

RADIATED EMISSIONS

DATA

FOR

**KYOCERA WIRELESS CORPORATION
10300 Campus Point Drive
San Diego, CA 92121**

Prepared by

**TÜV PRODUCT SERVICE
10040 Mesa Rim Road
San Diego, CA 92121-2912**

Measurement Requirements (CFR 47 Part 24, Paragraph 24.238)

The measurements which follow were performed by TÜV Product Service. To the best of my knowledge these tests were conducted in accordance with the procedures outlined in Part 2 of the Commission's Rules and Regulations. The data presented below demonstrates compliance with the appropriate technical standards.

A handwritten signature in black ink, which appears to read "David B. Bernardin". The signature is written in a cursive style.

Dave Bernardin
EMC Engineer

Emissions Test Conditions: SPURIOUS RADIATED EMISSIONS

Roof (small open area test site)

The <i>Spurious Radiated Emissions</i> measurements were performed using the following equipment:
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Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Cal Due Date
hp8586B	721	Spectrum Analyzer Display	Hewlett-Packard	2112A02185	06/02
3115	251	Double Ridge Antenna	EMCO	2495	10/01
AA-190-30.00.0	733	30 foot HFreq. Cable (1 - 18 GHz)	United Microwave	--	N/A*
AA-190-06.00.0	657	High Freq. Cable	United Microwave	--	N/A*
AMF-3D-010180-35-10P	752	Amplifier 20 dB	Miteq	614344	N/A*

Remarks: (*) Verified

Report No. SC105894-03



FCC Testing

REPORT No: SC105894

TESTER: Dave Bernardin

FCC Part 24

TEST DIST: 3 Meters

CUSTOMER: Kyocera

E U T: Phone AGP (V1) S/N 0194

TEST SITE: Roof

EUT MODE: Transmit

BICONICAL: N/A

DATE: August 7, 2001

LOG: N/A

NOTES: OTHER: 251

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
 below 1GHz: RBW & VBW 100 kHz for Pk; RBW 100kHz and VBW 10Hz for AVG
 CF = Antenna Factor + Cable Loss - Preamp/loss Gain + Preselector Loss

FREQ (MHz)	VERTICAL (dBuV)		HORIZONTAL (dBuV)		CF (dB/m)	MAX LEVEL (dBm(d))		SPEC LIMIT (dBm)		MARGIN (dB)		EUT Rotation	Antenna Height	Notes	dBuV/m
	pk	av	pk	av		pk	av	pk	av	pk	av				
1851.25	84		86.8		33.4	24.9								Fundamental	120.2
3702.5	37.4		38.3		-0.4	-57.4		-13.0		-44.4		0	1.2	Noise level	37.9
5553.75	36.3		36.6		4.5	-54.2		-13.0		-41.2		0	1.2	Noise level	41.1
7405	40.6		41.4		8.2	-45.7		-13.0		-32.7		0	1.2	Noise level	49.6
9256.25	41.4		41.7		10.4	-43.2		-13.0		-30.2		0	1.2	Noise level	52.1
11107.5	41.5		42.4		13.1	-39.7		-13.0		-26.7		0	1.2	Noise level	55.5
12958.75	45.6		46.8		12.7	-35.7		-13.0		-22.7		0	1.2	Noise level	59.5
1880	84		87.2		33.6	25.5								Fundamental	120.8
3760	36.3		37.3		-0.3	-58.2		-13.0		-45.2		0	1.2	Noise level	37.0
5640	36.8		36.3		4.7	-53.8		-13.0		-40.8		0	1.2	Noise level	41.5
7520	42.5		44.1		8.4	-42.7		-13.0		-29.7		0	1.2	Noise level	52.5
9400	41.1		42.5		10.0	-42.8		-13.0		-29.8		0	1.2	Noise level	52.5
11280	42		43		13.2	-39.1		-13.0		-26.1		0	1.2	Noise level	56.2
13160	45.8		45.3		13.2	-36.3		-13.0		-23.3		0	1.2	Noise level	59.0
1908.75	80.4		86.7		33.8	25.2								Fundamental	120.5
3817.5	36.1		38.2		-0.1	-57.2		-13.0		-44.2		0	1.2	Noise level	38.1
5726.25	37.2		36.6		4.9	-53.1		-13.0		-40.1		0	1.2	Noise level	42.1
7635	42		42		8.5	-44.7		-13.0		-31.7		0	1.2	Noise level	50.5
9543.75	42.7		43.3		9.8	-42.2		-13.0		-29.2		0	1.2	Noise level	53.1
11452.5	41.8		42.9		13.3	-39.1		-13.0		-26.1		0	1.2	Noise level	56.2
13361.25	45.9		45.5		14.0	-35.4		-13.0		-22.4		0	1.2	Noise level	59.9

TUV Product Service
10040 Mesa Rim Road
San Diego, CA 92121

Subject: Signal Substitution Method

All measured signals were at least 20dB from the limit and therefore the Signal Substitution Method was not performed.



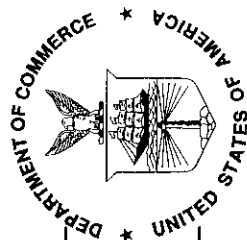
Dave Bernardin
EMC Engineer

Testing Facilities

Certificates of Approval

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]



Certificate of Accreditation

ISO/IEC GUIDE 25:1990
ISO 9002:1987

TUV PRODUCT SERVICE, INC.
SAN DIEGO, CA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/A5QC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

December 31, 2001

Effective through

David E. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 100268-0

NVLAP-01C (11-95)

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation



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**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100268-0

TUV PRODUCT SERVICE, INC.

10040 Mesa Rim Road
San Diego, CA 92121-1034
Mr. R. Barry Wallen
Phone: 619-546-3999 Fax: 619-546-0364
E-Mail: bwallen@TUVps.com
URL: <http://www.tuvps.com>

NVLAP Code Designation / Description

Emissions Test Methods:

12/CIS22	IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1:1995, and Amendment 2:1996.
12/CIS22b	CNS 13438:1997: Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/F01	FCC Method - 47 CFR Part 15 - Digital Devices
12/F01a	Conducted Emissions, Power Lines, 450 KHz to 30 MHz
12/F01b	Radiated Emissions

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A handwritten signature in dark ink, reading "David F. Alderman".

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NVLAP-01S (11-95)

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Scope of Accreditation



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**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100268-0

TUV PRODUCT SERVICE, INC.

NVLAP Code Designation / Description

12/T51 AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of
Information Technology Equipment

MIL-STD-462 : Conducted Emissions:

12/A01	MIL-STD-462 Method CE01
12/A04	MIL-STD-462 Method CE02
12/A06	MIL-STD-462 Method CE03
12/A08	MIL-STD-462 Method CE04
12/A10	MIL-STD-462 Method CE06
12/A12	MIL-STD-462 Method CE07

MIL-STD-462 : Conducted Susceptibility:

12/B01	MIL-STD-462 Method CS01
12/B02	MIL-STD-462 Method CS02
12/B04	MIL-STD-462 Method CS03/CS04/CS05/CS08
12/B05	MIL-STD-462 Method CS06

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NVLAP LAB CODE 100268-0

TUV PRODUCT SERVICE, INC.

NVLAP Code Designation / Description

12/B06 MIL-STD-462 Method CS07

12/B07 MIL-STD-462 Method CS09

MIL-STD-462 : Radiated Emissions:

12/D01 MIL-STD-462 Method RE01

12/D02 MIL-STD-462 Method RE02

12/D03 MIL-STD-462 Method RE03

MIL-STD-462 : Radiated Susceptibility:

12/E01 MIL-STD-462 Method RS01

12/E02 MIL-STD-462 Method RS02

12/E03 MIL-STD-462 Method RS03 (Consult laboratory for field strengths available)

12/E04 MIL-STD-462 Method RS03 employing RADHAZ procedures for high level testing
(Consult laboratory for field strengths available)

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Photograph of Test Setup



Photograph of Test Setup

