

Microsoft Corporation

**Zune (8GB)
Model: 1125
Zune AC Power
Adapter, Model: 1128**

September 07, 2007

Report No. MCSO1310 Rev 1

Report Prepared By



www.nwemc.com
1-888-EMI-CERT

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EMC Test Report

Certificate of Test

Issue Date: September 07, 2007

Microsoft Corporation

Model: Zune (8GB) Model 1125

Zune AC Power Adapter, Model: 1128

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Radiated Emissions	FCC 15.109(g) (CISPR 22:1997):2006	ANSI C63.4:2003	Pass
Conducted Emissions	FCC 15.107:2006	ANSI C63.4:2003	Pass
Radiated Emissions - High Frequency	FCC 15.109:2006	ANSI C63.4:2003	Pass

Modifications made to the product

See the Modifications section of this report

Approved By:



Greg Kiemel, Director of Engineering



NVLAP Lab Code: 200629-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision Number	Description	Date	Page Number
01	Per client's request, add "Zune AC Power Adapter, Model: 1128" after product name on cover page.	9/27/2007	Cover Page
01	Per client's request, add "Zune AC Power Adapter, Model: 1128" after the product name on the Certificate of Test and Product Description pages.	9/27/2007	2,8
01	Per client's request, add "Model: 1128" to the power supply part number.	9/27/2007	9,10, 11

FCC: Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



NVLAP: Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



NVLAP LAB CODE 200629-0
 NVLAP LAB CODE 200630-0
 NVLAP LAB CODE 200676-0
 NVLAP LAB CODE 200761-0

Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



CAB: Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



TÜV Product Service: Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0604C.



TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.



NEMKO: Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



Australia/New Zealand: The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294.*)



BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.



GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/scope.asp>

How important is it to understand performance criteria?

It is the responsibility of the test laboratory to observe the results of the tests that are performed and to accurately report those results. As the responsible party (manufacturer, importer, etc) it is your responsibility to take those results, compare them against the specifications and standards, then, if appropriate make a declaration of conformity. As the responsible party it makes sense that you are fully aware of the requirements, how your device performs when tested to those requirements, and what information is being used to declare conformity.

To better assist you in making those conformity decisions, Northwest EMC has adopted a very simple, yet very clear performance assessment procedure. The following criteria is used when performing immunity or susceptibility tests:

Performance Criteria 1:

- ❑ The EUT exhibited no change in performance when operating as specified by the manufacturer. In this case no changes were observed during the test.
- ❑ In most cases this would be equivalent to Performance Criteria A. When operating the equipment in the modes or configurations specified by the responsible party, monitoring the parameters specified, no changes were observed. Basically nothing happened.

Performance Criteria 2:

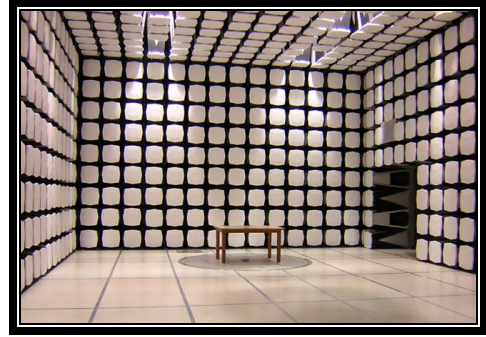
- ❑ The EUT exhibited a change in performance when operating as specified by the manufacturer. In this case the equipment recovered without any operator intervention, once the test signal was removed. The data sheets will detail the exact phenomena observed.
- ❑ In most cases this would be equivalent to Performance Criteria B. When operating the equipment in the modes or configurations specified by the responsible party, monitoring the parameters specified, changes were observed. The EUT was able to recover from those changes without any operator intervention, once the test signal was removed.

Performance Criteria 3:

- ❑ The EUT exhibited a change in performance when operating as specified by the manufacturer. In this case the equipment required some operator intervention in order to recover. This intervention may be in the form of changing EUT settings, or even resetting the system. The data sheets will detail the exact phenomena observed.
- ❑ In most cases this would be equivalent to Performance Criteria C. When operating the equipment in the modes or configurations specified by the responsible party, monitoring the parameters specified, changes were observed. The EUT required some sort of operator intervention to recover. There was no permanent damage and the EUT appeared to function normally after completion of test.

Performance Criteria 4:

- ❑ The EUT exhibited a change in performance when operating as specified by the manufacturer. In this case the equipment was damaged and would not recover. The data sheets will detail the exact phenomena observed.
- ❑ In most cases there is no specific criterion to compare this to; it typically ends the test. When operating the equipment in the modes or configurations specified by the responsible party, monitoring the parameters specified, changes were observed. There was no recovery; the equipment would no longer function as intended.



**California – Orange County Facility
Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility
Labs EV01 – EV11**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826



**Washington – Sultan Facility
Labs SU01 – SU07**

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

Company Name:	Microsoft Corporation
Address:	One Microsoft Way
City, State, Zip:	Redmond, WA 98052-6399
Test Requested By:	James Wooten
Model:	Zune (8GB) Model: 1125 Zune AC Power Adapter Model: 1128
First Date of Test:	August 18, 2007
Last Date of Test:	August 22, 2007
Receipt Date of Samples:	August 18, 2007
Equipment Design Stage:	Development
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test**Functional Description of the EUT (Equipment Under Test):**

Portable media device.

Testing Objective:

These tests were selected to satisfy the EMC requirements for FCC.

CONFIGURATION 1 MCSO1310

Software/Firmware Running during test	
Description	Version
Bootloader 762 NK.bin 905	Version 2.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Zune (8GB)	Microsoft	1125	0100282732

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	IBM	266843U	L3A3877
Laptop Power Supply	IBM	92P1020	11S92P102Z1Z9RM67H2S4

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Solution 2 Sync Cable	Yes	1.45m	No	Zune (8GB)	Power Supply/Laptop
Premium Earbuds	No	1.3m	No	Zune (8GB)	Terminated
Laptop AC Power	No	1.0m	No	Laptop	AC Mains
Laptop DC Leads	No	1.8m	Yes	Laptop Power Supply	Laptop

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 2 MCSO1310

Software/Firmware Running during test	
Description	Version
Bootloader 762 NK.bin 905	Version 2.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Zune (8GB)	Microsoft	1125	0100282732
Power Supply	Phihong	PSM05A-050Q-R Rev 1 Model: 1128	R3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Solution 2 Sync Cable	Yes	1.45m	No	Zune (8GB)	Power Supply/Laptop
Premium Earbuds	No	1.3m	No	Zune (8GB)	Terminated
AC Power Extension	No	0.8m	No	Power Supply	AC Mains

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 3 MCSO1310**Software/Firmware Running during test**

Description	Version
Bootloader 762 NK.bin 905	Version 2.1

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Zune (8GB)	Microsoft	1125	0100282732
Power Supply	Phihong	PSM05A-050Q-R Rev 1 Model: 1128	R3

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
TV	Sony	KV-21FX30E	1062255

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Solution 2 Sync Cable	Yes	1.45m	No	Zune (8GB)	Power Supply/Laptop
AV Cable	Yes	1.4m	No	Zune (8GB)	TV
TV AC Power	No	2.1m	Yes	TV	AC Mains
AC Power Extension	No	0.8m	No	Power Supply	AC Mains

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 4 MCSO1310**Software/Firmware Running during test**

Description	Version
Bootloader 762 NK.bin 905	Version 2.1

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Zune (8GB)	Microsoft	1125	0100252732
Power Supply	Phihong	PSM05A-050Q-R Rev 1 Model: 1128	R3

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Solution 2 Sync Cable	Yes	1.45m	No	Zune (8GB)	Power Supply/Laptop
Premium Earbuds	No	1.3m	No	Zune (8GB)	Terminated
AC Power Extension	No	0.8m	No	Power Supply	AC Mains

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 5 MCSO1310**Software/Firmware Running during test**

Description	Version
Bootloader 762 NK.bin 905	Version 2.1

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Zune (8GB)	Microsoft	1125	0100252732
Power Supply	Phihong	PSM05A-050Q-R Rev 1 Model: 1128	R3

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
TV	Sony	KV-21FX30E	1062255

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Solution 2 Sync Cable	Yes	1.45m	No	Zune (8GB)	Power Supply/Laptop
AV Cable	Yes	1.4m	No	Zune (8GB)	TV
TV AC Power	No	2.1m	Yes	TV	AC Mains
AC Power Extension	No	0.8m	No	Power Supply	AC Mains

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	8/17/2007	Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	8/18/2007	Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	8/20/2007	Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	8/22/2007	Radiated Emissions High Frequency	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	8/22/2007	Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

AV playback

MODE USED FOR FINAL DATA

AV playback

POWER SETTINGS INVESTIGATED

120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30MHz	Stop Frequency	1GHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8568B	AAE	12/7/2006	13
Quasi-Peak Adapter	Hewlett Packard	85650A	AQG	12/7/2006	13
Pre-Amplifier	Miteq	AM-1402	AOT	1/18/2007	13
SU02 cables a,b,c			SUK	2/8/2007	13
Antenna, Log Periodic	EMCO	3146	ALE	2/1/2007	13
Antenna, Bicon	EMCO	3104C	ABF	1/28/2007	13

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

EUT: Zune (8GB) Model: 1125	Work Order: MCSO1302
Serial Number: 0100282732	Date: 08/22/07
Customer: Microsoft Corporation	Temperature: 24
Attendees: James Wooten	Humidity: 44%
Project: N/A	Barometric Pres.: 29.88
Tested by: Kevin Cameron	Power: 120VAC/60Hz
	Job Site: SU07

TEST SPECIFICATIONS	Test Method
FCC 15.109(g) (CISPR 22:1997):2006 Class B:	ANSI C63.4:2003:

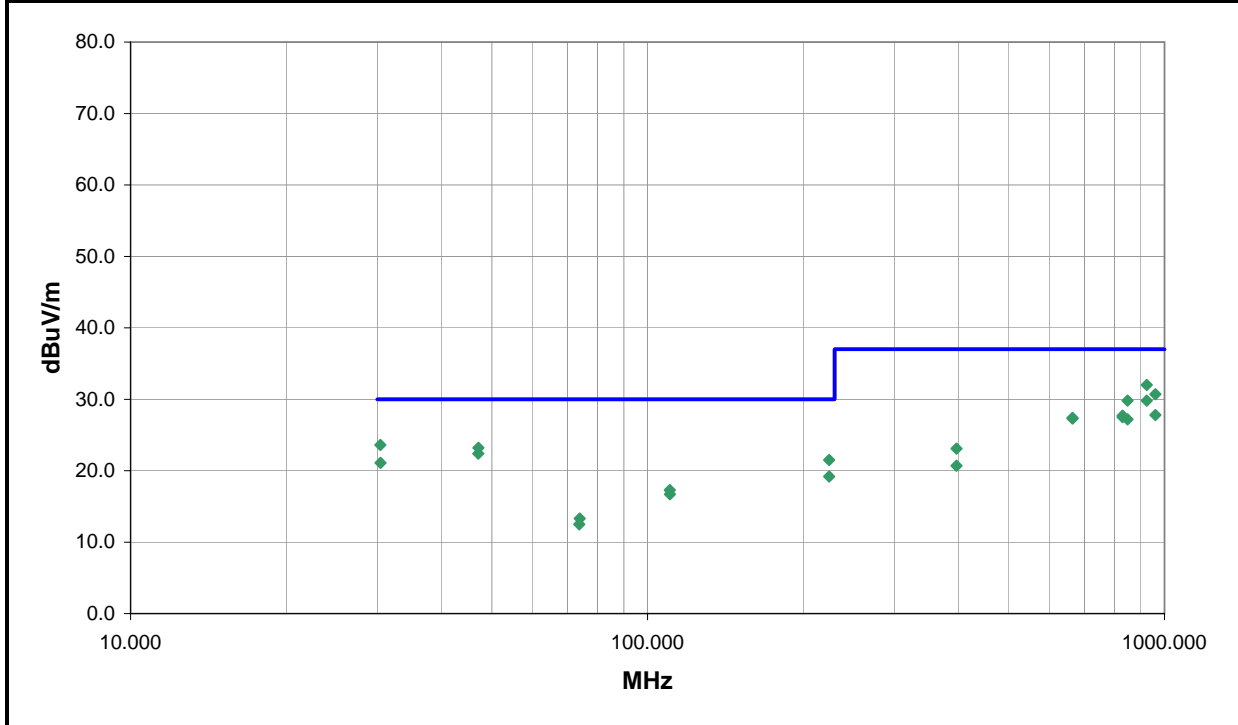
TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 10

COMMENTS
DV Solution 2 sync cable, AV cable to TV, Phihong PS MN:PSM05A-050Q-R Rev 1 / SN:R3, Config 3A-P. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
AV playback

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	8	Signature <i>Kevin M. Cameron</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
924.027	23.3	8.7	252.0	2.1	10.0	0.0	V-LPA	QP	0.0	32.0	37.0	-5.0
959.986	21.5	9.2	44.0	1.6	10.0	0.0	V-LPA	QP	0.0	30.7	37.0	-6.3
30.425	30.3	-6.7	217.0	3.0	10.0	0.0	H-Bicon	QP	0.0	23.6	30.0	-6.4
47.093	30.9	-7.7	72.0	4.0	10.0	0.0	H-Bicon	QP	0.0	23.2	30.0	-6.8
847.936	22.6	7.2	186.0	1.1	10.0	0.0	H-LPA	QP	0.0	29.8	37.0	-7.2
924.028	21.1	8.7	237.0	1.0	10.0	0.0	H-LPA	QP	0.0	29.8	37.0	-7.2
47.058	30.1	-7.7	193.0	4.0	10.0	0.0	H-Bicon	QP	0.0	22.4	30.0	-7.6
224.528	28.2	-6.7	264.0	3.7	10.0	0.0	H-LPA	QP	0.0	21.5	30.0	-8.5
30.447	27.8	-6.7	243.0	1.0	10.0	0.0	V-Bicon	QP	0.0	21.1	30.0	-8.9
959.993	18.6	9.2	360.0	1.3	10.0	0.0	H-LPA	QP	0.0	27.8	37.0	-9.2
829.498	20.8	6.9	172.0	2.2	10.0	0.0	V-LPA	QP	0.0	27.7	37.0	-9.3
829.505	20.6	6.9	161.0	1.0	10.0	0.0	H-LPA	QP	0.0	27.5	37.0	-9.5
663.610	23.0	4.4	305.0	3.1	10.0	0.0	V-LPA	QP	0.0	27.4	37.0	-9.6
663.581	22.9	4.4	45.0	1.2	10.0	0.0	H-LPA	QP	0.0	27.3	37.0	-9.7
847.936	20.0	7.2	295.0	2.7	10.0	0.0	V-LPA	QP	0.0	27.2	37.0	-9.8
224.531	25.9	-6.7	19.0	1.9	10.0	0.0	V-LPA	QP	0.0	19.2	30.0	-10.8
110.418	21.5	-4.2	128.0	2.8	10.0	0.0	H-Bicon	QP	0.0	17.3	30.0	-12.7
110.479	20.9	-4.2	220.0	1.0	10.0	0.0	V-Bicon	QP	0.0	16.7	30.0	-13.3
395.994	24.2	-1.1	44.0	2.7	10.0	0.0	H-LPA	QP	0.0	23.1	37.0	-13.9
396.024	21.8	-1.1	69.0	4.0	10.0	0.0	V-LPA	QP	0.0	20.7	37.0	-16.3
73.901	24.5	-11.2	167.0	1.2	10.0	0.0	V-Bicon	QP	0.0	13.3	30.0	-16.7
73.760	23.6	-11.1	360.0	3.0	10.0	0.0	H-Bicon	QP	0.0	12.5	30.0	-17.5

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Syncing to laptop

MODE USED FOR FINAL DATA

Syncing to laptop

POWER SETTINGS INVESTIGATED

120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30MHz	Stop Frequency	1GHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
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Pre-Amplifier	Miteq	AM-1402	AOT	1/18/2007	13
SU02 cables a,b,c			SUK	2/8/2007	13
Antenna, Log Periodic	EMCO	3146	ALE	2/1/2007	13
Antenna, Bicon	EMCO	3104C	ABF	1/28/2007	13

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

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Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

EUT:	Zune (8GB) Model: 1125	Work Order:	MCSO1278
Serial Number:	0100282732	Date:	08/17/07
Customer:	Microsoft Corporation	Temperature:	23
Attendees:	James Wooten	Humidity:	46%
Project:	N/A	Barometric Pres.:	30.01
Tested by:	Kevin Cameron	Power:	120VAC/60Hz
		Job Site:	SU02

TEST SPECIFICATIONS	Test Method
FCC 15.109(g) (CISPR 22:1997):2006 Class B:	ANSI C63.4:2003:

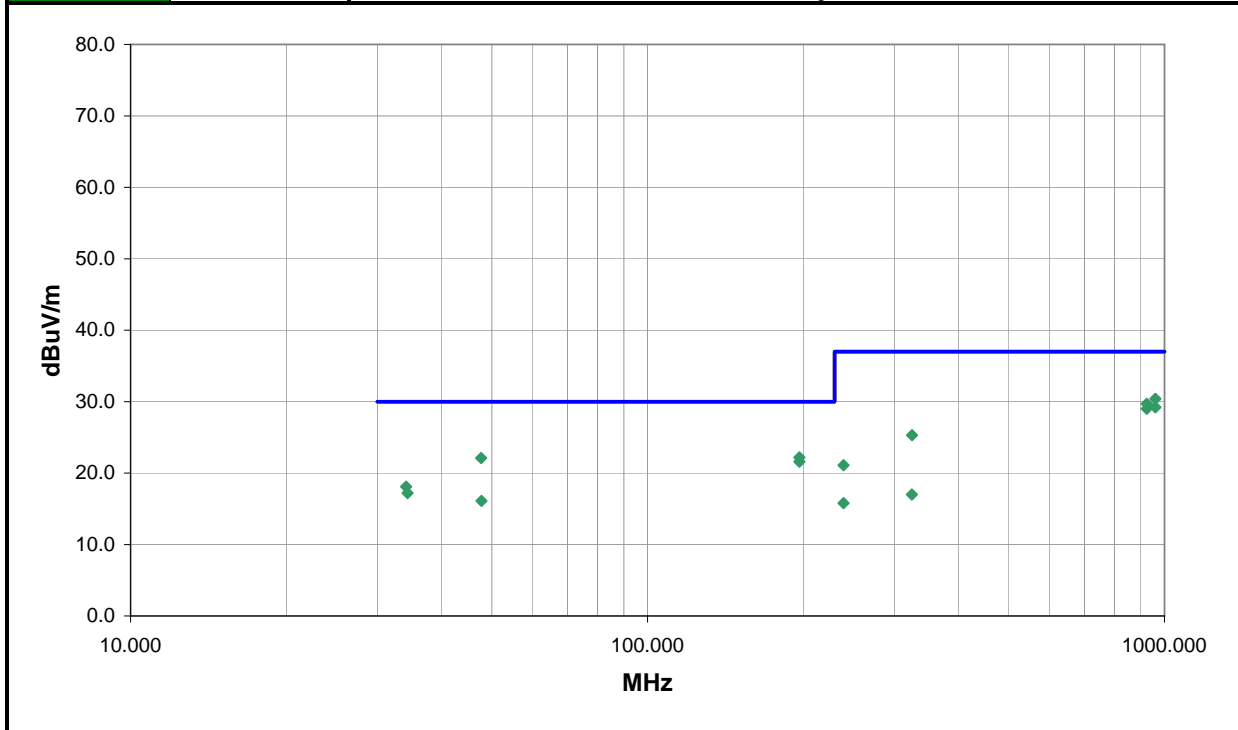
TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 10

COMMENTS
DV Solution 2 sync cable, DV Premium earbuds. Config 1B-1. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
Syncing to laptop

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	1	Signature <i>Kevin M. Cameron</i>
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
959.975	21.2	9.2	291.0	1.5	10.0	0.0	H-LPA	QP	0.0	30.4	37.0	-6.6
923.990	21.0	8.7	273.0	1.7	10.0	0.0	V-LPA	QP	0.0	29.7	37.0	-7.3
196.639	22.6	-0.4	126.0	2.6	10.0	0.0	V-Bicon	QP	0.0	22.2	30.0	-7.8
959.956	20.0	9.2	0.0	1.3	10.0	0.0	V-LPA	QP	0.0	29.2	37.0	-7.8
47.655	29.8	-7.7	269.0	3.9	10.0	0.0	H-Bicon	QP	0.0	22.1	30.0	-7.9
924.017	20.3	8.7	234.0	1.3	10.0	0.0	H-LPA	QP	0.0	29.0	37.0	-8.0
196.641	22.0	-0.4	254.0	4.0	10.0	0.0	H-Bicon	QP	0.0	21.6	30.0	-8.4
324.900	27.7	-2.4	77.0	2.4	10.0	0.0	H-LPA	QP	0.0	25.3	37.0	-11.7
34.121	25.2	-7.1	201.0	1.0	10.0	0.0	V-Bicon	QP	0.0	18.1	30.0	-11.9
34.324	24.3	-7.1	250.0	4.0	10.0	0.0	H-Bicon	QP	0.0	17.2	30.0	-12.8
47.712	23.8	-7.7	360.0	1.0	10.0	0.0	V-Bicon	QP	0.0	16.1	30.0	-13.9
239.484	27.1	-6.0	337.0	3.4	10.0	0.0	H-LPA	QP	0.0	21.1	37.0	-15.9
324.500	19.4	-2.4	275.0	1.2	10.0	0.0	V-LPA	QP	0.0	17.0	37.0	-20.0
239.465	21.8	-6.0	161.0	1.0	10.0	0.0	V-LPA	QP	0.0	15.8	37.0	-21.2

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

AV playback

MODE USED FOR FINAL DATA

AV playback

POWER SETTINGS INVESTIGATED

120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30MHz	Stop Frequency	1GHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8568B	AAE	12/7/2006	13
Quasi-Peak Adapter	Hewlett Packard	85650A	AQG	12/7/2006	13
Pre-Amplifier	Miteq	AM-1402	AOT	1/18/2007	13
SU02 cables a,b,c			SUK	2/8/2007	13
Antenna, Log Periodic	EMCO	3146	ALE	2/1/2007	13
Antenna, Bicon	EMCO	3104C	ABF	1/28/2007	13

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

EUT: Zune (8GB) Model: 1125	Work Order: MCS01278
Serial Number: 0100282732	Date: 08/18/07
Customer: Microsoft Corporation	Temperature: 22
Attendees: James Wooten	Humidity: 47%
Project: N/A	Barometric Pres.: 30.1
Tested by: Kevin Cameron	Power: 120VAC/60Hz
	Job Site: SU02

TEST SPECIFICATIONS	Test Method
FCC 15.109(g) (CISPR 22:1997):2006 Class B:	ANSI C63.4:2003:

TEST PARAMETERS		
Antenna Height(s) (m)	1 - 4	Test Distance (m)
		10

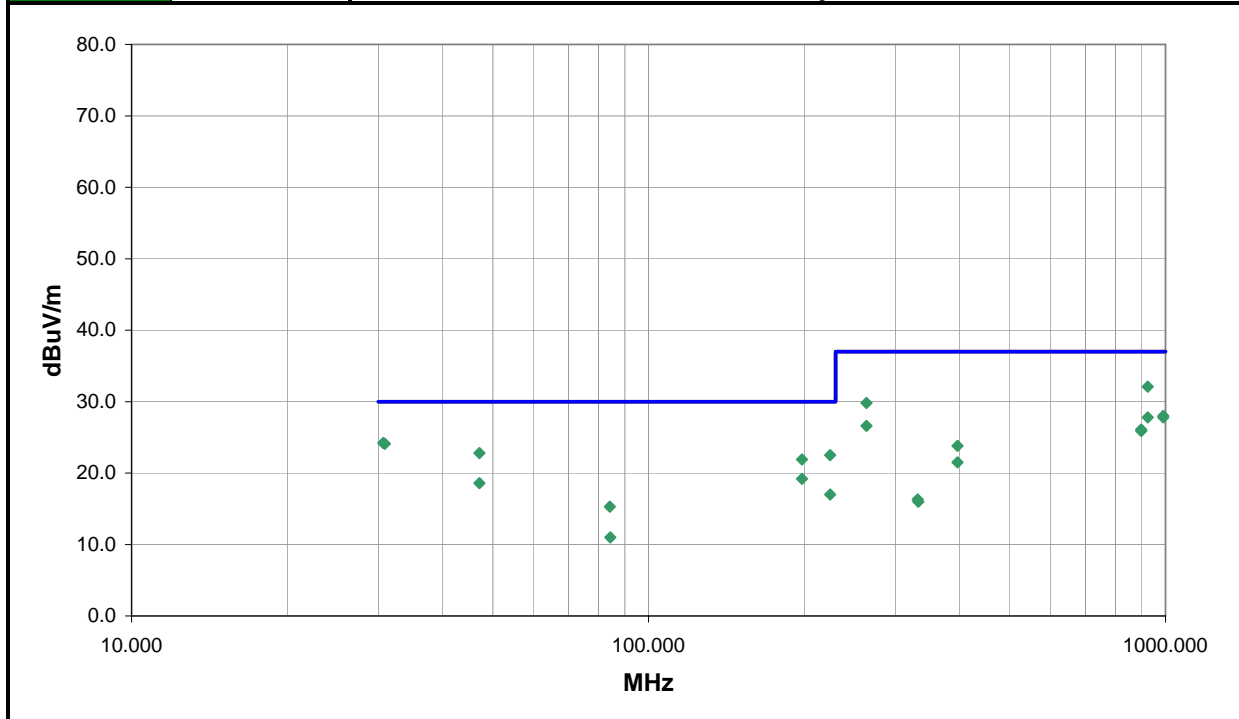
COMMENTS
DV Solution 2 sync cable, Premium earbuds, Phihong PS MN:PSM05A-050Q-R Rev 1, SN:R3, Config 2B-P. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
AV playback

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	2
Configuration #	2
Results	Pass

Signature *Kevin M. Cameron*



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
924.027	23.4	8.7	299.0	2.2	10.0	0.0	V-LPA	QP	0.0	32.1	37.0	-4.9
30.680	31.0	-6.8	226.0	3.0	10.0	0.0	V-Bicon	QP	0.0	24.2	30.0	-5.8
30.893	30.9	-6.8	360.0	3.2	10.0	0.0	H-Bicon	QP	0.0	24.1	30.0	-5.9
47.093	30.5	-7.7	265.0	3.9	10.0	0.0	H-Bicon	QP	0.0	22.8	30.0	-7.2
264.026	34.8	-5.0	132.0	4.0	10.0	0.0	H-LPA	QP	0.0	29.8	37.0	-7.2
224.530	29.2	-6.7	79.0	4.0	10.0	0.0	H-LPA	QP	0.0	22.5	30.0	-7.5
198.010	22.3	-0.4	219.0	1.5	10.0	0.0	V-Bicon	QP	0.0	21.9	30.0	-8.1
989.993	18.1	9.9	90.0	1.0	10.0	0.0	H-LPA	QP	0.0	28.0	37.0	-9.0
924.001	19.1	8.7	35.0	2.5	10.0	0.0	H-LPA	QP	0.0	27.8	37.0	-9.2
990.021	17.9	9.9	360.0	1.0	10.0	0.0	V-LPA	QP	0.0	27.8	37.0	-9.2
264.032	31.6	-5.0	0.0	1.0	10.0	0.0	V-LPA	QP	0.0	26.6	37.0	-10.4
198.012	19.6	-0.4	65.0	4.0	10.0	0.0	H-Bicon	QP	0.0	19.2	30.0	-10.8
897.496	17.7	8.4	261.0	1.0	10.0	0.0	H-LPA	QP	0.0	26.1	37.0	-10.9
897.111	17.5	8.4	360.0	1.0	10.0	0.0	V-LPA	QP	0.0	25.9	37.0	-11.1
47.093	26.3	-7.7	288.0	1.0	10.0	0.0	V-Bicon	QP	0.0	18.6	30.0	-11.4
224.506	23.7	-6.7	0.0	1.0	10.0	0.0	V-LPA	QP	0.0	17.0	30.0	-13.0
396.027	24.9	-1.1	118.0	2.1	10.0	0.0	H-LPA	QP	0.0	23.8	37.0	-13.2
84.154	27.0	-11.7	68.0	1.0	10.0	0.0	V-Bicon	QP	0.0	15.3	30.0	-14.7
395.992	22.6	-1.1	310.0	1.0	10.0	0.0	V-LPA	QP	0.0	21.5	37.0	-15.5
84.339	22.7	-11.7	109.0	4.0	10.0	0.0	H-Bicon	QP	0.0	11.0	30.0	-19.0
331.690	18.5	-2.2	259.0	2.5	10.0	0.0	H-LPA	QP	0.0	16.3	37.0	-20.7

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
332.609	18.2	-2.2	85.0	1.0	10.0	0.0	V-LPA	QP	0.0	16.0	37.0	-21.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

AV playback

Syncing to laptop

MODE USED FOR FINAL DATA

AV playback

Syncing to laptop

POWER SETTINGS INVESTIGATED

120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	1000MHz	Stop Frequency	8000MHz
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CLOCKS AND OSCILLATORS

None Provided

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APJ	2/14/2007	13
Antenna, Horn	EMCO	3115	AHM	2/20/2006	24
SU07 cables a,h,c			SUB	2/14/2007	13
Spectrum Analyzer	Agilent	E4440A	AAW	4/25/2007	12

MEASUREMENT BANDWIDTHS

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

EUT: Zune (8GB) Model: 1125	Work Order: MCSO1278
Serial Number: 0100282732	Date: 08/18/07
Customer: Microsoft Corporation	Temperature: 24
Attendees: James Wooten	Humidity: 44%
Project: N/A	Barometric Pres.: 29.88
Tested by: Kevin Cameron	Power: 120VAC/60Hz
	Job Site: SU07

TEST SPECIFICATIONS		Test Method	
FCC 15.109:2006 Class B		ANSI C63.4:2003	

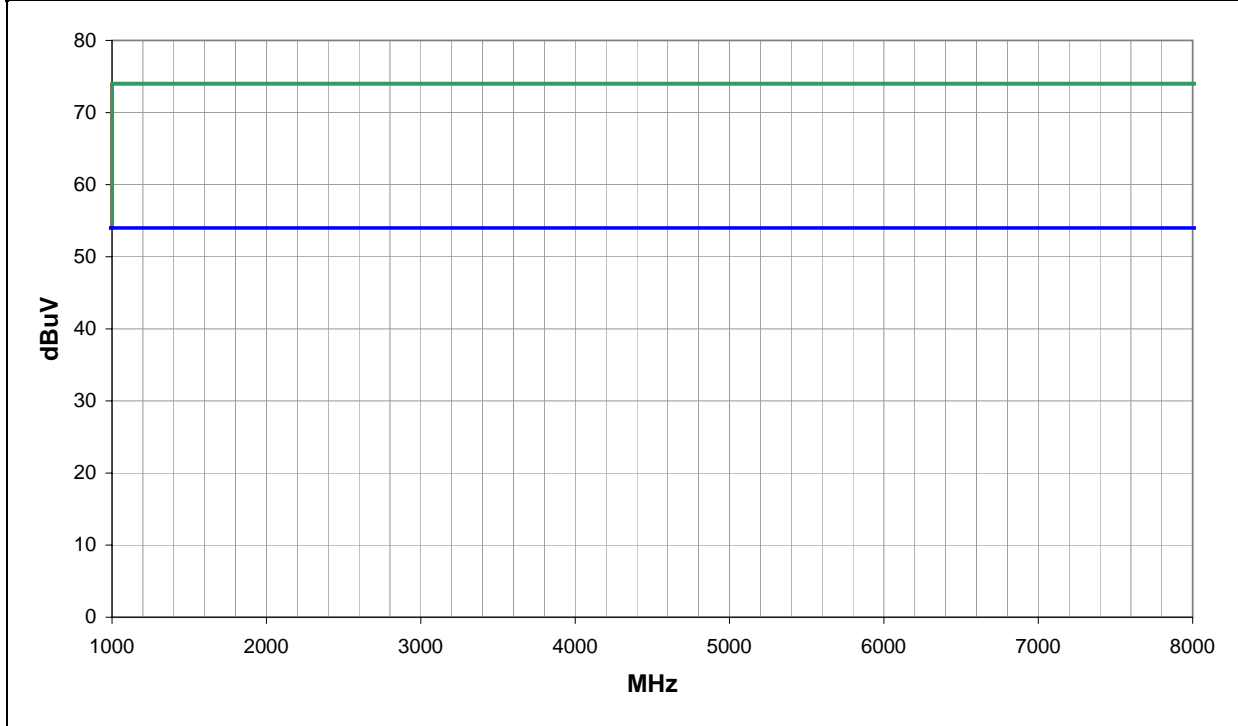
TEST PARAMETERS			
Antenna Height(s) (m)	1.2	Test Distance (m)	3

COMMENTS
DV Solution 2 sync cable, Premium earbuds, Config 1B-1. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
Syncing to laptop

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	80-81	Signature <i>Kevin M. Cameron</i>
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Preamp (dB)	Antenna Height (m)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Polarity/Transducer Type	Detector (blank equal peaks [PK] from scan)	Distance Adjustment (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
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All emissions were greater than 10db below the limit.

EUT: Zune (8GB) Model: 1125		Work Order: MCSO1278	
Serial Number: 0100282732		Date: 08/18/07	
Customer: Microsoft Corporation		Temperature: 20	
Attendees: James Wooten		Humidity: 51%	
Project: N/A		Barometric Pres.: 30.01	
Tested by: Kevin Cameron		Power: 120VAC/60Hz	
		Job Site: SU07	

TEST SPECIFICATIONS		Test Method	
FCC 15.109:2006 Class B		ANSI C63.4:2003	

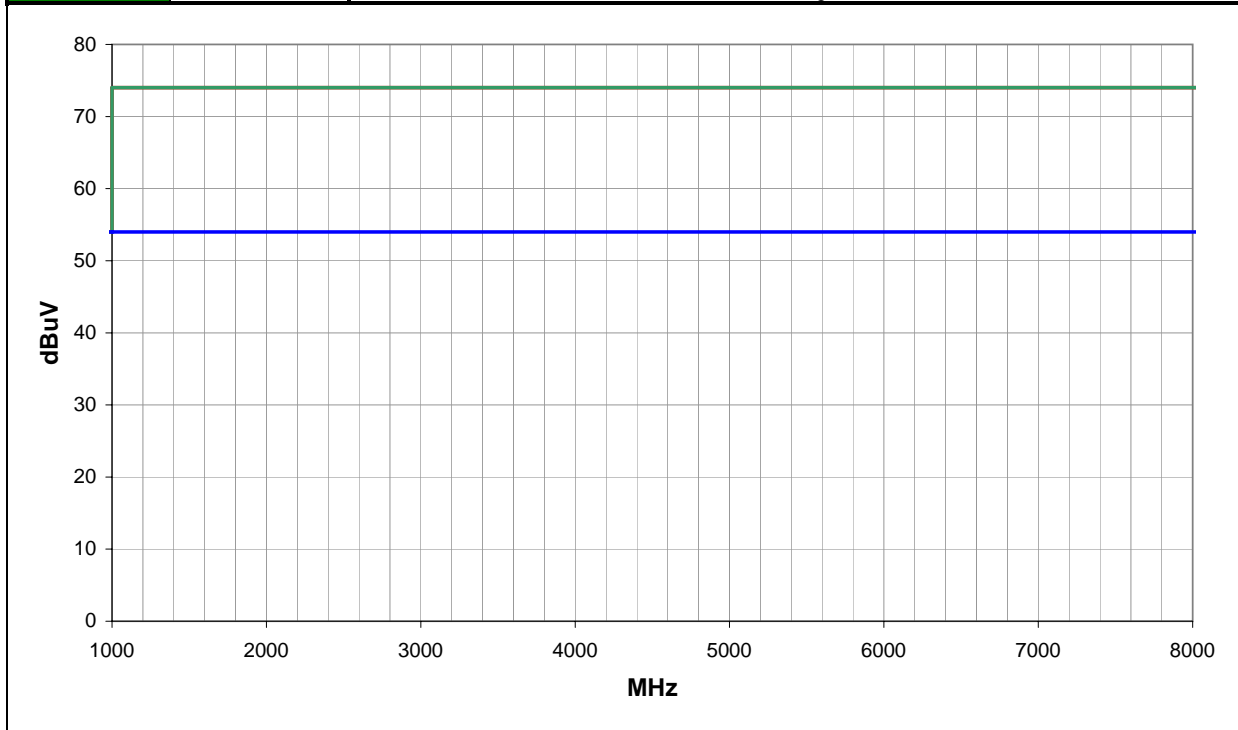
TEST PARAMETERS			
Antenna Height(s) (m)	1.2	Test Distance (m)	3

COMMENTS
DV Solution 2 sync cable, Premium earbuds, Config 1B-1. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
AV playback

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	41-42	Signature <i>Kevin M. Cameron</i>
Configuration #	2	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Preamp (dB)	Antenna Height (m)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Polarity/Transducer Type	Detector (blank equal peaks [PK] from scan)	Distance Adjustment (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
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All emissions were greater than 10db below the limit.

EUT: Zune (8GB) Model: 1125		Work Order: MCS01278
Serial Number: 0100282732	Date: 08/18/07	
Customer: Microsoft Corporation	Temperature: 24	
Attendees: James Wooten	Humidity: 44%	
Project: N/A	Barometric Pres.: 29.88	
Tested by: Kevin Cameron	Power: 120VAC/60Hz	Job Site: SU07

TEST SPECIFICATIONS		Test Method
FCC 15.109:2006 Class B		ANSI C63.4:2003

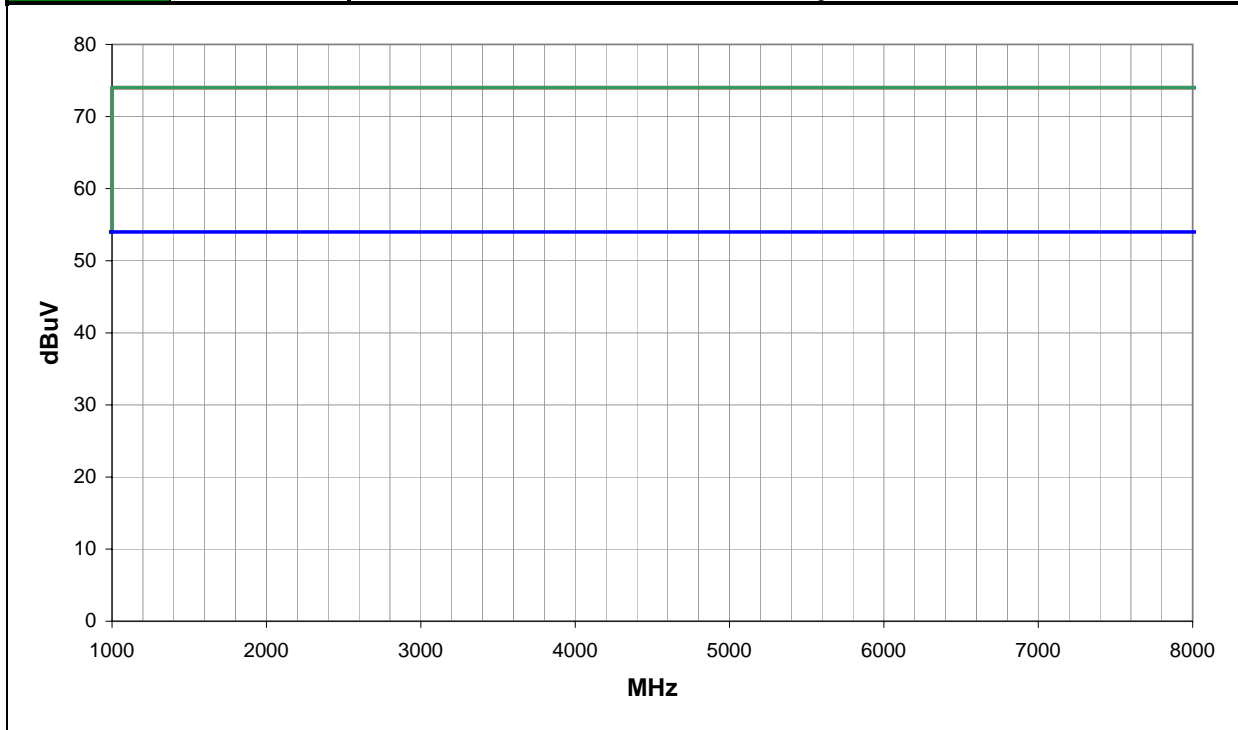
TEST PARAMETERS			
Antenna Height(s) (m)	1.2	Test Distance (m)	3

COMMENTS
DV Solution 2 sync cable, Premium earbuds, Config 1B-1. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)

EUT OPERATING MODES
AV playback

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	70	Signature <i>Kevin M. Cameron</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Preamp (dB)	Antenna Height (m)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Polarity/Transducer Type	Detector (blank equal peaks [PK] from scan)	Distance Adjustment (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
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All emissions were greater than 10db below the limit.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

AV playback

POWER SETTINGS INVESTIGATED

120V/60Hz

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-R-24-BNC	LIK	1/17/2007	13
SU07 cables d,c,a			SUC	1/18/2007	13
Attenuator	Tektronix	011-0059-02	ATR	1/17/2007	13
High Pass Filter	TTE	H647-100k-50-718B	HFB	1/17/2007	13
Receiver	Rohde & Schwartz	ESCI	ARE	12/7/2006	13

MEASUREMENT BANDWIDTHS

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY


Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

EMC

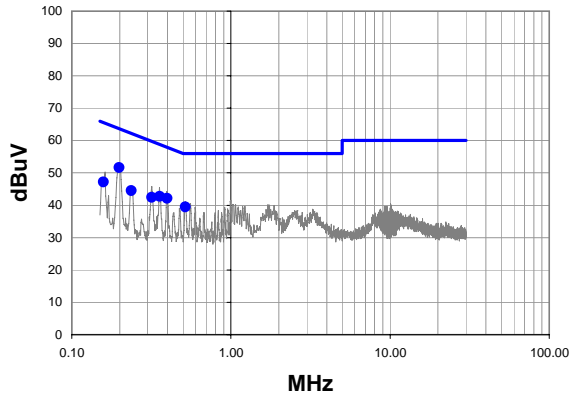
CONDUCTED EMISSIONS

Work Order:	MCSO1293	Date:	08/20/07	 Tested by: Kyle Holgate
Project:	N/A	Temperature:	23c	
Job Site:	SU01	Humidity:	57	
Serial Number:	0100252732	Barometric Pres.:	30.13	
EUT:	Zune (8GB) Model: 1125			
Configuration:	4			
Customer:	Microsoft Corporation			
Attendees:	James Wooten			
EUT Power:	120V/60Hz			
Operating Mode:	AV playback			
Deviations:	No deviations.			
Comments:	Pihong PS MN: PSM05A-050Q-R rev 1, SN: R3 Config 2B-P, DV solution 2 to sync cable, Premium earbuds. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)			

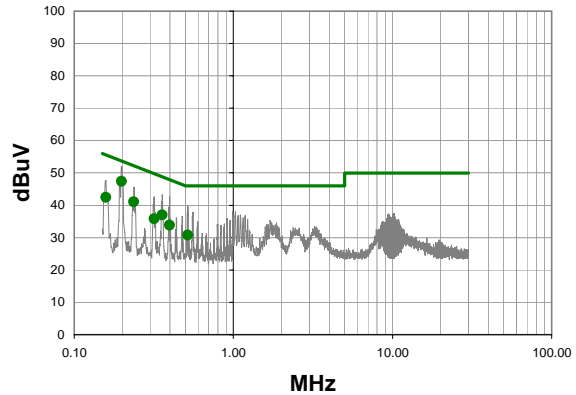
Test Specifications FCC 15.107:2006	Class B	Test Method ANSI C63.4:2003
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Run #	35	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.198	30.6	1.1	51.7	63.7	-12.0
0.398	21.2	0.9	42.1	57.9	-15.8
0.357	21.8	0.9	42.7	58.8	-16.1
0.517	18.6	0.8	39.4	56.0	-16.6
0.318	21.5	1.0	42.5	59.8	-17.3
0.237	23.5	1.0	44.5	62.2	-17.7
0.158	25.3	1.8	47.1	65.6	-18.4

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.198	26.3	1.1	47.4	53.7	-6.3
0.237	20.1	1.0	41.1	52.2	-11.1
0.357	16.1	0.9	37.0	48.8	-11.8
0.158	20.6	1.8	42.4	55.6	-13.1
0.318	14.9	1.0	35.9	49.8	-13.9
0.398	12.9	0.9	33.8	47.9	-14.1
0.517	9.9	0.8	30.7	46.0	-15.3

EMC

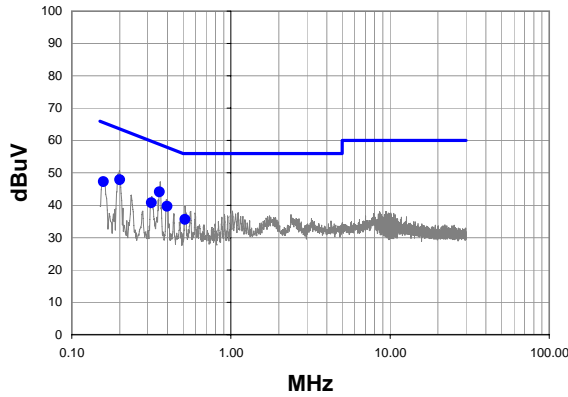
CONDUCTED EMISSIONS

Work Order:	MCSO1293	Date:	08/20/07	
Project:	N/A	Temperature:	23c	
Job Site:	SU01	Humidity:	57	
Serial Number:	0100252732	Barometric Pres.:	30.13	
EUT:	Zune (8GB) Model: 1125			
Configuration:	4			
Customer:	Microsoft Corporation			
Attendees:	James Wooten			
EUT Power:	120V/60Hz			
Operating Mode:	AV playback			
Deviations:	No deviations.			
Comments:	Phihong PS MN: PSM05A-050Q-R rev 1, SN: R3 Config 2B-P, DV solution 2 to sync cable, Premium earbuds. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)			

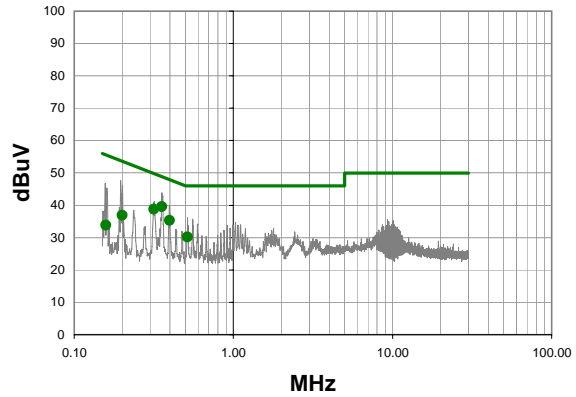
Test Specifications FCC 15.107:2006	Class B	Test Method ANSI C63.4:2003
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Run #	36	Line:	Neutral	Ext. Attenuation:	20	Results	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.356	23.2	0.9	44.1	58.8	-14.7
0.200	26.9	1.0	47.9	63.6	-15.7
0.397	18.8	0.9	39.7	57.9	-18.2
0.158	25.4	1.8	47.2	65.6	-18.3
0.316	19.8	1.0	40.8	59.8	-19.1
0.516	14.8	0.8	35.6	56.0	-20.4

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.356	18.6	0.9	39.5	48.8	-9.3
0.316	17.8	1.0	38.8	49.8	-11.1
0.397	14.4	0.9	35.3	47.9	-12.6
0.516	9.3	0.8	30.1	46.0	-15.9
0.200	15.9	1.0	36.9	53.6	-16.7
0.158	12.0	1.8	33.8	55.6	-21.7

EMC

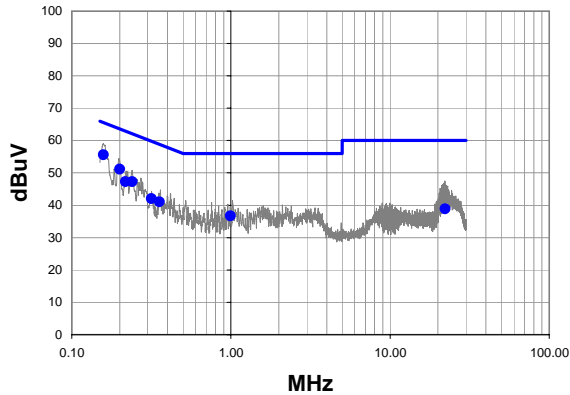
CONDUCTED EMISSIONS

Work Order:	MCSO1293	Date:	08/20/07	
Project:	N/A	Temperature:	24c	
Job Site:	SU01	Humidity:	52	
Serial Number:	0100252732	Barometric Pres.:	29.93	
EUT:	Zune (8GB) Model: 1125			
Configuration:	5			
Customer:	Microsoft Corporation			
Attendees:	James Wooten			
EUT Power:	120V/60Hz			
Operating Mode:	AV playback			
Deviations:	No deviations.			
Comments:	Phihong PS MN: PSM05A-050Q-R rev 1, SN: R3 Config 2B-P, DV solution 2 to sync cable, Premium earbuds. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)			

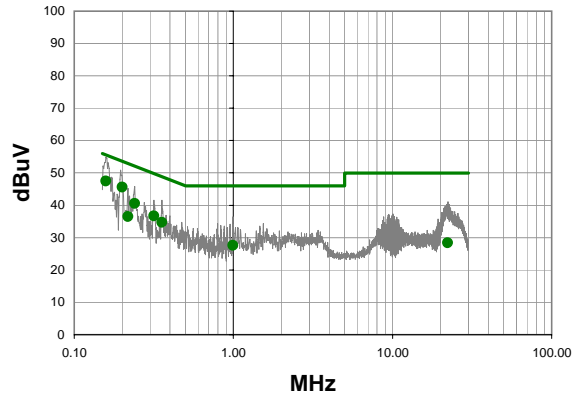
Test Specifications FCC 15.107:2006	Class B	Test Method ANSI C63.4:2003
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Run #	21	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.158	33.7	1.8	55.5	65.6	-10.0
0.200	30.1	1.0	51.1	63.6	-12.5
0.240	26.3	1.0	47.3	62.1	-14.8
0.218	26.3	1.0	47.3	62.9	-15.6
0.317	21.1	1.0	42.1	59.8	-17.7
0.356	20.1	0.9	41.0	58.8	-17.8
0.993	16.1	0.6	36.7	56.0	-19.3
22.252	17.9	1.0	38.9	60.0	-21.1

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.200	24.6	1.0	45.6	53.6	-8.0
0.158	25.6	1.8	47.4	55.6	-8.1
0.240	19.6	1.0	40.6	52.1	-11.5
0.317	15.7	1.0	36.7	49.8	-13.1
0.356	13.8	0.9	34.7	48.8	-14.1
0.218	15.5	1.0	36.5	52.9	-16.4
0.993	7.0	0.6	27.6	46.0	-18.4
22.252	7.4	1.0	28.4	50.0	-21.6

EMC

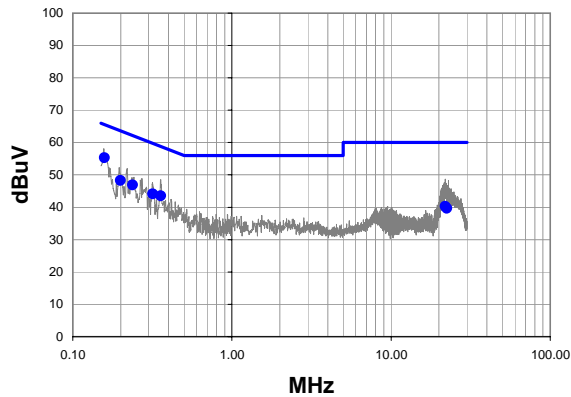
CONDUCTED EMISSIONS

Work Order:	MCSO1293	Date:	08/20/07	
Project:	N/A	Temperature:	24c	
Job Site:	SU01	Humidity:	52	
Serial Number:	0100252732	Barometric Pres.:	29.93	
EUT:	Zune (8GB) Model: 1125			
Configuration:	5			
Customer:	Microsoft Corporation			
Attendees:	James Wooten			
EUT Power:	120V/60Hz			
Operating Mode:	AV playback			
Deviations:	No deviations.			
Comments:	Pihong PS MN: PSM05A-050Q-R rev 1, SN: R3 Config 2B-P, DV solution 2 to sync cable, Premium earbuds. DV2 Config 1 Scorpius (Hynix Memory/Toshiba LCD)			

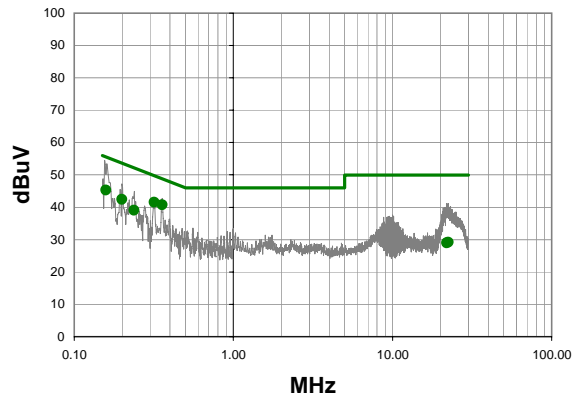
Test Specifications FCC 15.107:2006	Class B	Test Method ANSI C63.4:2003
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Run #	22	Line:	Neutral	Ext. Attenuation:	20	Results	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.158	33.4	1.8	55.2	65.6	-10.3
0.357	22.6	0.9	43.5	58.8	-15.3
0.238	25.9	1.0	46.9	62.2	-15.3
0.199	27.2	1.0	48.2	63.7	-15.4
0.318	23.2	1.0	44.2	59.8	-15.6
21.930	19.3	1.0	40.3	60.0	-19.7
22.420	18.7	1.0	39.7	60.0	-20.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.357	19.8	0.9	40.7	48.8	-8.1
0.318	20.6	1.0	41.6	49.8	-8.2
0.158	23.5	1.8	45.3	55.6	-10.2
0.199	21.4	1.0	42.4	53.7	-11.2
0.238	18.1	1.0	39.1	52.2	-13.1
22.420	8.2	1.0	29.2	50.0	-20.8
21.930	8.0	1.0	29.0	50.0	-21.0