radio frequency power produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

NOTE: See the following pages for the data ad graphs of the actual measurements made:



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

CONDUCTED EMISSION DATA AND GRAPH(S) TAKEN FOR SPURIOUS EMISSION MEASUREMENTS MADE AT THE ANTENNA TERMINALS

PART 15.247(c)



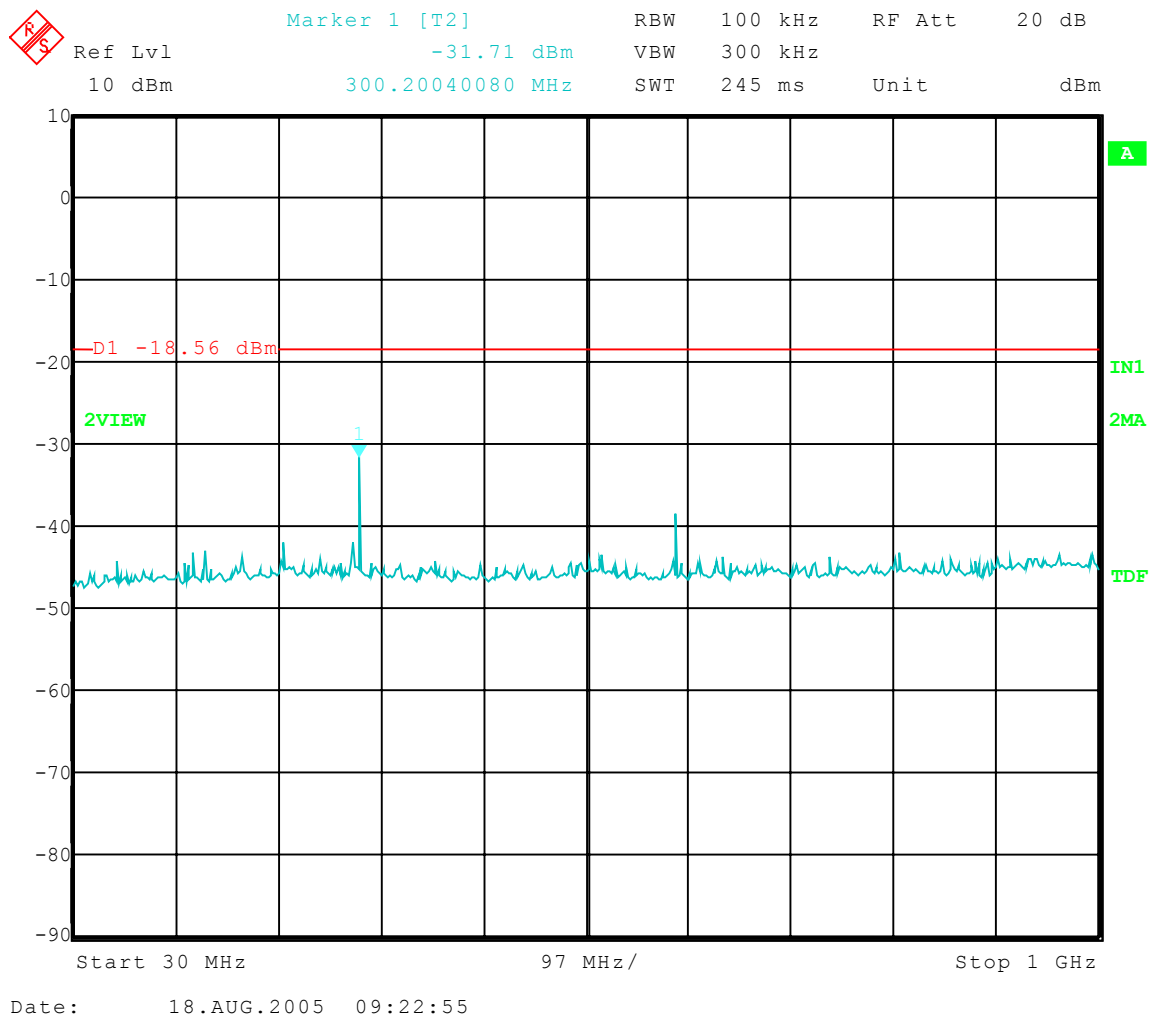
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Transmit – 2402 MHz**
Frequency Range: 30 to 1000 MHz
Limit = -18.56 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





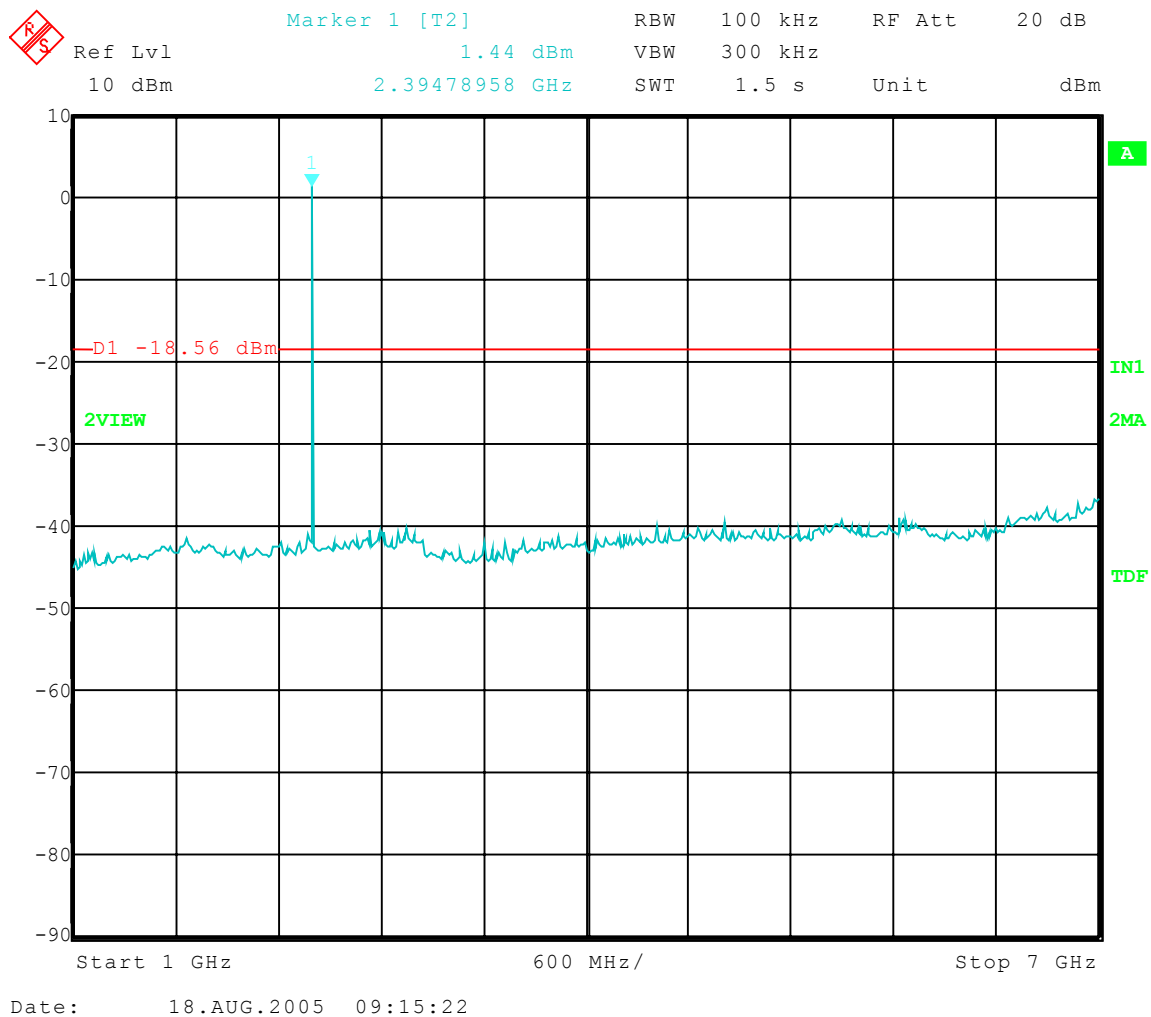
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Transmit – 2402 MHz**
Frequency Range: 1 to 7 GHz
Limit = -18.56 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





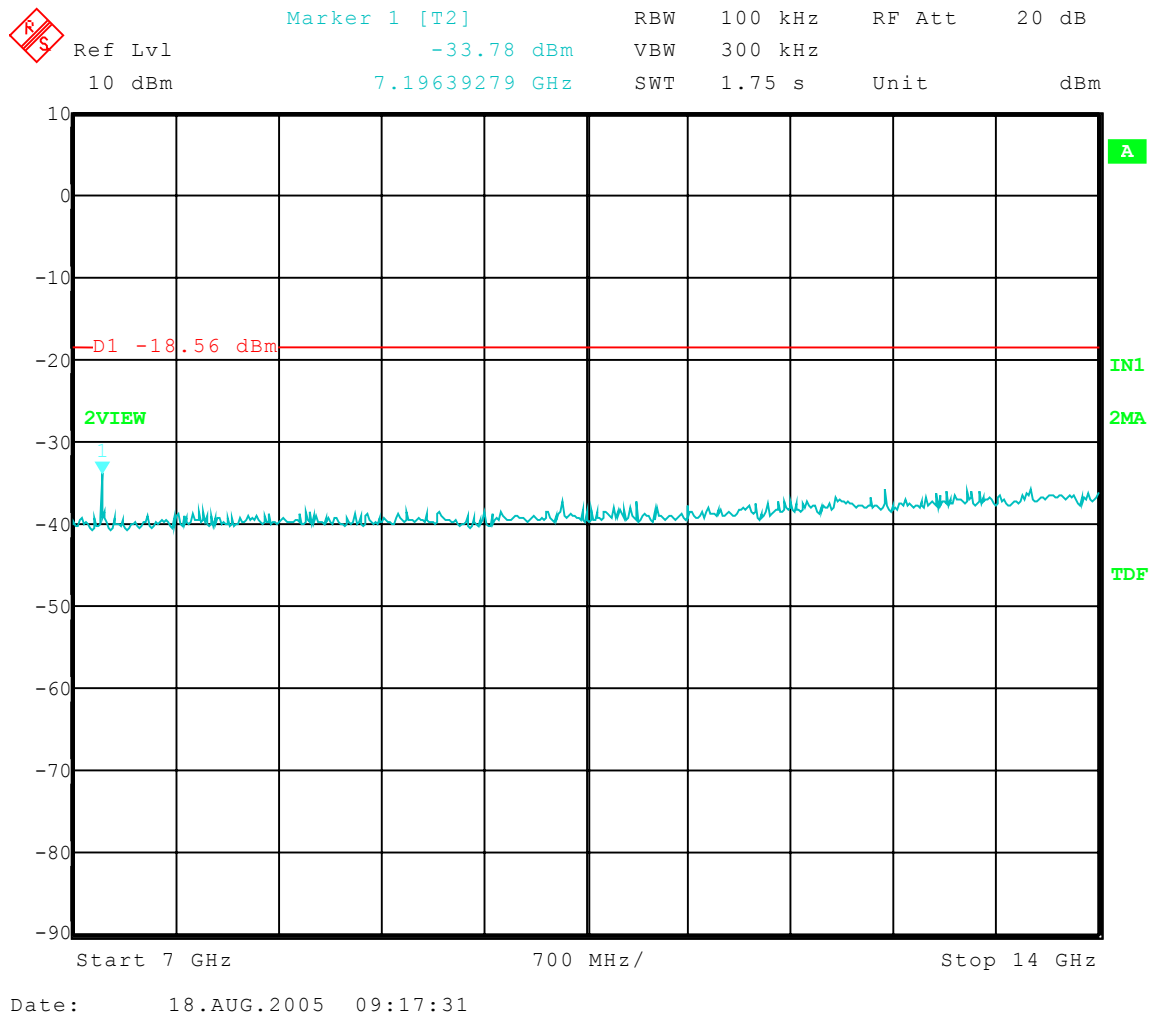
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Transmit – 2402 MHz**
Frequency Range: 7 to 14 GHz
Limit = -18.56 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





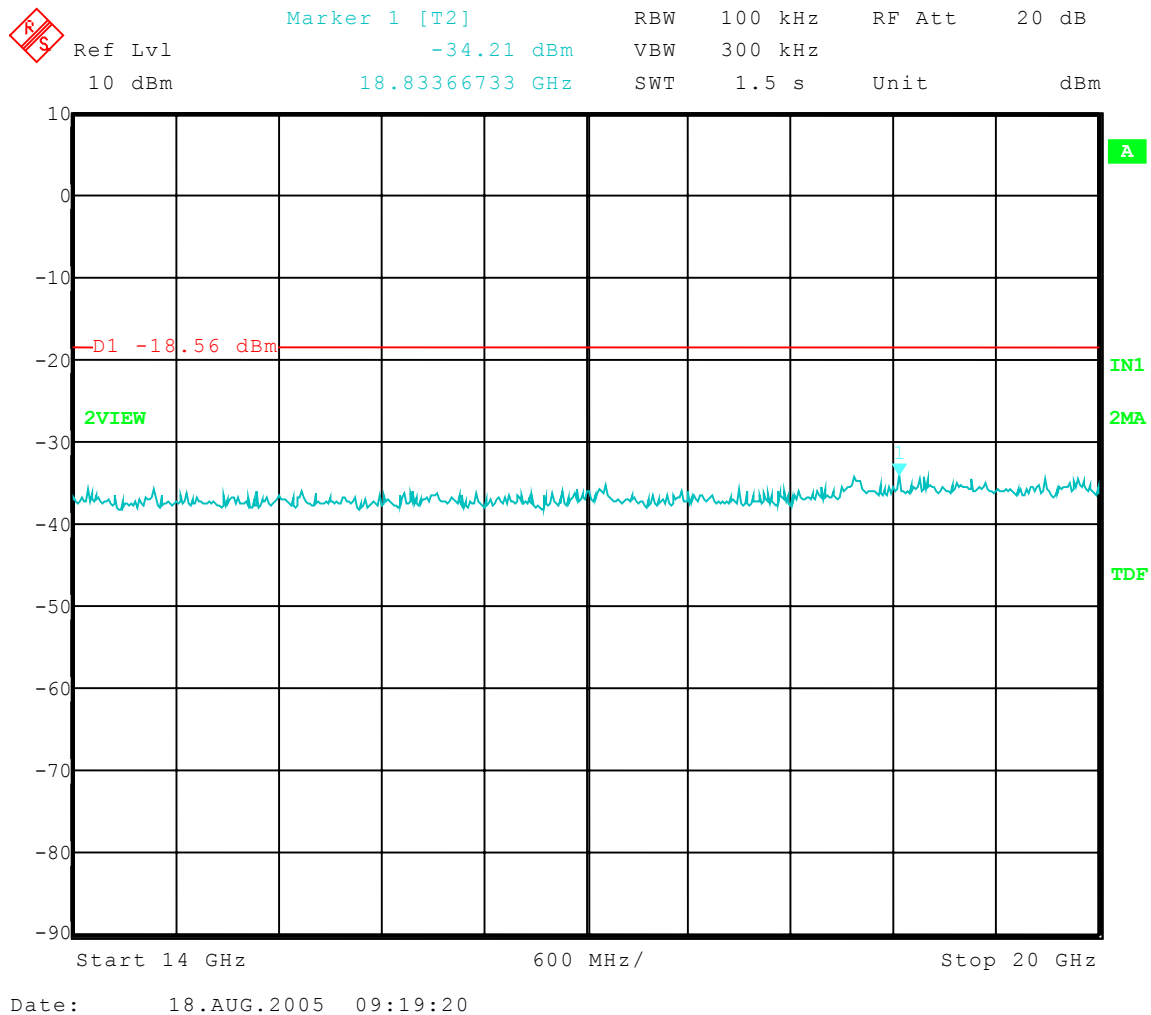
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Transmit – 2402 MHz**
Frequency Range: 14 to 20 GHz
Limit = -18.56 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





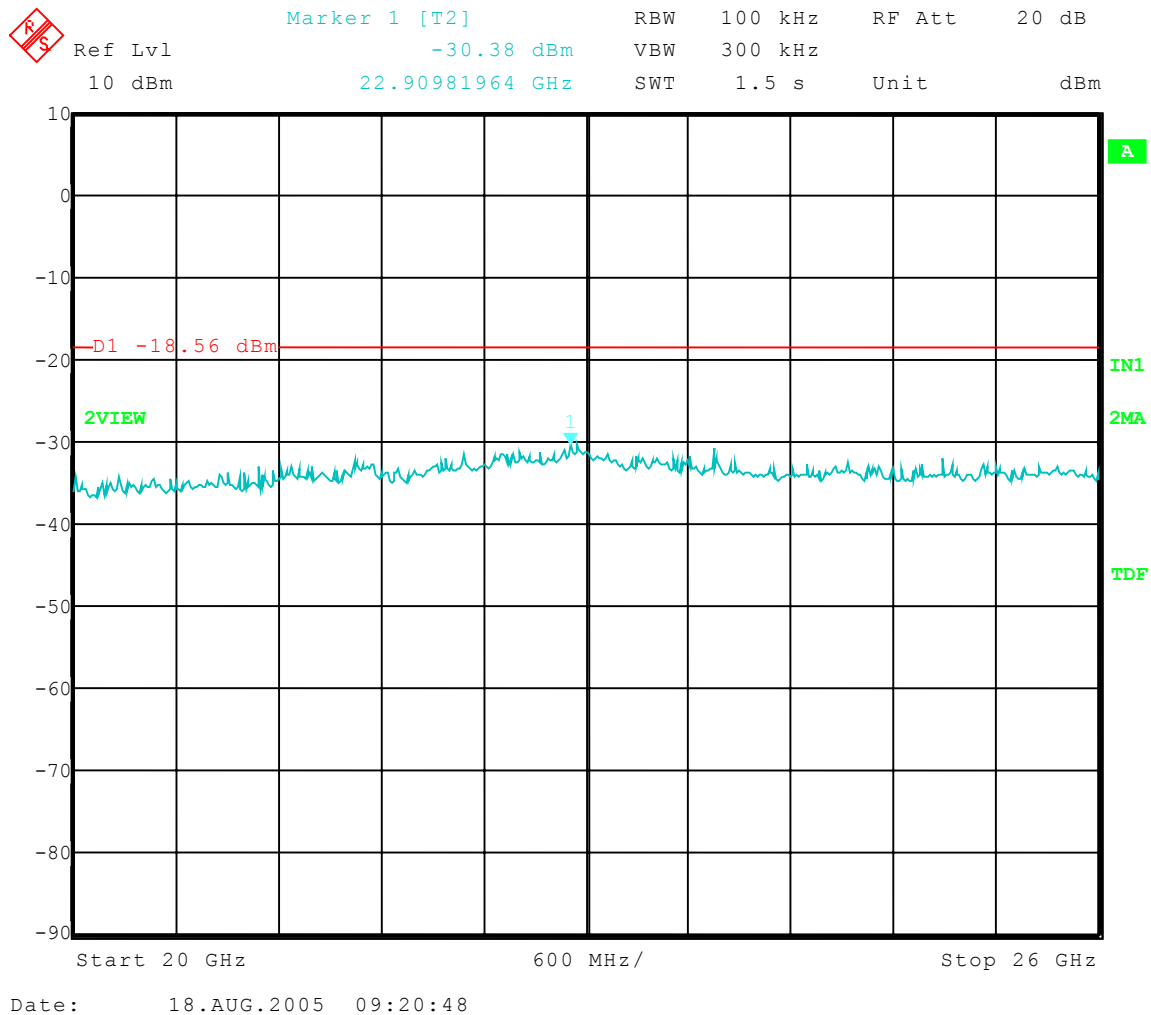
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Transmit – 2402 MHz**
Frequency Range: 20 to 26 GHz
Limit = -18.56 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





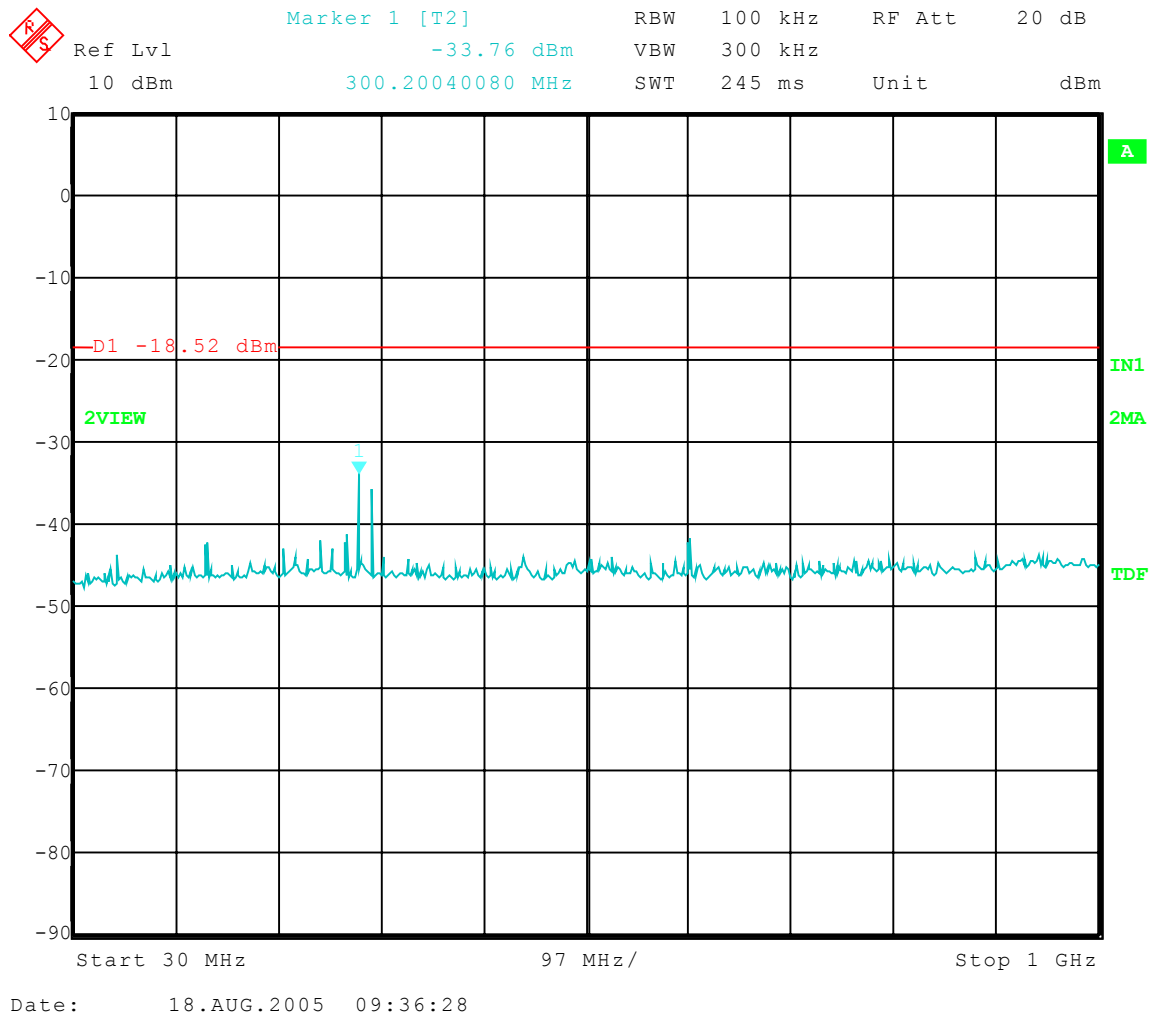
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Transmit – 2442 MHz**
Frequency Range: 30 to 1000 MHz
Limit = -18.52 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





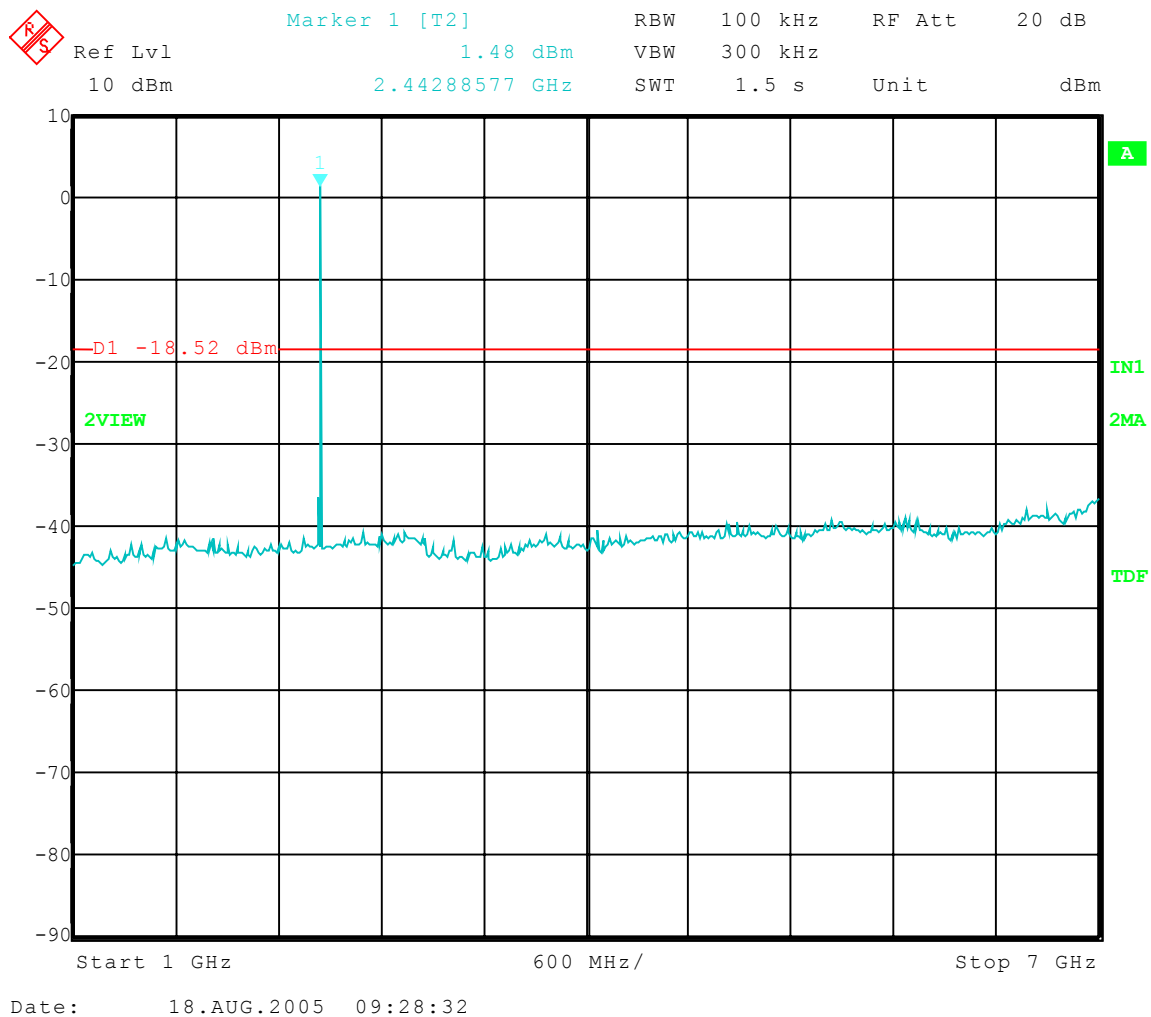
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Transmit – 2442 MHz**
Frequency Range: 1 to 7 GHz
Limit = -18.52 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





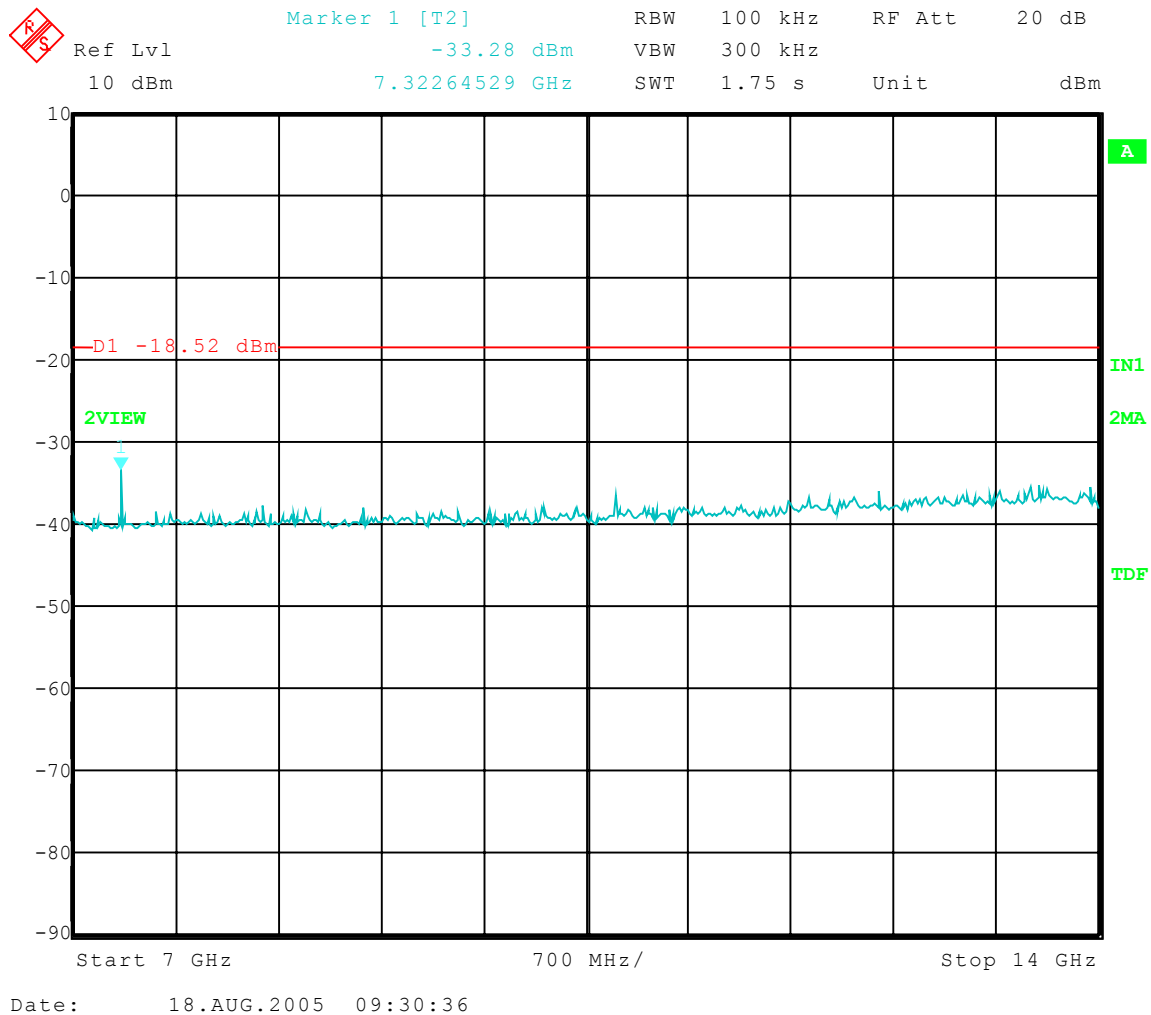
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Transmit – 2442 MHz**
Frequency Range: 7 to 14 GHz
Limit = -18.52 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency

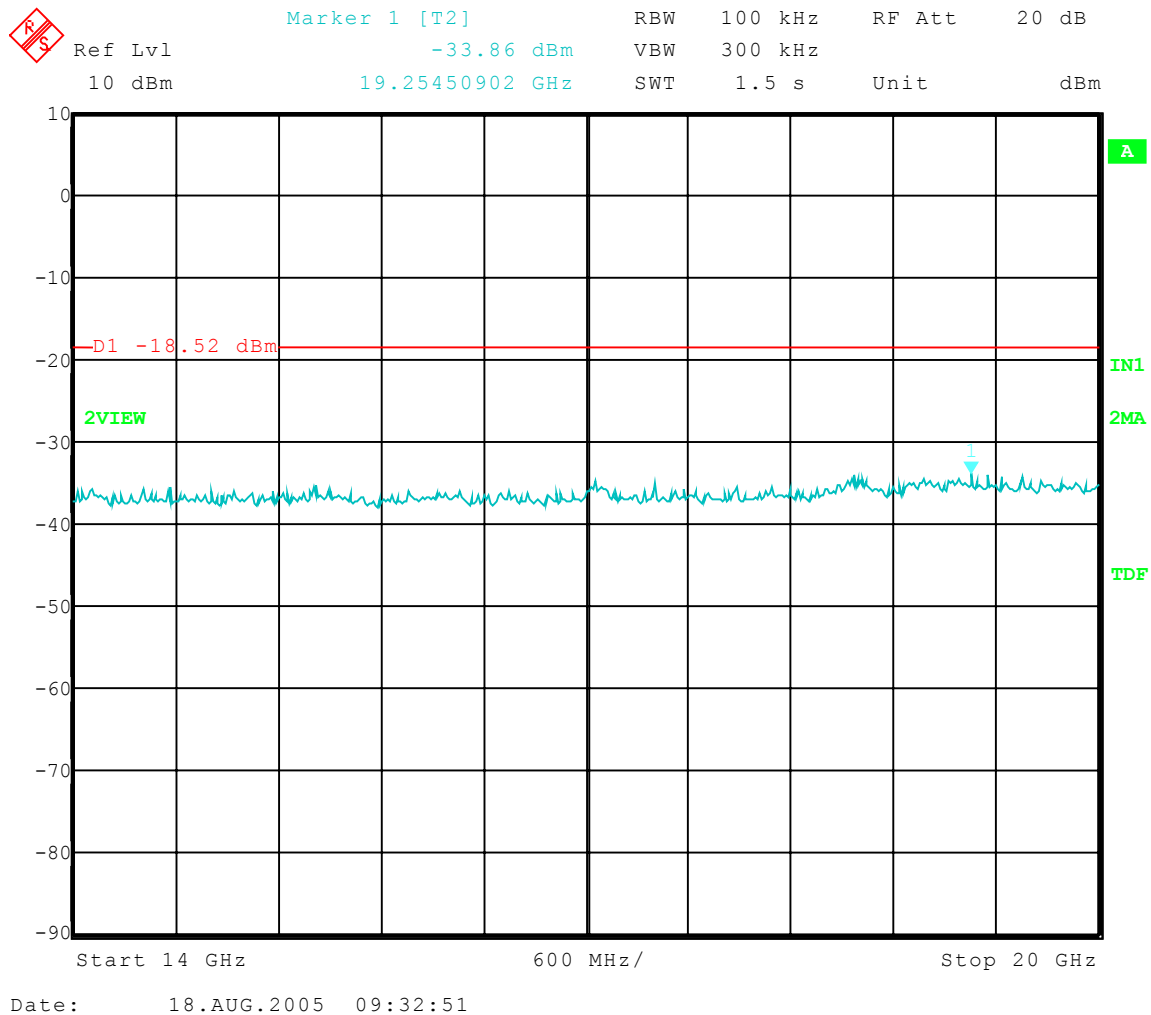


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Middle Channel** 40: Transmit – 2442 MHz
Frequency Range: 14 to 20 GHz
Limit = -18.52 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





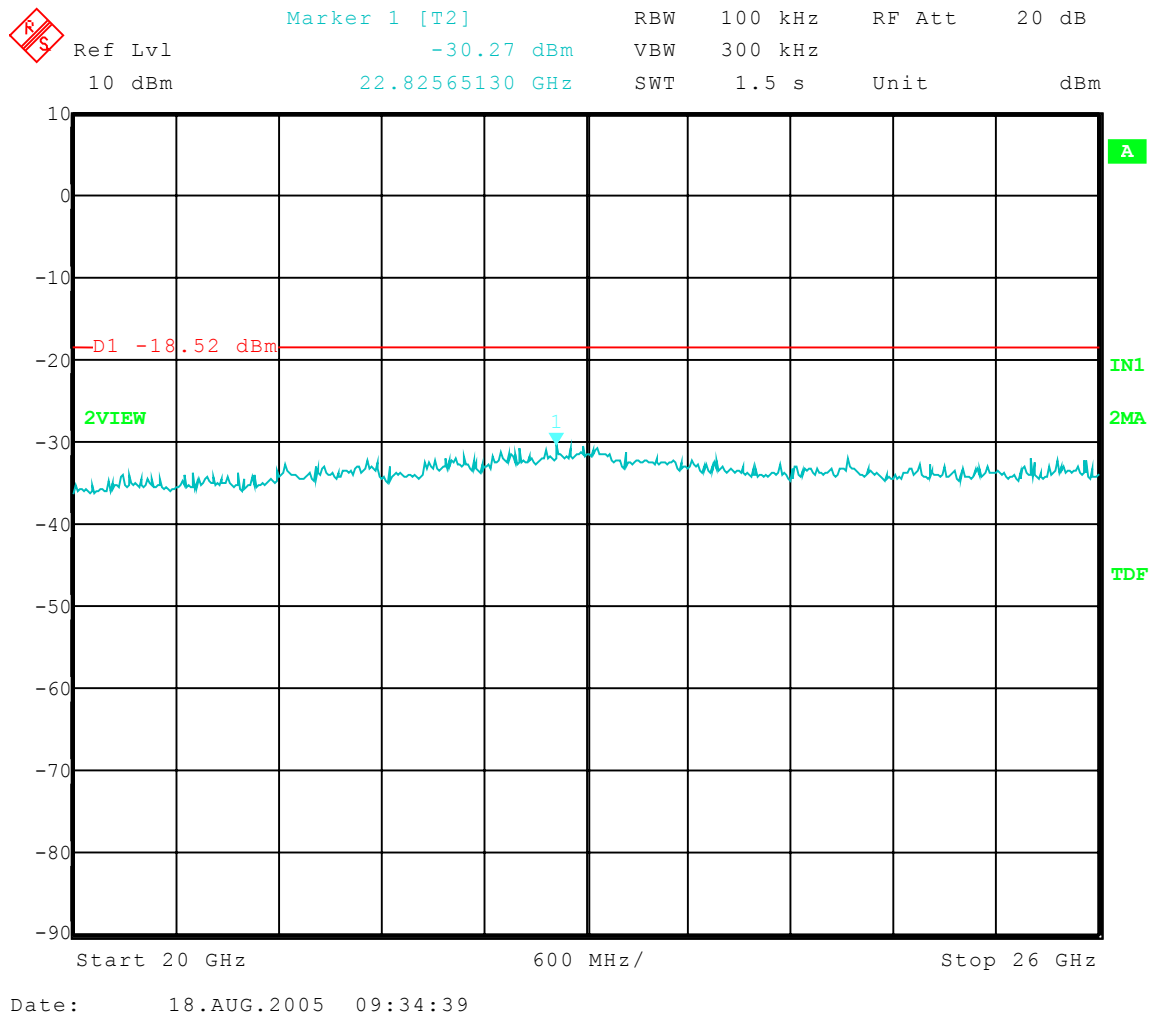
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Transmit – 2442 MHz**
Frequency Range: 20 to 26 GHz
Limit = -18.52 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





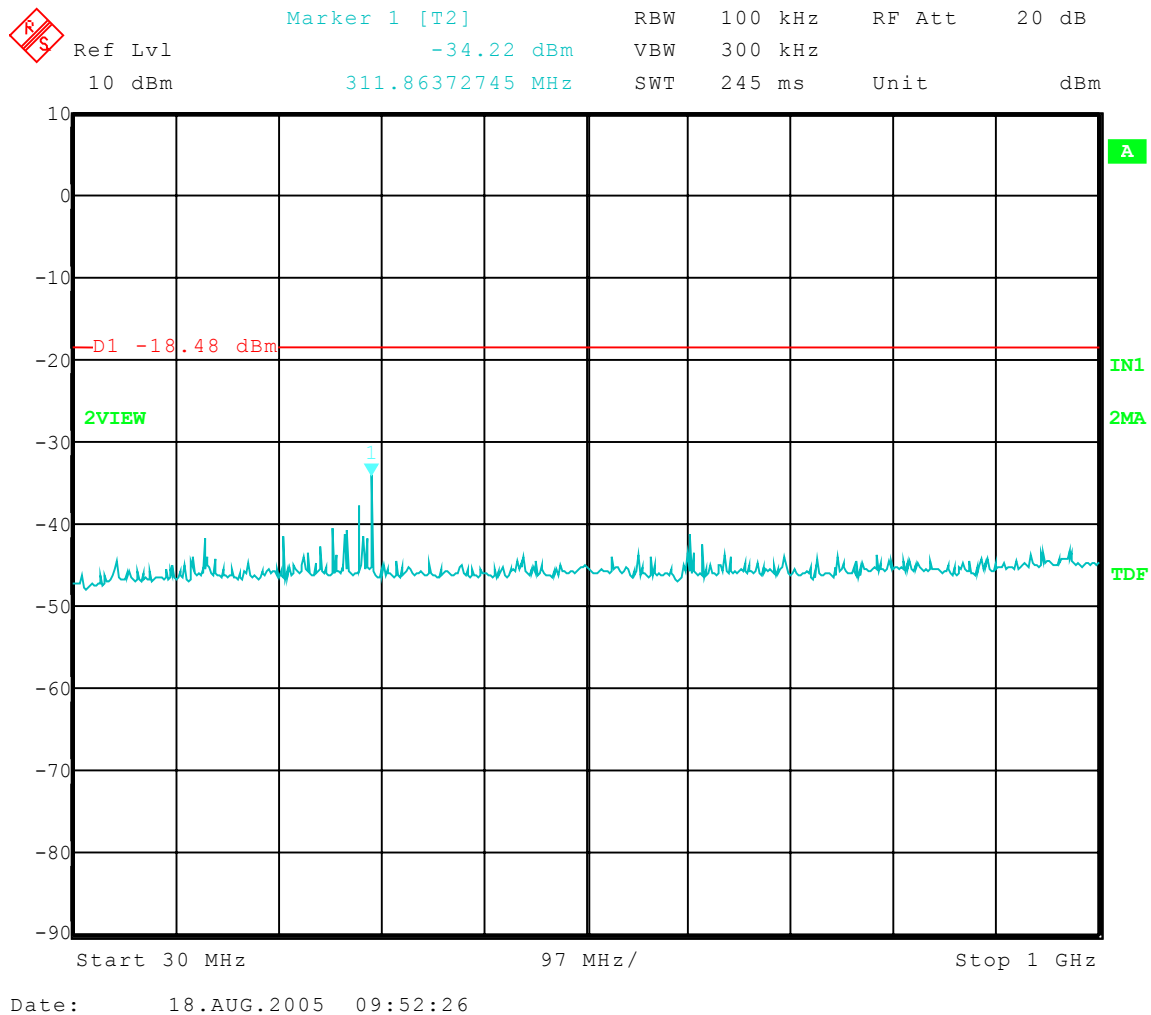
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **High Channel 78: Transmit – 2480 MHz**
Frequency Range: 30 to 1000 MHz
Limit = -18.48 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





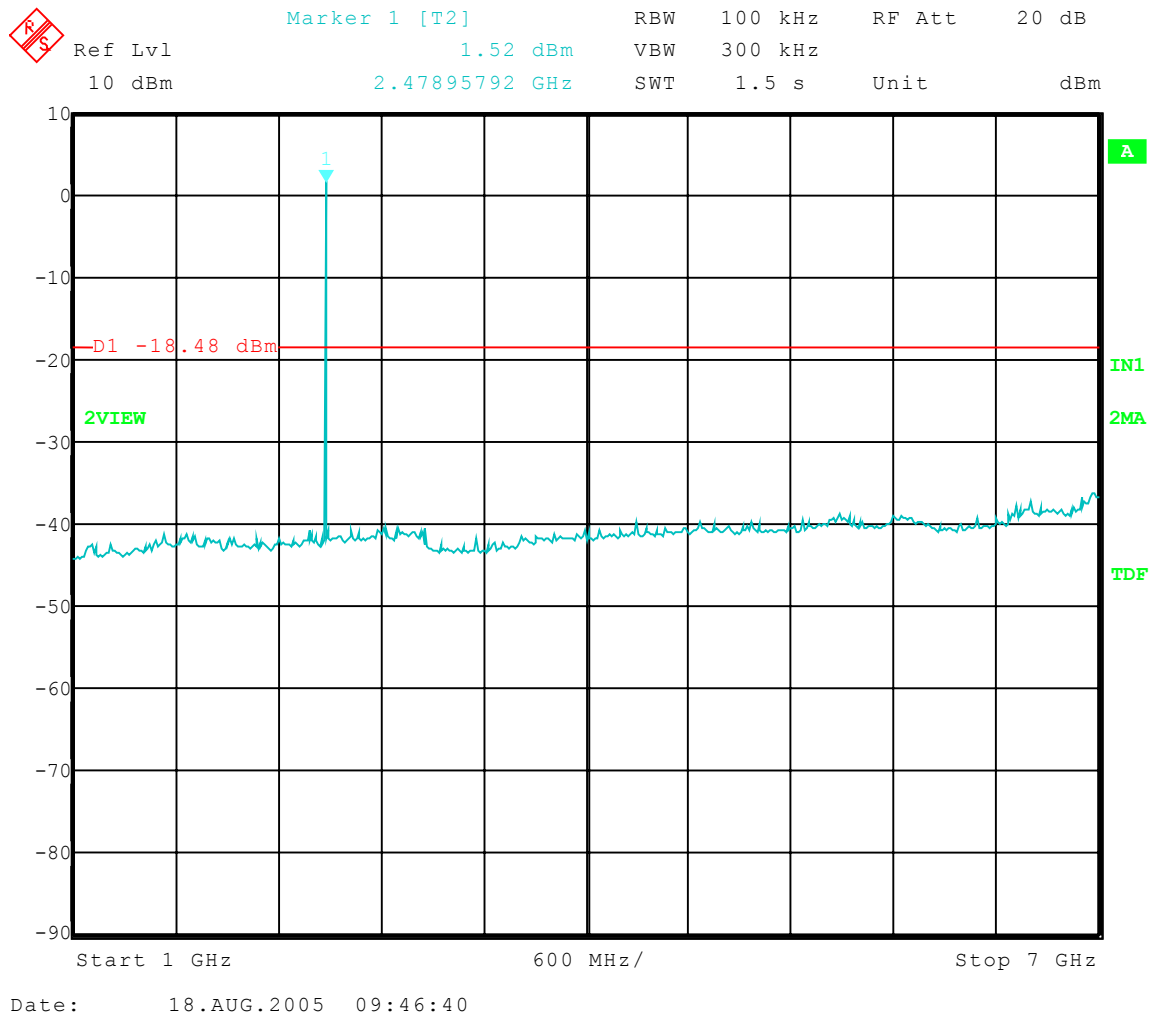
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **High Channel 78: Transmit – 2480 MHz**
Frequency Range: 1 to 7 GHz
Limit = -18.48 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





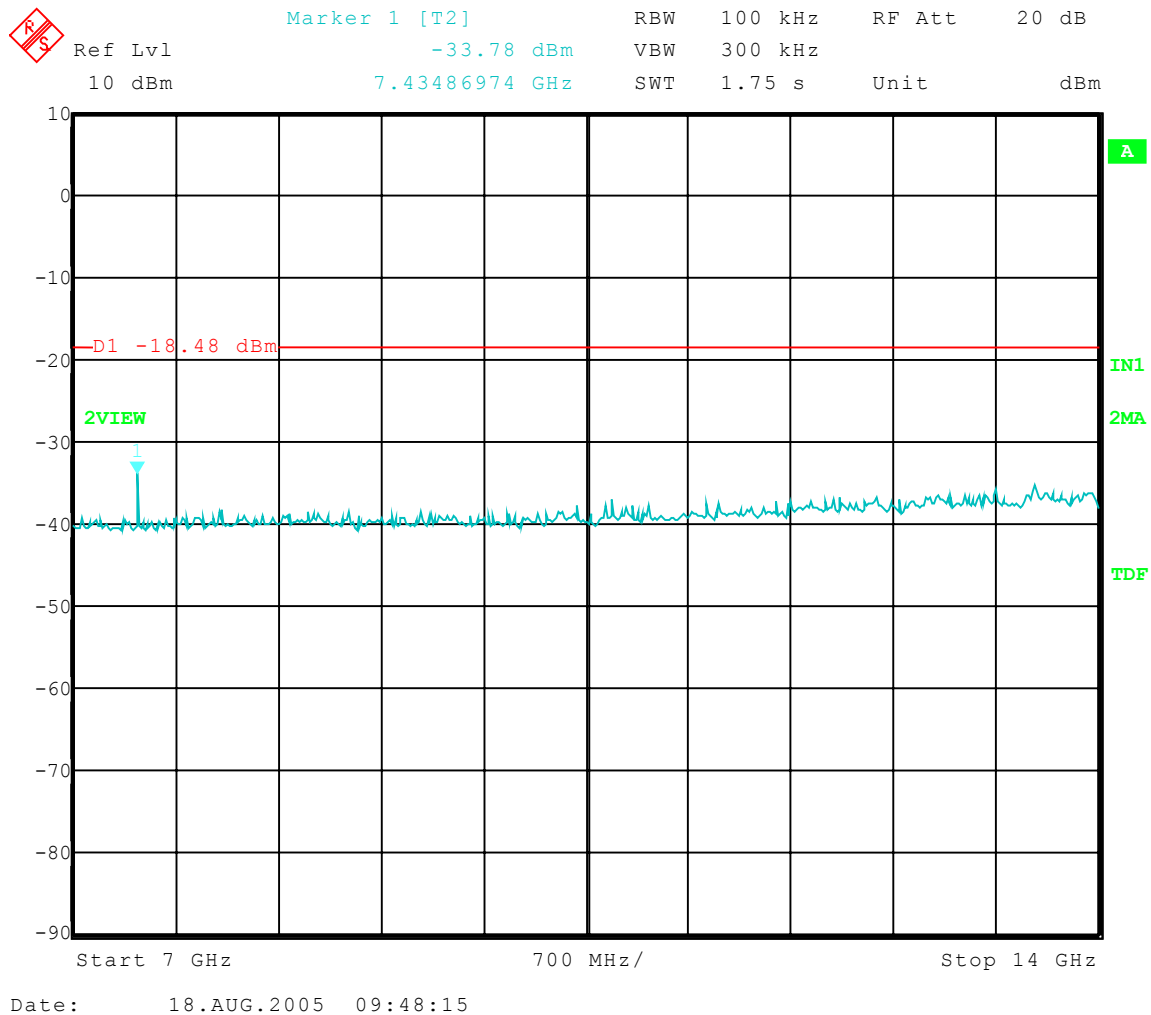
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **High Channel 78: Transmit – 2480 MHz**
Frequency Range: 7 to 14 GHz
Limit = -18.48 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





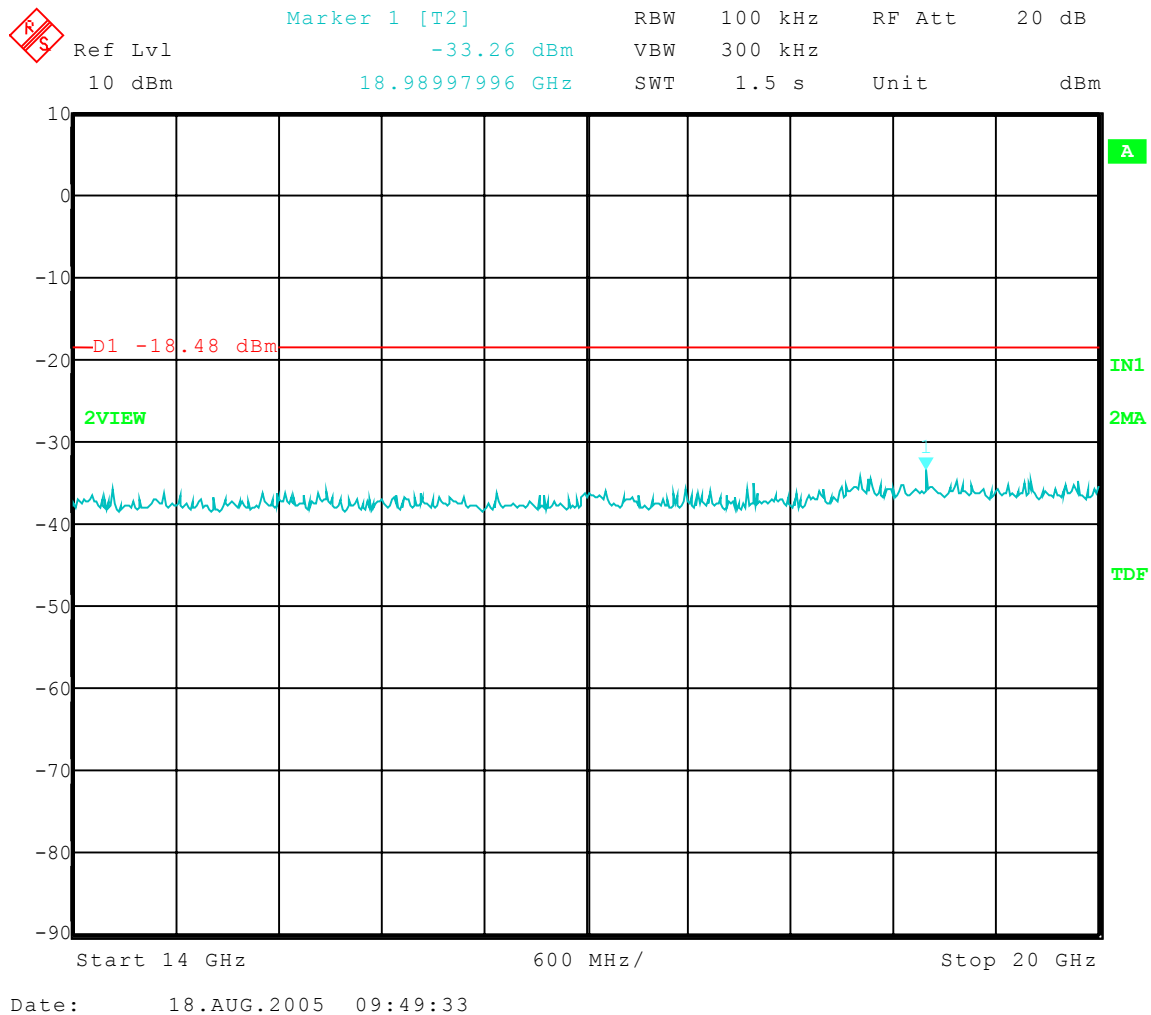
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **High Channel 78: Transmit – 2480 MHz**
Frequency Range: 14 to 20 GHz
Limit = -18.48 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





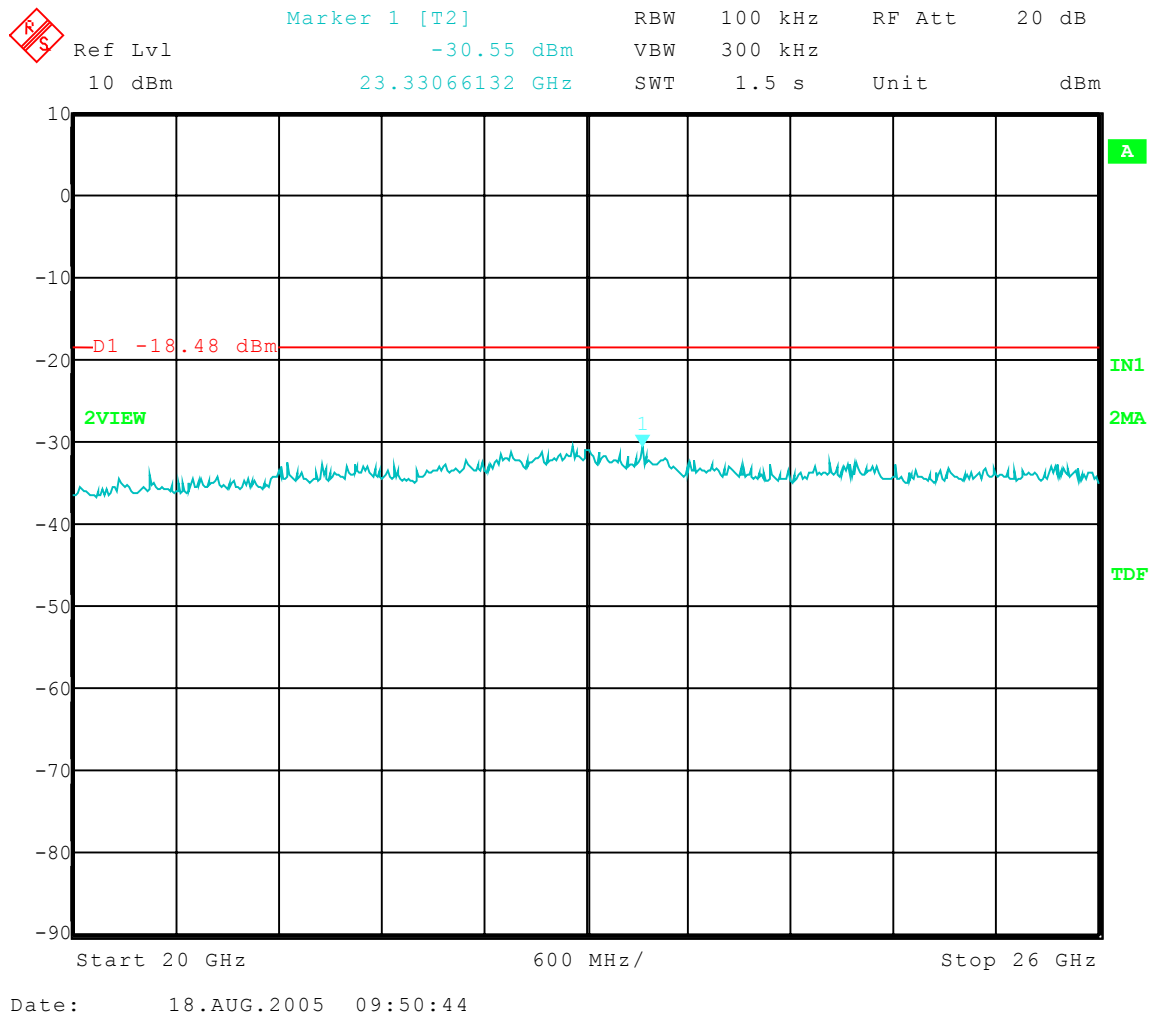
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Spurious Emissions - Conducted
Operator: Jason L.
Comment: **High Channel 78: Transmit – 2480 MHz**
Frequency Range: 20 to 26 GHz
Limit = -18.48 dBm

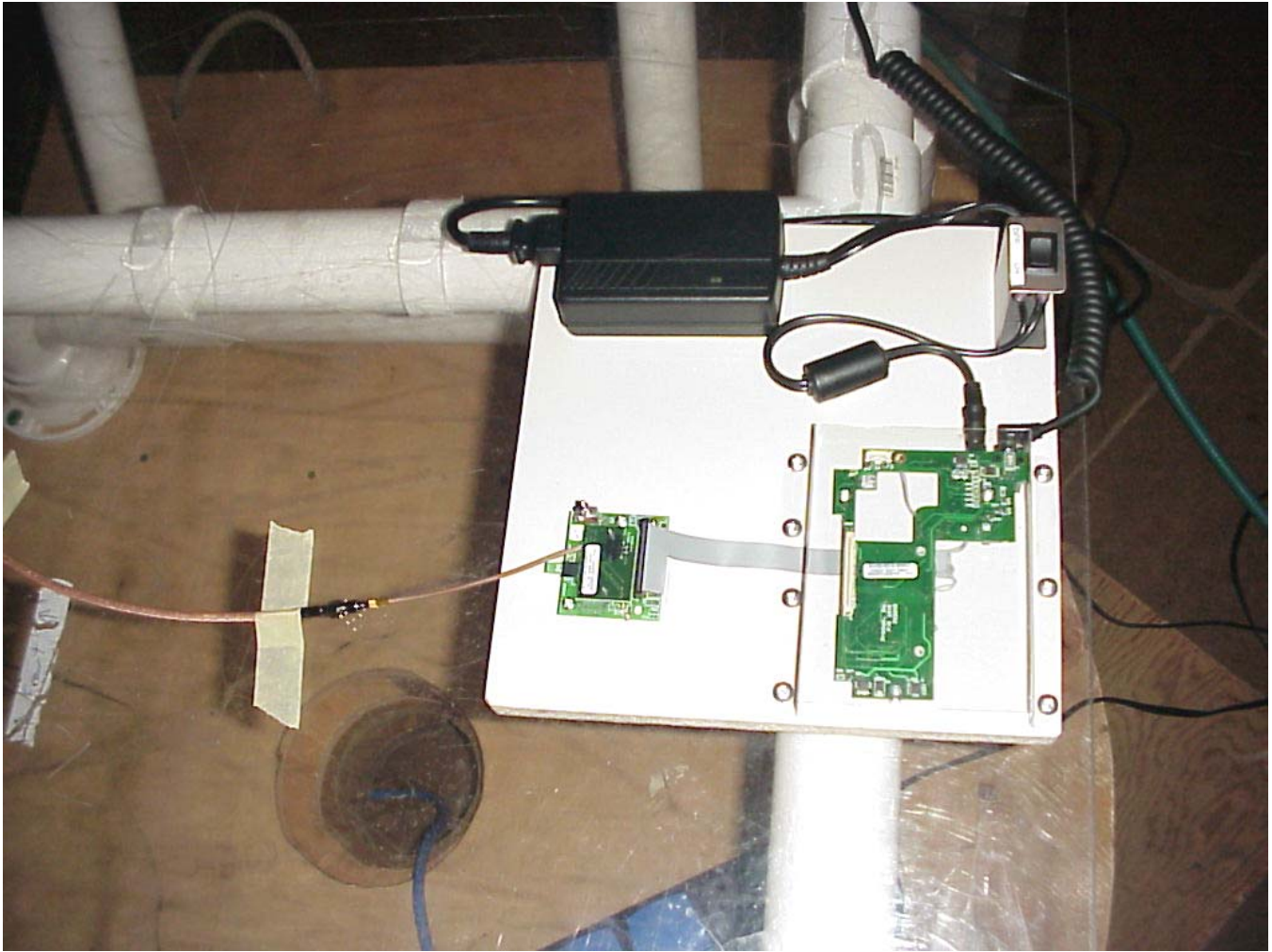
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

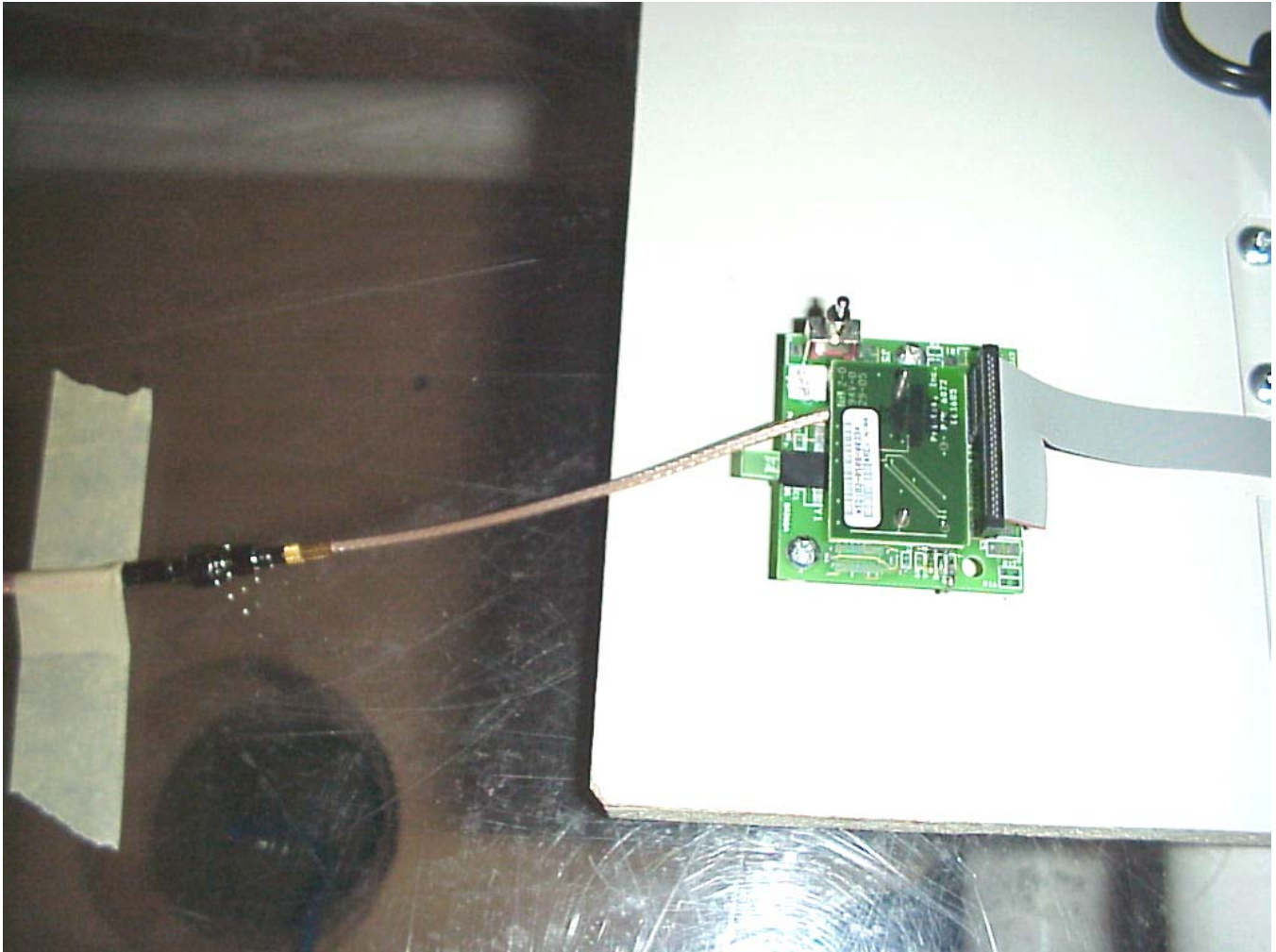
3.0 CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING



RF CONDUCTED 1

APPENDIX A

3.0 CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING



RF CONDUCTED 2



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

4.0 RESTRICTED BANDS

As stated in Section 15.205a, the fundamental emission from the PWA Bluetooth module MtPxxx shall not fall within any of the bands listed below:

Frequency in MHz	Frequency in MHz	Frequency in MHz	Frequency in GHz
.0900 to .1100	162.0125 to 167.17	2310.0 to 2390	9.30 to 9.50
.4900 to .5100	167.7200 to 173.20	2483.5 to 2500	10.60 to 12.70
2.1735 to 2.1905	240.000 to 285.00	2655.0 to 2900	13.25 to 13.40
8.362 to 8.3660	322.200 to 335.40	3260.0 to 3267	14.47 to 14.50
13.36 to 13.410	399.900 to 410.00	3332.0 to 3339	15.35 to 16.20
25.50 to 25.670	608.000 to 614.00	3345.8 to 3358	17.70 to 21.40
37.50 to 38.250	960.000 to 1240.00	3600.0 to 4400	22.01 to 23.13
73.00 to 75.500	1300.000 to 1427.00	4500.0 to 5250	23.60 to 24.00
108.00 to 121.94	1435.000 to 1626.50	5350.0 to 5450	31.20 to 31.80
123.00 to 138.00	1660.000 to 1710.00	7250.0 to 7750	36.43 to 36.50
149.90 to 150.00	1718.800 to 1722.20	8025.0 to 8500	ABOVE 38.60
156.70 to 156.90	2200.000 to 2300.00	9000.0 to 9200	

NOTE:

The noise floor within the Restricted Bands for the EMC Receiver and HP Spectrum Analyzer will typically lay 20 dB below the limit.

5.0 BAND EDGE AND RESTRICT BAND COMPLIANCE

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the attenuation below the general limits specified in 15.209 is not required.

The field strength of any **radiated emissions** which fall within the restricted bands shall not exceed the general radiated emissions limits as stated Section 15.209.

NOTE: See the following page(s) for the graph(s) made showing compliance for Band Edge and Restrict Band:



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DATA AND GRAPH(S) TAKEN SHOWING THE BAND EDGE AND RESTRICT BAND COMPLIANCE

PART 15.247(c)



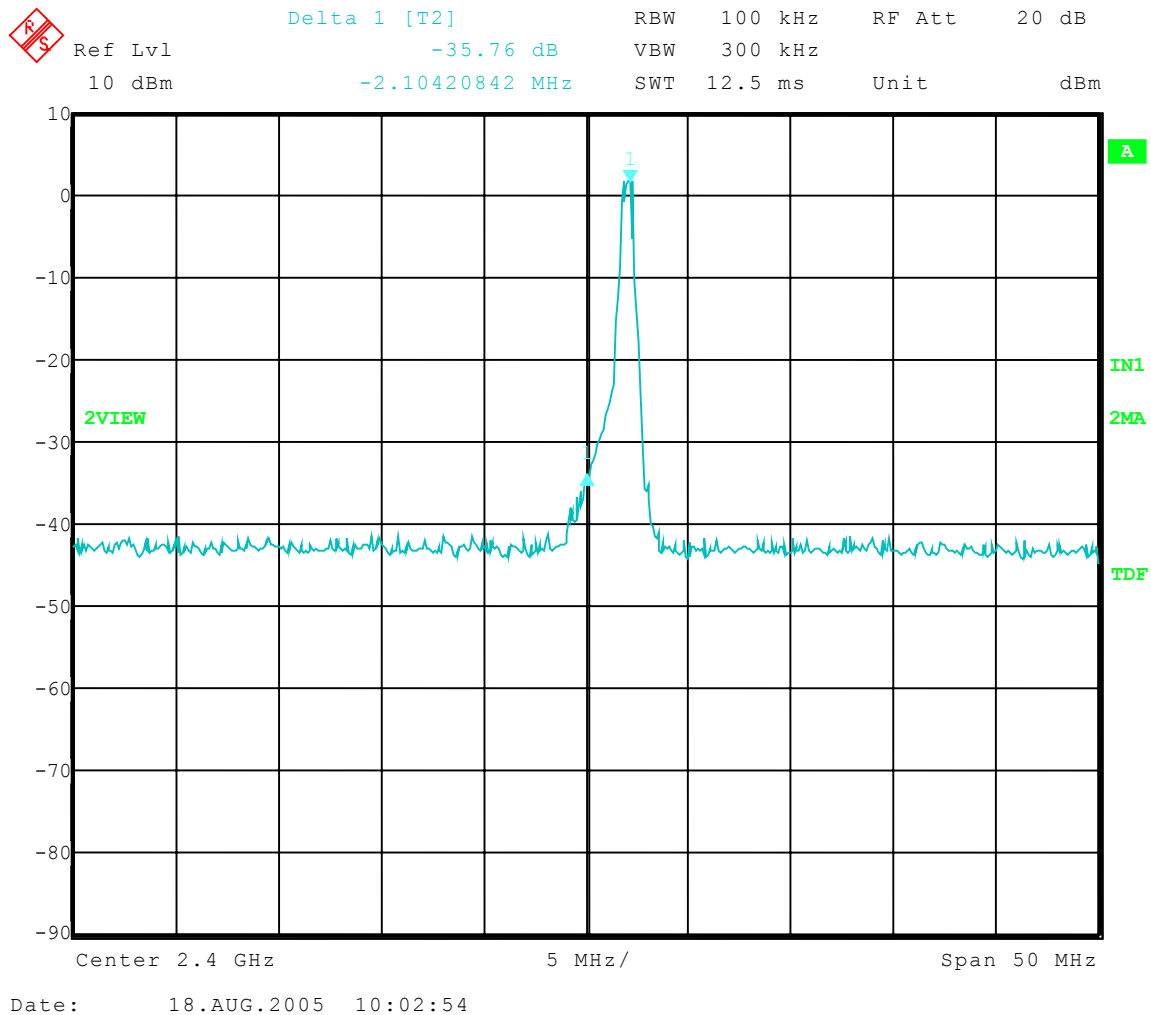
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Low Band-Edge Compliance - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Frequency – 2.402 MHz**

Band-Edge Frequency = 2.4 GHz
Band-Edge > 20 dB Below Peak In-Band Emission





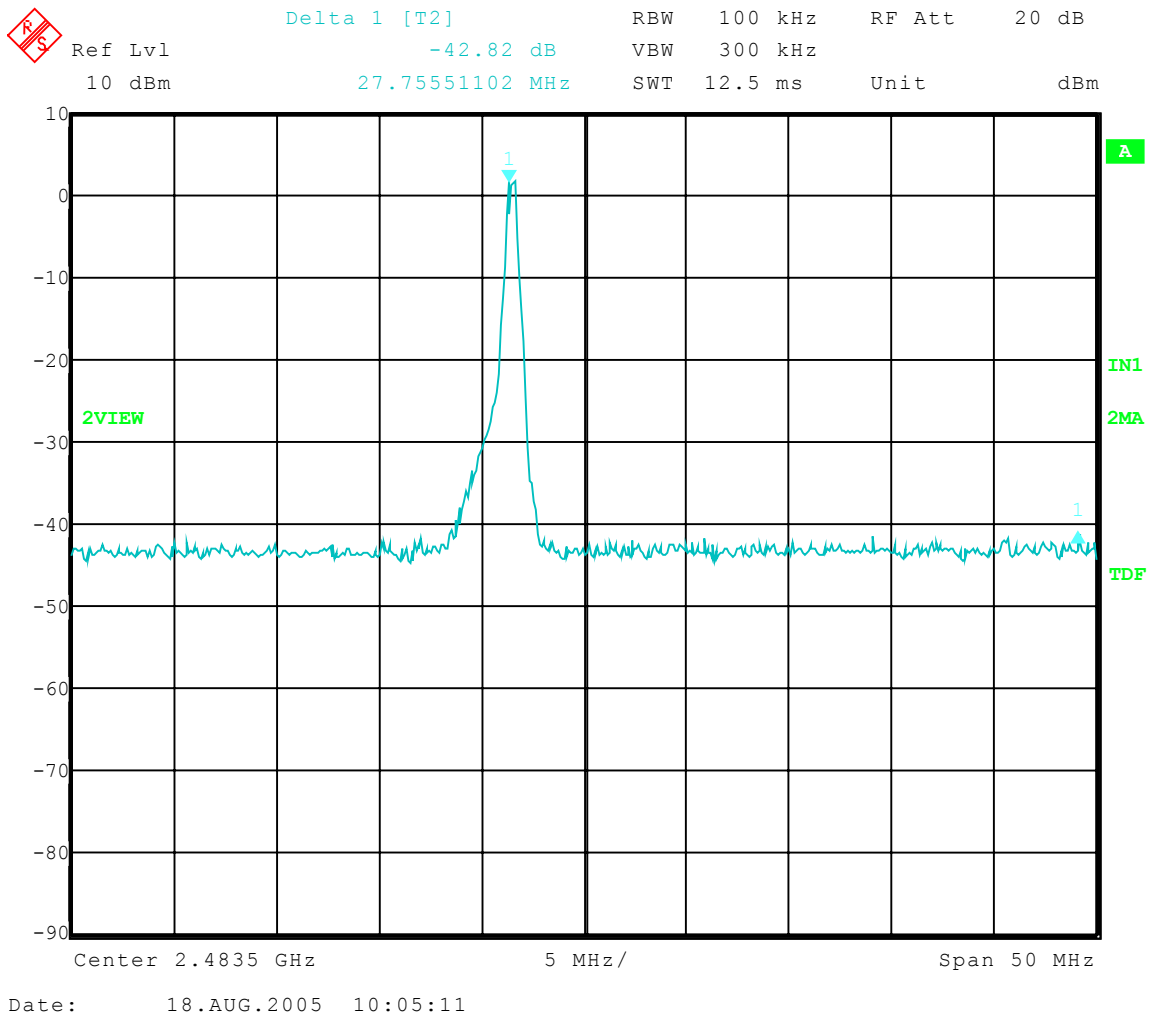
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Upper Band-Edge Compliance - Conducted
Operator: Jason L.
Comment: **High Channel 78: Frequency – 2480 MHz**

Band-Edge Frequency = 2.4835 GHz
Band-Edge > 20 dB Below Peak In-Band Emission





Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

6.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the PWA Bluetooth module MtPxxx, Model Number: 6072, are shown in tabulated and graph form. Preliminary radiation measurements were performed at a 3 meter test distance with the limits adjusted linearly when required. The frequency range from 30 MHz to over 960 MHz, depending upon the fundamental frequency as stated in Part 15.33a, was automatically scanned and plotted at various angles.

Measurements for the PWA Bluetooth module MtPxxx were made up to 13000 MHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 2480 MHz. For intentional radiators, the frequency range to be investigated is determined by the lowest radio frequency generated by the device without going below 30 MHz, up to at least the tenth harmonic of the highest fundamental frequency or 10 GHz, whichever is lower. At those frequencies where significant signals were detected, measurements were made over the entire frequency range specified in FCC Part 15, Subpart C, Section 15.247 at the open field test site, located at Genoa City, Wisconsin, FCC file number **31040/SIT**. When required, levels were extrapolated from 10 meters to 3 meters using a linear extrapolation.

All signals in the frequency range of 30 MHz to 2000 MHz were measured with a Biconical Antenna or tuned dipoles and from 200 MHz to 1000 MHz, a Log Periodic or Tuned Dipoles were used. From 1000 MHz to 25 GHz Horn Antennas were used. During the test the equipment was rotated and the antenna was raised and lowered from 1 meter to 4 meters to find the maximum level of emissions. In order to find maximum emissions, the cables were moved through all the positions the equipment would be expected to experience in the field. The EUT, peripheral equipment and cables were configured to meet the conditions in ANSI C63.4-2003, Clauses 6 & 8. Tests were made with the receive antenna(s) in both the horizontal and vertical planes of polarization. In each case, the table was rotated to find the maximum emissions.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

6.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS (CON'T)

As stated in Section 15.247(b) the allowed maximum peak output power of the transmitter shall not exceed 1 Watt. In any 100 kHz bandwidth outside these frequency bands (the power that is produced by the modulation products of the spreading sequence), the information sequence and the carrier frequency shall be either at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Attenuation below the general limits specified in 15.209 is not required.

Field strength limits are at a distance of 3 meters. The emission limits shown are based on measurement instrumentation employing an average detector.

Emissions radiated outside of the specified frequency bands, except for harmonics are attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Preliminary radiated emission measurements were performed at a 3 meter test distance. The frequency range from 30 MHz to 1000 MHz was automatically scanned and plotted at various angles.

NOTE:

All radiated emissions measurements were made at a test room temperature of **68°F** at **49%** relative humidity.



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

FIELD STRENGTH

SPURIOUS EMISSION MEASUREMENTS

PART 15.247

30 MHZ to 1000 MHZ

FCC Part 15 Class B

Electric Field Strength

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 68 degF; 49% R.H.
Test Site: DLS O.F. Site 2
Operator: Jason L
Test Specification: 120 V; 60 Hz
Comment: **Transmit and** Receive Mode
Date: 08/22/2005

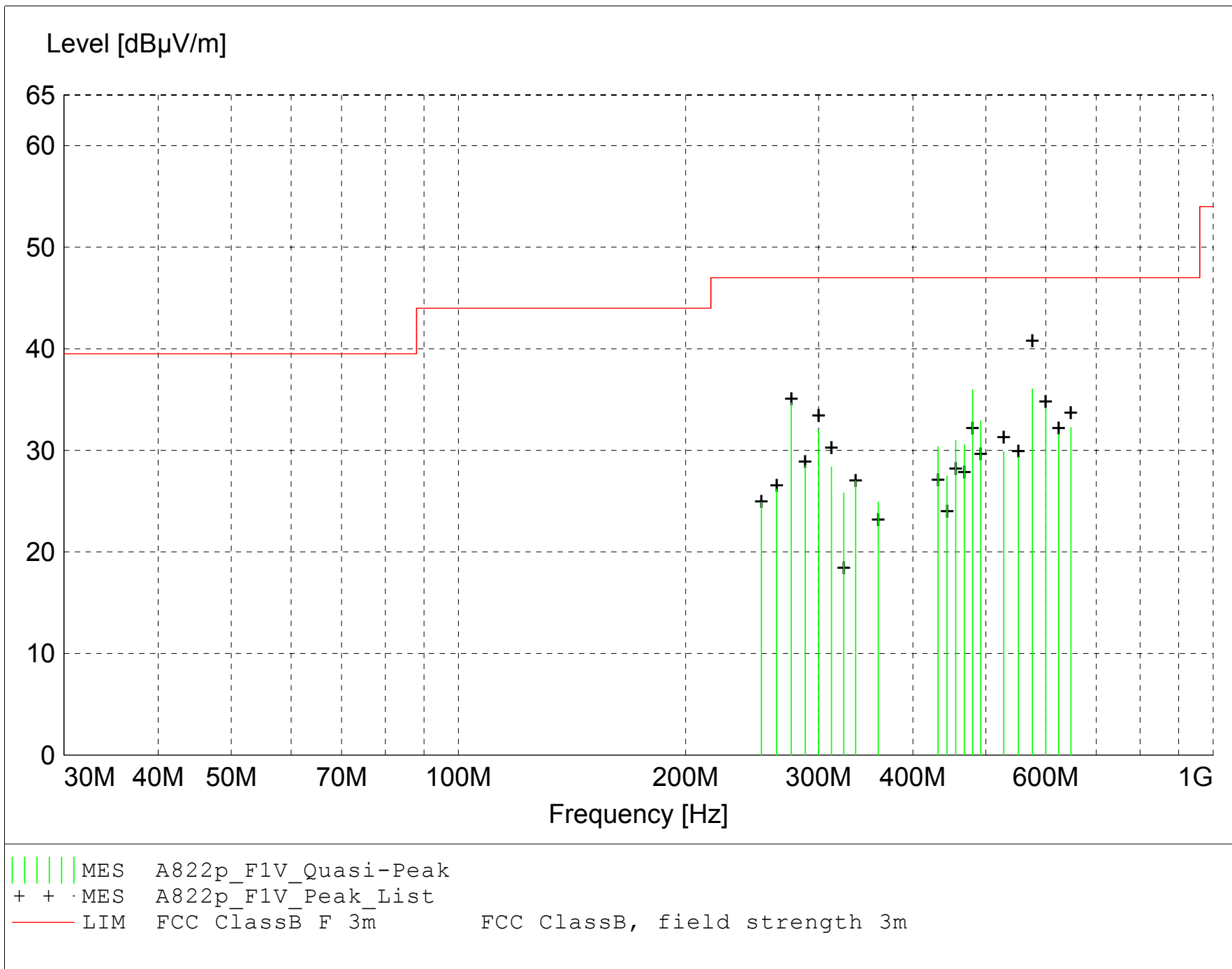
TEXT: "Site 2 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---
Biconical -- EMCO 3104C SN: 0005-4892
Log Periodic -- Electro Metrics LPA-25 SN: 1205

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/004

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "A822p_F1V_Final"

8/22/2005 1:12PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
576.000000	38.15	18.14	-20.3	36.0	47.0	11.0	1.00	90	QUASI-PEAK	None
480.000000	39.64	17.37	-21.0	36.0	47.0	11.0	1.00	180	QUASI-PEAK	None
276.000000	43.44	13.48	-22.3	34.7	47.0	12.3	1.00	225	QUASI-PEAK	None
600.000000	35.54	18.78	-20.1	34.2	47.0	12.8	1.00	90	QUASI-PEAK	None
492.000000	36.47	17.36	-20.9	32.9	47.0	14.1	1.00	180	QUASI-PEAK	None
648.000000	32.19	20.08	-20.0	32.2	47.0	14.8	1.00	90	QUASI-PEAK	None
300.000000	39.29	14.72	-22.0	32.0	47.0	15.0	1.00	325	QUASI-PEAK	None
624.010000	32.30	19.34	-20.1	31.6	47.0	15.4	1.00	90	QUASI-PEAK	None
456.000000	35.92	16.28	-21.2	31.0	47.0	16.0	1.00	180	QUASI-PEAK	None
468.000000	34.99	16.73	-21.2	30.6	47.0	16.4	1.00	180	QUASI-PEAK	None
432.000000	35.71	15.78	-21.1	30.4	47.0	16.6	1.00	170	QUASI-PEAK	None
528.000000	32.81	17.71	-20.6	29.9	47.0	17.1	1.00	200	QUASI-PEAK	None
552.000000	31.90	17.85	-20.4	29.3	47.0	17.7	1.00	60	QUASI-PEAK	None
288.000000	36.38	14.25	-22.1	28.5	47.0	18.5	1.00	270	QUASI-PEAK	None
312.000000	34.64	15.74	-22.0	28.4	47.0	18.6	1.00	125	QUASI-PEAK	None
444.000000	32.65	16.04	-21.2	27.5	47.0	19.5	1.00	200	QUASI-PEAK	None
336.000000	33.98	14.91	-21.9	27.0	47.0	20.0	1.00	180	QUASI-PEAK	None
264.000000	35.58	12.83	-22.2	26.2	47.0	20.8	1.00	325	QUASI-PEAK	None
324.000000	32.64	15.09	-21.9	25.8	47.0	21.2	1.00	45	QUASI-PEAK	None
360.000000	31.57	14.78	-21.4	24.9	47.0	22.1	1.00	180	QUASI-PEAK	None
252.000000	34.42	12.54	-22.1	24.9	47.0	22.1	1.00	270	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 68 degF; 49% R.H.
Test Site: DLS O.F. Site 2
Operator: Jason L
Test Specification: 120 V; 60 Hz
Comment: **Transmit and** Receive Mode
Date: 08/22/2005

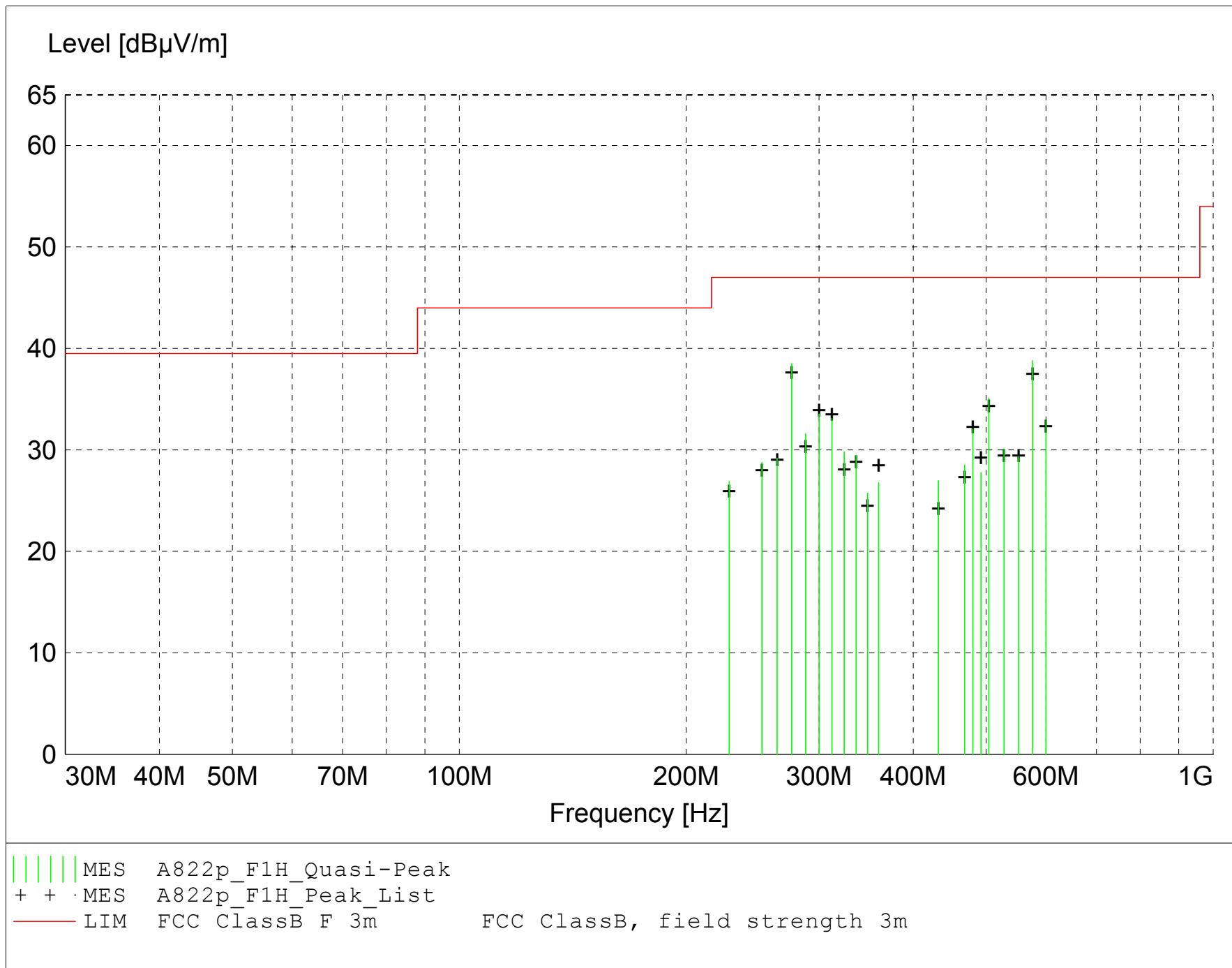
TEXT: "Site 2 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---
Biconical -- EMCO 3104C SN: 0005-4892
Log Periodic -- Electro Metrics LPA-25 SN: 1205

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/004

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "A822p_F1H_Final"

8/22/2005 12:56PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
576.000000	40.90	18.14	-20.3	38.8	47.0	8.2	1.00	60	QUASI-PEAK	None
276.000000	47.29	13.48	-22.3	38.5	47.0	8.5	1.00	90	QUASI-PEAK	None
504.000000	38.06	17.87	-20.8	35.1	47.0	11.9	1.00	90	QUASI-PEAK	None
300.000000	40.83	14.72	-22.0	33.5	47.0	13.5	1.00	90	QUASI-PEAK	None
312.000000	39.37	15.74	-22.0	33.1	47.0	13.9	1.00	270	QUASI-PEAK	None
600.000000	34.28	18.78	-20.1	32.9	47.0	14.1	1.50	60	QUASI-PEAK	None
480.000000	35.71	17.37	-21.0	32.1	47.0	14.9	1.00	90	QUASI-PEAK	None
288.000000	39.46	14.25	-22.1	31.6	47.0	15.4	1.00	90	QUASI-PEAK	None
528.000000	33.03	17.71	-20.6	30.1	47.0	16.9	1.70	60	QUASI-PEAK	None
324.000000	36.65	15.09	-21.9	29.8	47.0	17.2	1.00	125	QUASI-PEAK	None
336.000000	36.43	14.91	-21.9	29.5	47.0	17.5	1.00	200	QUASI-PEAK	None
552.000000	31.92	17.85	-20.4	29.4	47.0	17.6	2.00	90	QUASI-PEAK	None
264.000000	38.59	12.83	-22.2	29.2	47.0	17.8	1.00	90	QUASI-PEAK	None
252.000000	38.27	12.54	-22.1	28.8	47.0	18.2	1.00	90	QUASI-PEAK	None
468.000000	32.97	16.73	-21.2	28.5	47.0	18.5	1.00	90	QUASI-PEAK	None
492.000000	31.32	17.36	-20.9	27.8	47.0	19.2	1.00	90	QUASI-PEAK	None
432.000000	32.32	15.78	-21.1	27.0	47.0	20.0	1.00	90	QUASI-PEAK	None
228.000000	37.66	11.58	-22.3	26.9	47.0	20.1	1.00	90	QUASI-PEAK	None
360.000000	33.42	14.78	-21.4	26.8	47.0	20.2	1.00	270	QUASI-PEAK	None
348.000000	32.46	14.93	-21.6	25.8	47.0	21.2	1.00	90	QUASI-PEAK	None



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

FIELD STRENGTH

SPURIOUS EMISSION MEASUREMENTS

PART 15.247

1 GHZ to 25 GHz



Company: Printek, Inc.
 Model Tested: 6072
 Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Radiated Fundamental and Spurious Emissions – 1 GHz to 25 GHz

Tested at a 3 Meter Distance

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 72 deg F; 44% R.H.
Test Site: Site 2
Operator: Jason Lauer
Test Specification: FCC Part 15.247 and FCC Part 15.205
Comment: Continuous Transmit – **Low Channel 0:** Frequency – 2402 MHz
Date: 08/18/2005

Notes: (1) The EUT was measured in a tabletop set-up.
 (2) All other emissions at least 20 dB under the limit.

Frequency (MHz)	Measurement Detector	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Height (m)	EUT Angle (deg)	Comment
4804	Max Peak	Vert	67.98	32.72	-33.1		67.6	74.00	6.4	1.00	270	Res. Band
4804	Average	Vert	65.07	32.72	-33.1	-41.68	23.0	54.00	31.0	1.00	270	Res. Band
4804	Max Peak	Horz	67.49	32.72	-33.1		67.1	74.00	6.9	1.00	300	Res. Band
4804	Average	Horz	64.39	32.72	-33.1	-41.68	22.3	54.00	31.7	1.00	300	Res. Band
7206	Max Peak	Vert	49.42	35.52	-31.7		53.2	74.00	20.8	1.00	270	Harmonic
7206	Average	Vert	36.06	35.52	-31.7	-41.68	-1.8	54.00	55.8	1.00	270	Harmonic
7206	Max Peak	Horz	54.54	35.52	-31.7		58.3	74.00	15.7	1.00	300	Harmonic
7206	Average	Horz	36.76	35.52	-31.7	-41.68	-1.1	54.00	55.1	1.00	300	Harmonic
9608	Max Peak	Vert	53.33	37.73	-32.0		59.1	74.00	14.9	1.00	300	Harmonic
9608	Average	Vert	41.63	37.73	-32.0	-41.68	5.68	54.00	48.32	1.00	300	Harmonic
9608	Max Peak	Horz	52.67	37.73	-32.0		58.4	74.00	15.6	1.00	270	Harmonic
9608	Average	Horz	41.51	37.73	-32.00	-41.68	5.56	54.00	48.4	1.00	270	Harmonic



Company: Printek, Inc.
 Model Tested: 6072
 Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Radiated Fundamental and Spurious Emissions – 1 GHz to 25 GHz

Tested at a 3 Meter Distance

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 72 deg F; 44% R.H.
Test Site: Site 2
Operator: Jason Lauer
Test Specification: FCC Part 15.247 and FCC Part 15.205
Comment: Continuous Transmit – **Middle Channel** 40: Frequency – 2442 MHz
Date: 08/18/2005

Notes: (1) The EUT was measured in a tabletop set-up.
 (2) All other emissions at least 20 dB under the limit.

Frequency (MHz)	Measurement Detector	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Height (m)	EUT Angle (deg)	Comment
4884	Max Peak	Vert	67.98	32.89	-32.9		67.9	74.00	6.1	1.00	270	Res. Band
4884	Average	Vert	65.13	32.89	-32.9	-41.68	23.4	54.00	30.6	1.00	270	Res. Band
4884	Max Peak	Horz	66.74	32.89	-32.9		66.7	74.00	7.3	1.00	300	Res. Band
4884	Average	Horz	63.70	32.89	-32.9	-41.68	22.0	54.00	32.0	1.00	300	Res. Band
7326	Max Peak	Vert	49.55	35.79	-31.6		53.7	74.00	20.3	1.00	270	Harmonic
7326	Average	Vert	36.69	35.79	-31.6	-41.68	-0.8	54.00	54.8	1.00	270	Harmonic
7326	Max Peak	Horz	53.20	35.79	-31.6		57.3	74.00	16.7	1.00	330	Harmonic
7326	Average	Horz	37.27	35.79	-31.6	-41.68	-0.2	54.00	54.2	1.00	330	Harmonic
9768	Max Peak	Vert	52.27	37.88	-31.7		58.4	74.00	15.6	1.00	300	Harmonic
9768	Average	Vert	40.98	37.88	-31.7	-41.68	5.5	54.00	48.5	1.00	300	Harmonic
9768	Max Peak	Horz	53.07	37.88	-31.7		59.2	74.00	14.8	1.00	270	Harmonic
9768	Average	Horz	43.17	37.88	-31.7	-41.68	7.7	54.00	46.3	1.00	270	Harmonic



Company: Printek, Inc.
 Model Tested: 6072
 Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Radiated Fundamental and Spurious Emissions – 1 GHz to 25 GHz

Tested at a 3 Meter Distance

EUT: 6072 RF Module
Manufacturer: Printek, Inc.
Operating Condition: 72 deg F; 44% R.H.
Test Site: Site 2
Operator: Jason Lauer
Test Specification: FCC Part 15.247 and FCC Part 15.205
Comment: Continuous Transmit – **High Channel** 78: Frequency – 2480 MHz
Date: 08/18/2005

Notes: (1) The EUT was measured in a tabletop set-up.
 (2) All other emissions at least 20 dB under the limit.

Frequency (MHz)	Measurement Detector	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Height (m)	EUT Angle (deg)	Comment
4960	Max Peak	Vert	67.49	33.06	-32.7		67.8	74.00	6.2	1.00	225	Res. Band
4960	Average	Vert	64.59	33.06	-32.7	-41.68	23.3	54.00	30.7	1.00	225	Res. Band
4960	Max Peak	Horz	66.61	33.06	-32.7		66.9	74.00	7.1	1.00	270	Res. Band
4960	Average	Horz	63.64	33.06	-32.7	-41.68	22.3	54.00	31.7	1.00	270	Res. Band
7440	Max Peak	Vert	49.30	36.04	-31.7		53.6	74.00	20.4	1.00	270	Harmonic
7440	Average	Vert	36.27	36.04	-31.7	-41.68	-1.1	54.00	55.1	1.00	270	Harmonic
7440	Max Peak	Horz	49.68	36.04	-31.7		54.0	74.00	20.0	1.00	270	Harmonic
7440	Average	Horz	36.33	36.04	-31.7	-41.68	-1.0	54.00	55.0	1.00	270	Harmonic
9920	Max Peak	Vert	52.53	38.01	-31.5		59.1	74.00	14.9	1.00	270	Harmonic
9920	Average	Vert	40.88	38.01	-31.5	-41.68	5.7	54.00	48.3	1.00	270	Harmonic
9920	Max Peak	Horz	52.13	38.01	-31.5		58.7	74.00	15.3	1.00	270	Harmonic
9920	Average	Horz	41.14	38.01	-31.5	-41.68	6.0	54.00	48.0	1.00	270	Harmonic



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

6 dB BANDWIDTH GRAPHS

PART 15.247



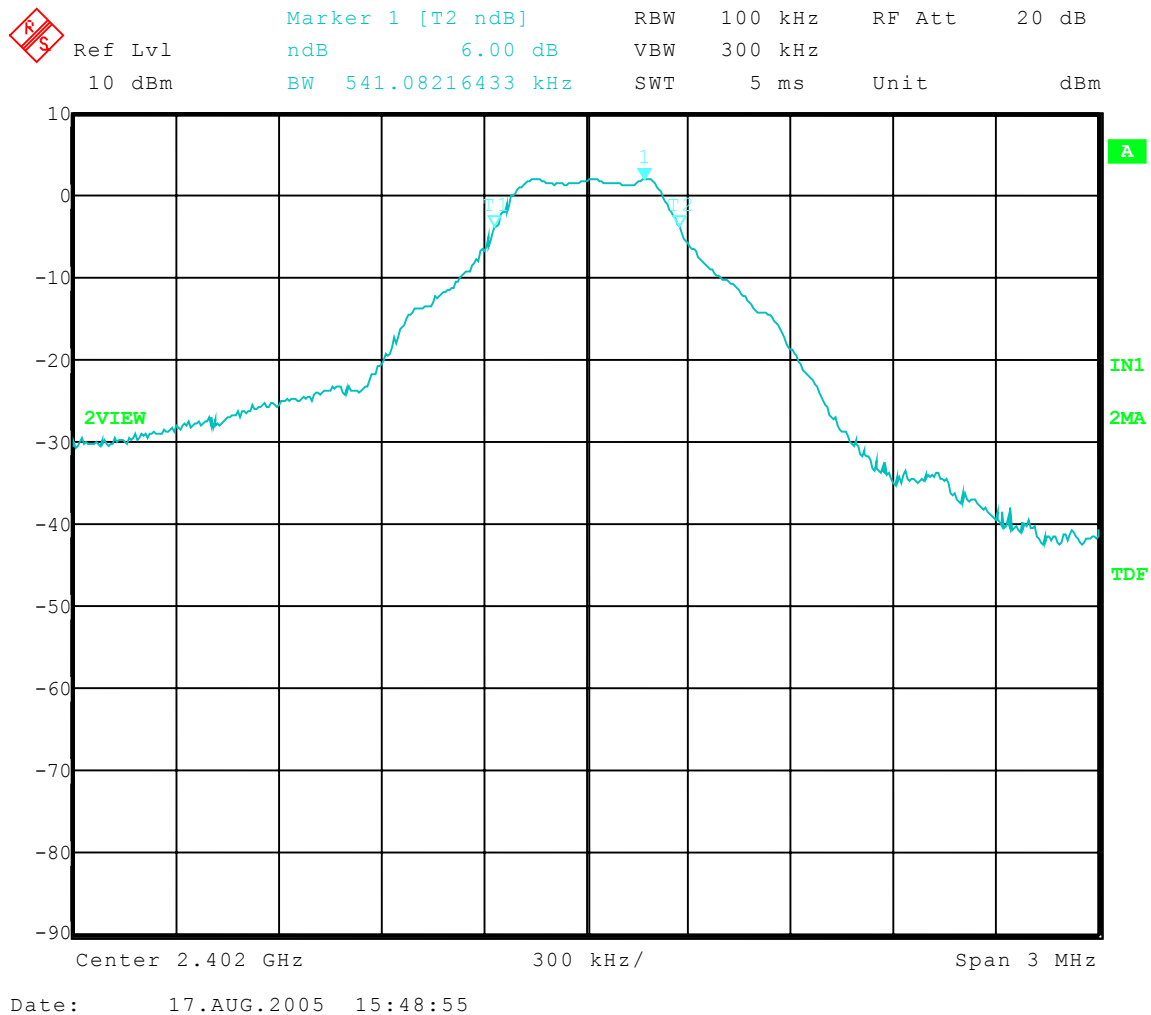
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: 6 dB Bandwidth - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Frequency – 2402 MHz**

6 dB Bandwidth = 541.08 kHz





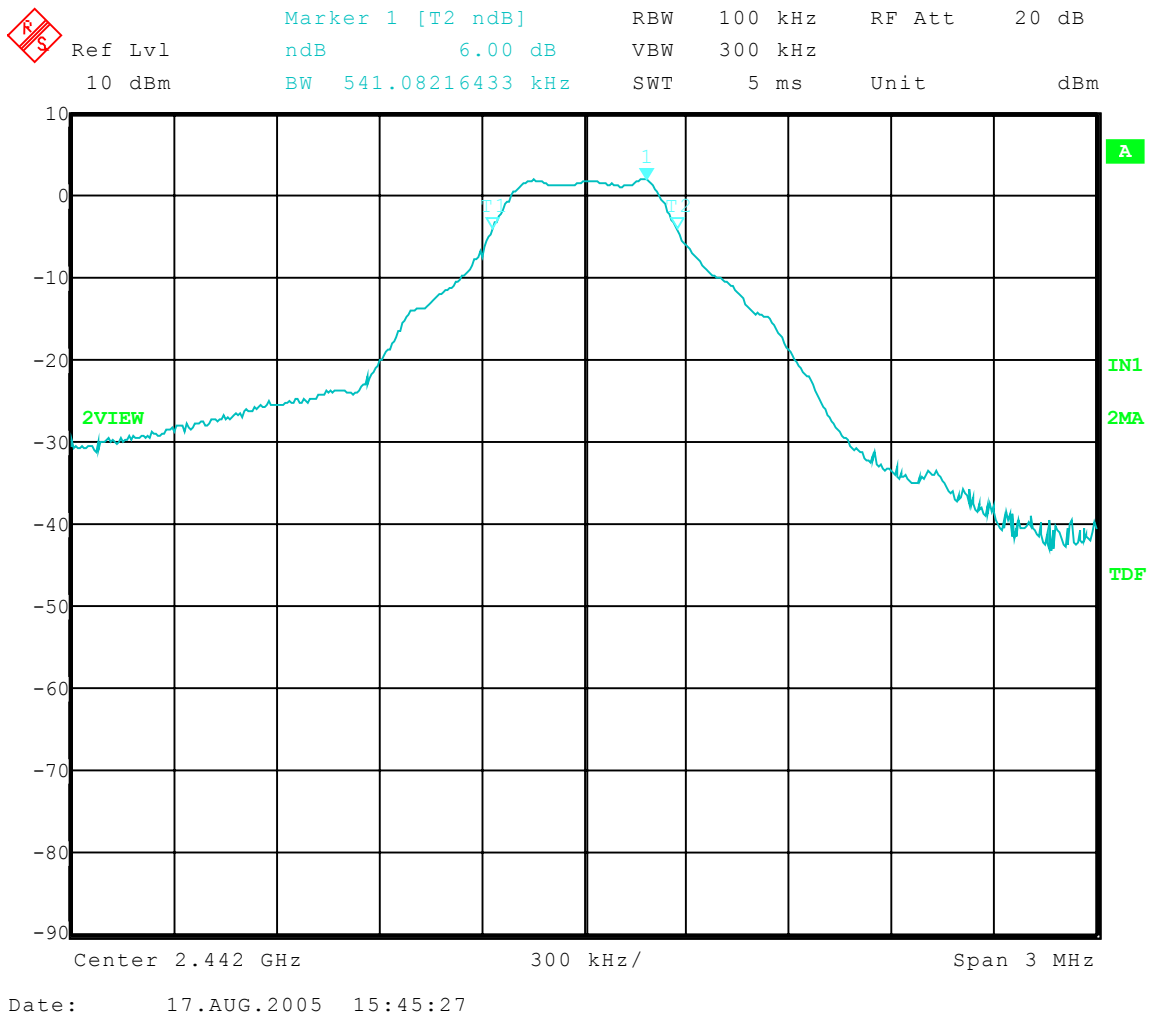
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: 6 dB Bandwidth - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Frequency – 2442 MHz**

6 dB Bandwidth = 541.08 kHz





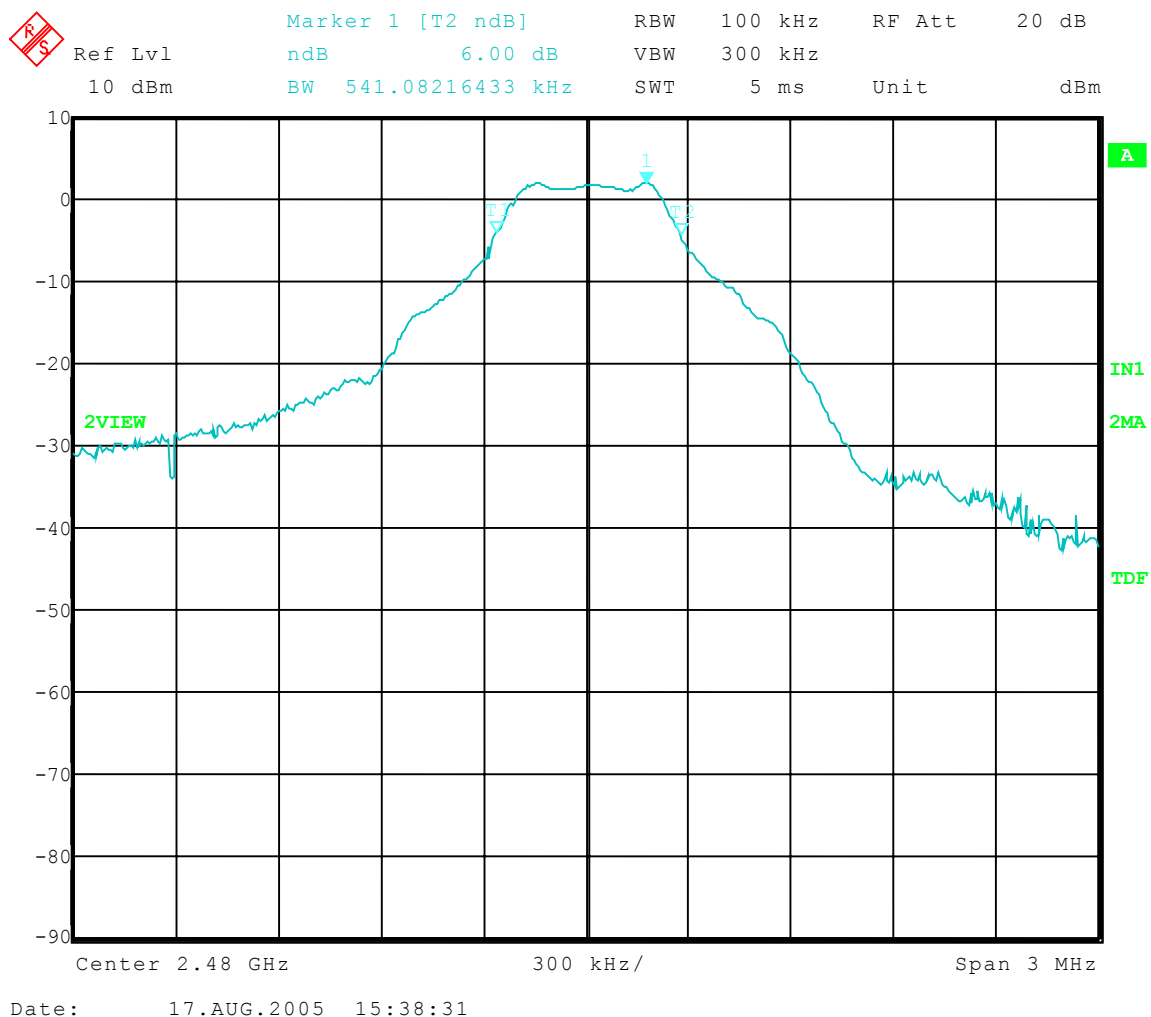
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: 6 dB Bandwidth - Conducted
Operator: Jason L.
Comment: **High Channel 78: Frequency – 2480 MHz**

6 dB Bandwidth = 541.08 kHz





Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247



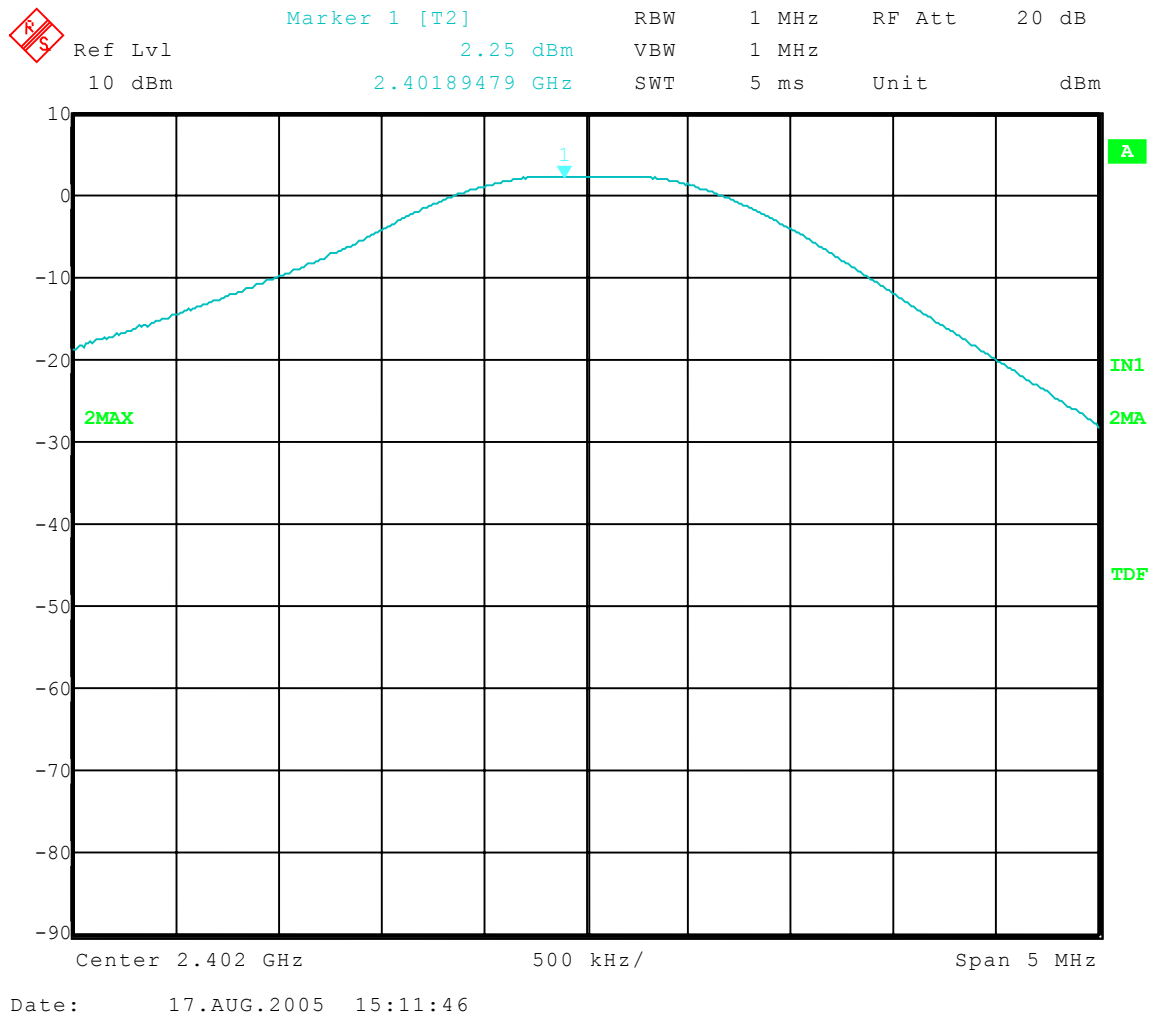
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Output Power - Conducted
Operator: Jason L.
Comment: **Low Channel 0:** Frequency – 2402 MHz

Peak Output Power = 2.25 dBm = 1.68 mW





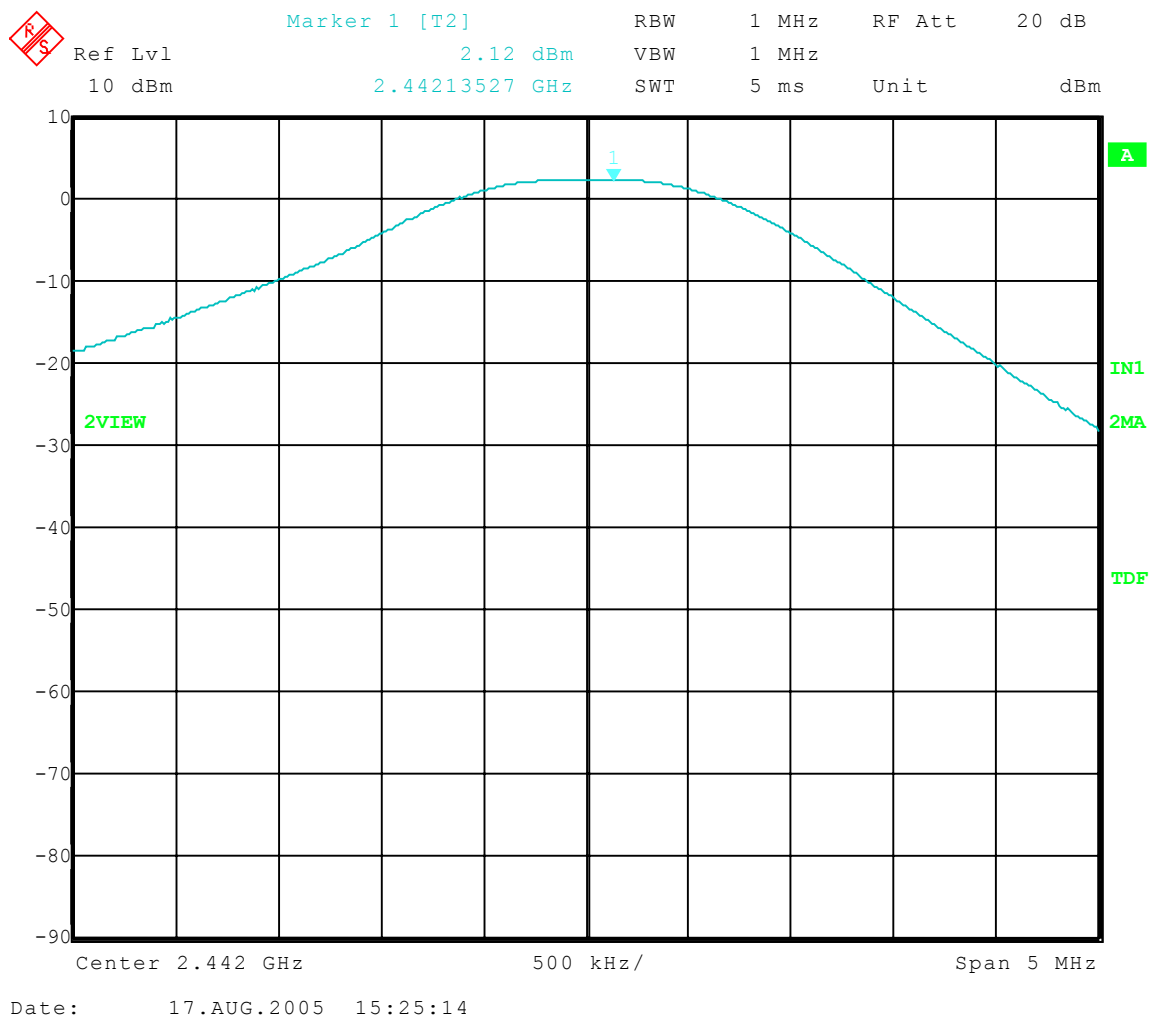
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Output Power - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Frequency – 2442 MHz**

Peak Output Power = 2.12 dBm = 1.63 mW





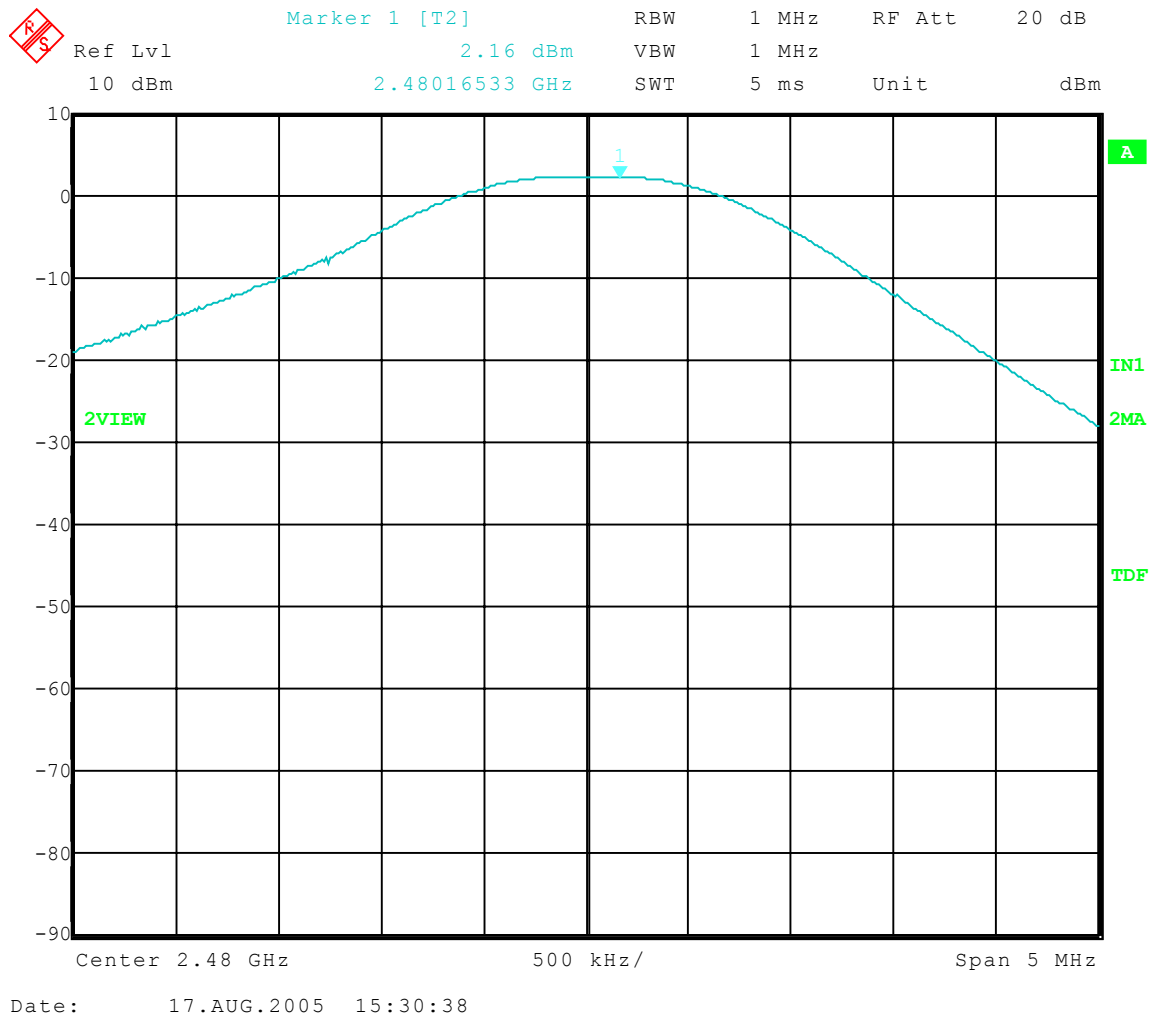
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-17-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Output Power - Conducted
Operator: Jason L.
Comment: **High Channel 78: Frequency – 2480 MHz**

Peak Output Power = 2.16 dBm = 1.64 mW





Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

PEAK POWER SPECTRAL DENSITY GRAPHS

PART 15.247



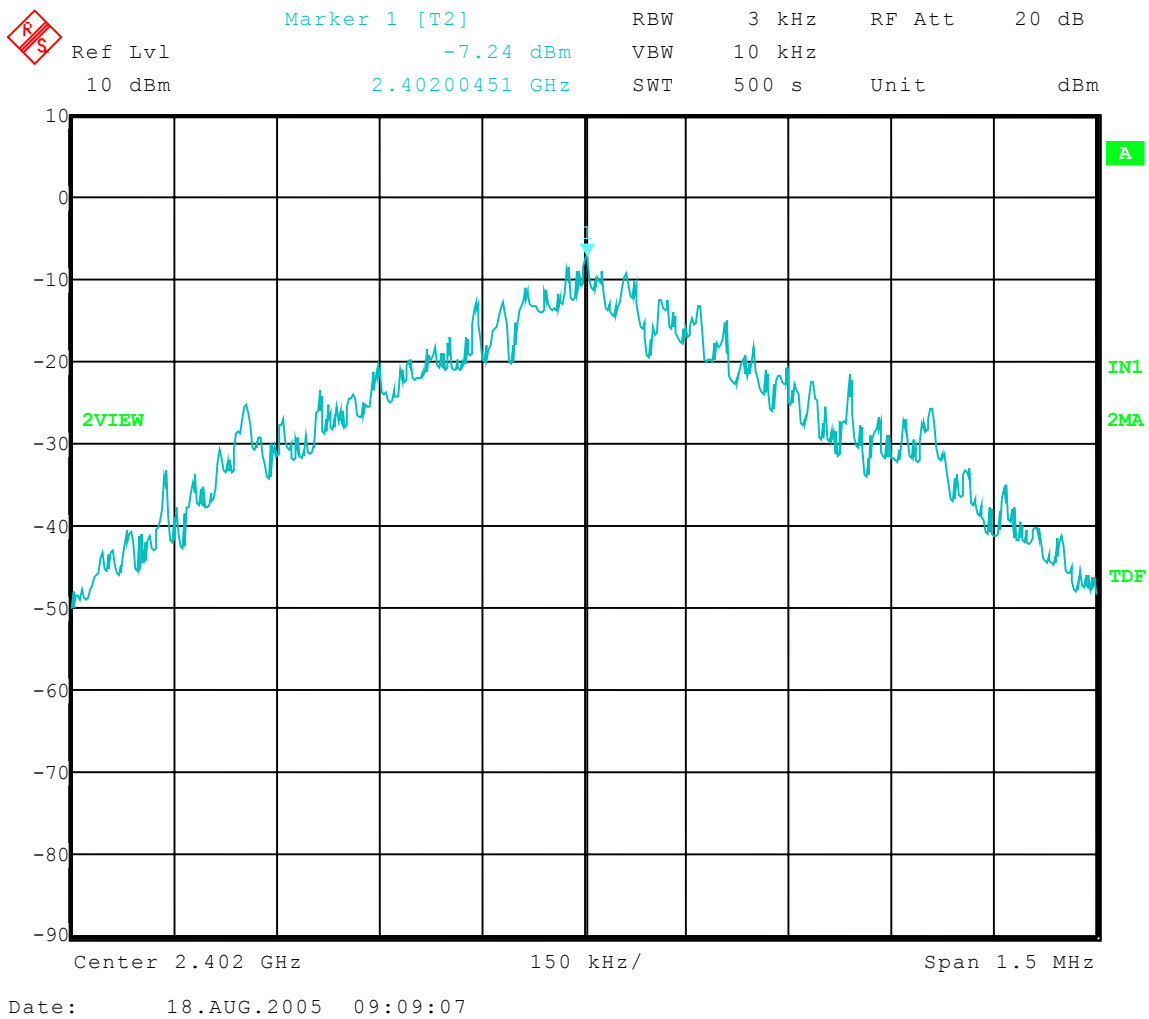
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Power Spectral Density - Conducted
Operator: Jason L.
Comment: **Low Channel 0: Frequency – 2402 MHz**

3 kHz Bandwidth = -7.24 dBm





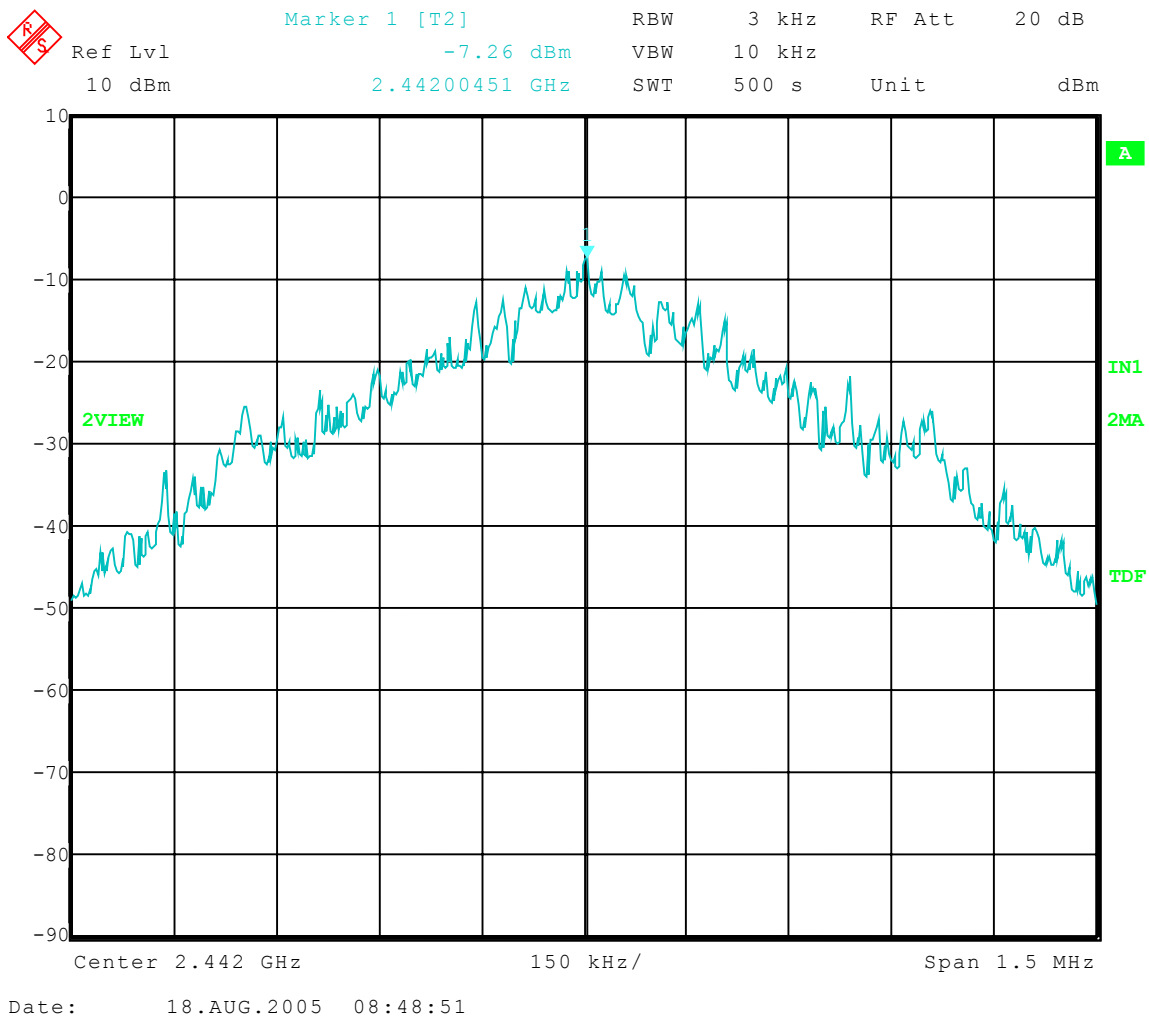
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Power Spectral Density - Conducted
Operator: Jason L.
Comment: **Middle Channel 40: Frequency – 2442 MHz**

3 kHz Bandwidth = -7.26 dBm





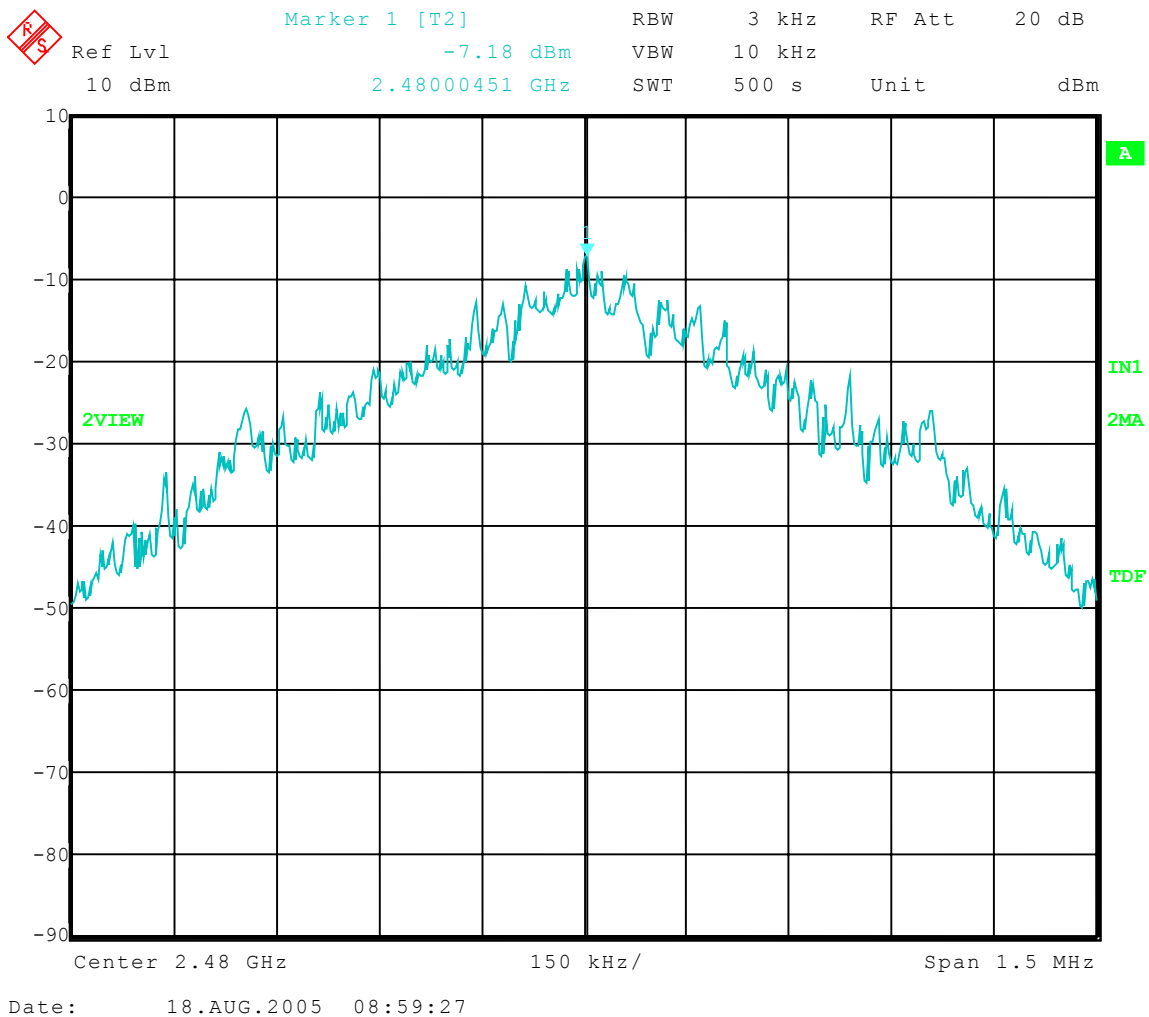
Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 8-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Peak Power Spectral Density - Conducted
Operator: Jason L.
Comment: **High Channel 78: Frequency – 2480 MHz**

3 kHz Bandwidth = -7.18 dBm





Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DUTY CYCLE GRAPH(S)

PART 15.247



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

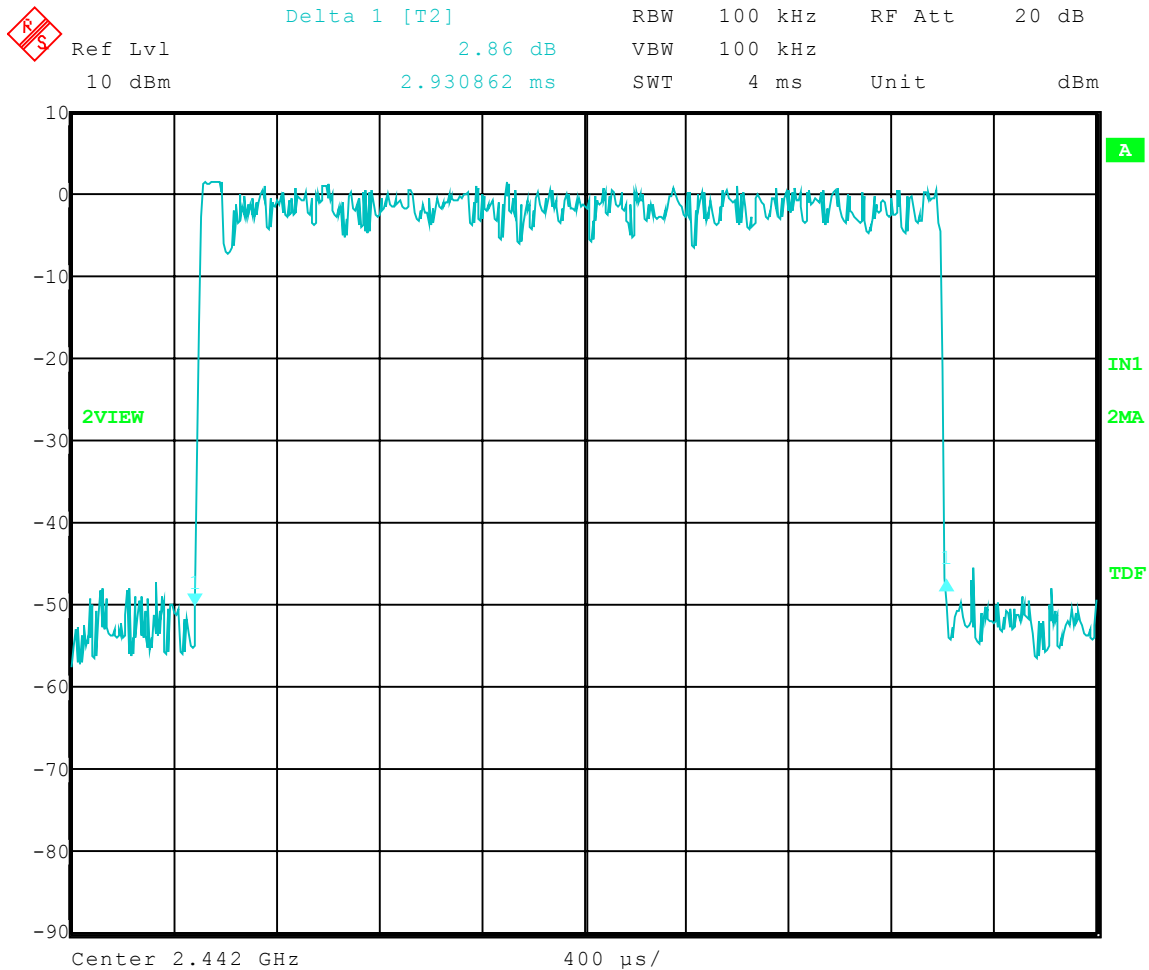
1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: Duty Cycle
Operator: Jason L.
Comment: 90 Pulses at 2.93 ms each = 263.7 ms ON
during a 32 Second Period.

$$20 \log (0.2637/32) = -41.68$$

duty cycle correction factor = 41.68 dB



Date: 18.AUG.2005 13:43:17

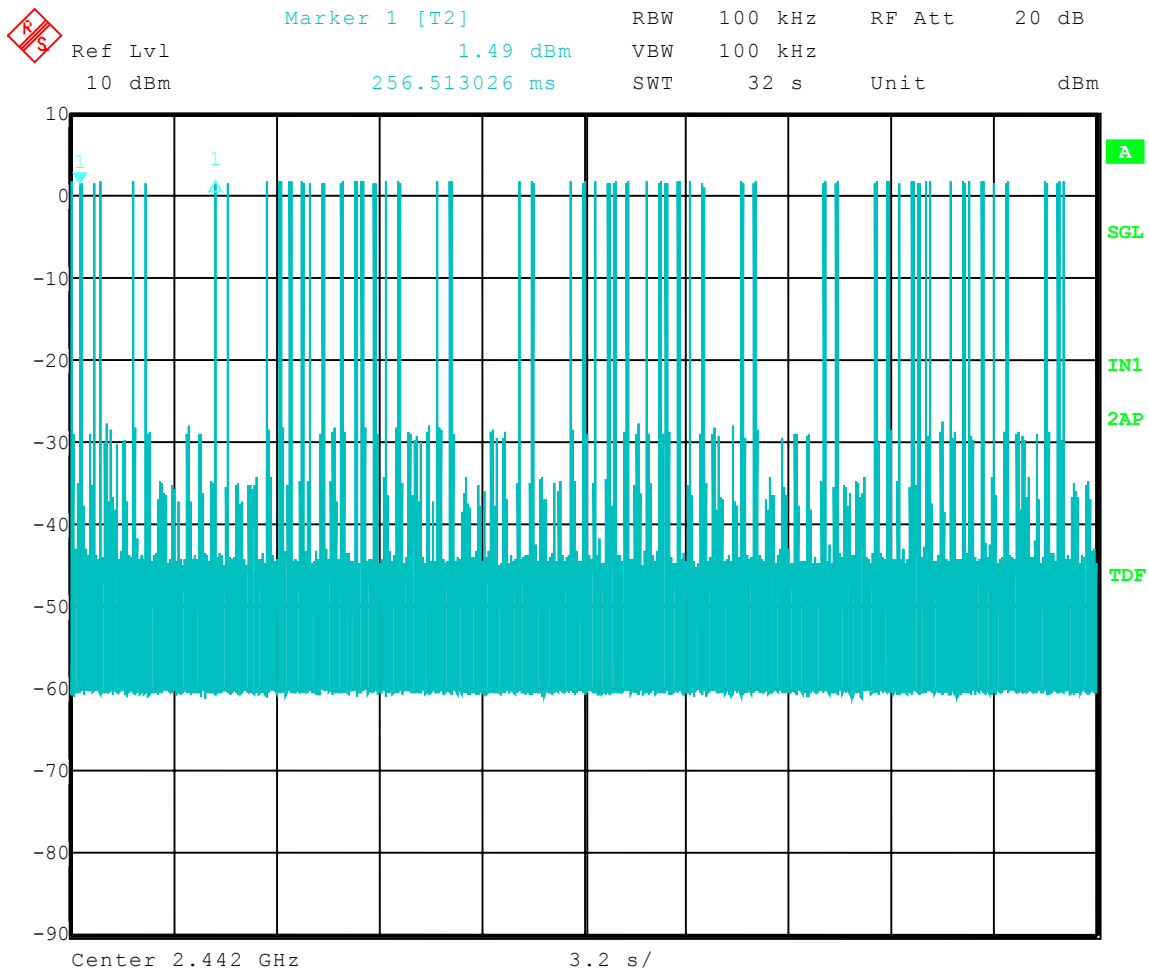


Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-18-2005
Company: Printek, Inc.
EUT: 6072 RF Module
Test: **Duty Cycle**
Operator: Jason L.
Comment: 32 Second Sweep = 90 Pulses



Date: 18.AUG.2005 13:58:49



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

NUMBER OF HOPPING FREQUENCIES GRAPH(S)

PART 15.247



Company: Printek, Inc.
Model Tested: 6072
Report Number: 11622

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Bluetooth Frequency Hopping List

Channel 0 : 2.402 GHz	Channel 41 : 2.443 GHz
Channel 1 : 2.403 GHz	Channel 42 : 2.444 GHz
Channel 2 : 2.404 GHz	Channel 43 : 2.445 GHz
Channel 3 : 2.405 GHz	Channel 44 : 2.446 GHz
Channel 4 : 2.406 GHz	Channel 45 : 2.447 GHz
Channel 5 : 2.407 GHz	Channel 46 : 2.448 GHz
Channel 6 : 2.408 GHz	Channel 47 : 2.449 GHz
Channel 7 : 2.409 GHz	Channel 48 : 2.450 GHz
Channel 8 : 2.410 GHz	Channel 49 : 2.451 GHz
Channel 9 : 2.411 GHz	Channel 50 : 2.452 GHz
Channel 10 : 2.412 GHz	Channel 51 : 2.453 GHz
Channel 11 : 2.413 GHz	Channel 52 : 2.454 GHz
Channel 12 : 2.414 GHz	Channel 53 : 2.455 GHz
Channel 13 : 2.415 GHz	Channel 54 : 2.456 GHz
Channel 14 : 2.416 GHz	Channel 55 : 2.457 GHz
Channel 15 : 2.417 GHz	Channel 56 : 2.458 GHz
Channel 16 : 2.418 GHz	Channel 57 : 2.459 GHz
Channel 17 : 2.419 GHz	Channel 58 : 2.460 GHz
Channel 18 : 2.420 GHz	Channel 59 : 2.461 GHz
Channel 19 : 2.421 GHz	Channel 60 : 2.462 GHz
Channel 20 : 2.422 GHz	Channel 61 : 2.463 GHz
Channel 21 : 2.423 GHz	Channel 62 : 2.464 GHz
Channel 22 : 2.424 GHz	Channel 63 : 2.465 GHz
Channel 23 : 2.425 GHz	Channel 64 : 2.466 GHz
Channel 24 : 2.426 GHz	Channel 65 : 2.467 GHz
Channel 25 : 2.427 GHz	Channel 66 : 2.468 GHz
Channel 26 : 2.428 GHz	Channel 67 : 2.469 GHz
Channel 27 : 2.429 GHz	Channel 68 : 2.470 GHz
Channel 28 : 2.430 GHz	Channel 69 : 2.471 GHz
Channel 29 : 2.431 GHz	Channel 70 : 2.472 GHz
Channel 30 : 2.432 GHz	Channel 71 : 2.473 GHz
Channel 31 : 2.433 GHz	Channel 72 : 2.474 GHz
Channel 32 : 2.434 GHz	Channel 73 : 2.475 GHz
Channel 33 : 2.435 GHz	Channel 74 : 2.476 GHz
Channel 34 : 2.436 GHz	Channel 75 : 2.477 GHz
Channel 35 : 2.437 GHz	Channel 76 : 2.478 GHz
Channel 36 : 2.438 GHz	Channel 77 : 2.479 GHz
Channel 37 : 2.439 GHz	Channel 78 : 2.480 GHz
Channel 38 : 2.440 GHz	
Channel 39 : 2.441 GHz	
Channel 40 : 2.442 GHz	