SPURIOUS RADIATED EMISSIONS

DATA

FOR

QUALCOMM, INC.
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 2, Paragraph 2.993 & Part 22, Paragraph 22.917)

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.

Floyd R. Fleury
EMC Manager

TÜV PRODUCT SERVICE 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 619 546 3999 FAX 619 546 0364

Emissions Test Conditions: SPURIOUS RADIATED EMISSIONS

The *Spurious Radiated Emissions* measurements were performed using the following equipment:

Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Cal Date
8566B	720/721	Spectrum Analyzer & Display	Hewlett Packard	2115A00842 2112A02185	02/18/99
AA-190-10.00.0	655	Cable	United Microwave Prod.	--	N/A
AA-190-06.00.0	657	Cable	United Microwave Prod.	--	N/A
AA-190-30.00.0	733	Cable	United Microwave Prod.	--	N/A
AMF-5D-010180-35-10P	719	Pre-amplifier	Miteq	549460	04/07/99
3115	453	Double Ridge Antenna	EMCO	9412-4364	03/10/99
3146	244	Log Periodic Antenna	EMCO	1063	03/09/99
3146	418	Log Periodic Antenna	EMCO	9402-3775	06/25/99
F4777	--	High Pass Filter	Qualcomm	--	N/A

Remarks: _____

TÜV PRODUCT SERVICE 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 619 546 3999 FAX 619 546 0364

TÜV PRODUCT SERVICE

REPORT No: S8590 TESTED BY: MW mw SPEC: FCC Part 2, Para. 2.993 & Part 22, Para. 22.917

CUSTOMER: Qualcomm, Inc. TEST DIST: 3 Meters

E U T: Model PDQ-800 Cellular Phone TEST SITE: 3

EUT MODE: Transmit, FM BICONICAL: N/A

DATE: 08-Dec-98 LOG PERIODIC: 244

NOTES: Thumper, 800 MHz Phone. OTHER: 453

RBW & VBW = 100 kHz below 1 GHz.

RBW & VBW = 1 MHz above 1 GHz.

FREQ (MHz)	VERTICAL (dBuv) pk	av	HORIZONTAL (dBuv) pk	av	CORRECTION FACTOR (dB/m)	MAX LEVEL (dBuV/m) pk	av	SPEC LIMIT (dBuV/m) pk	av	MARGIN (dB) pk	av	EUT Rotatio	Antenna Height	
824	93.5		99		26.1	125.1		-		-		96	2	
1648	33		40		31.3	71.3		84.4		-13.1		157	1.6	
2472	27.8		30.2		34.8	65.0		84.4		-19.4				
3296	34.1		32		39.2	73.3		84.4		-11.1		154	1.1	
4120	18.1		15.7		43.0	61.1		84.4		-23.3				
4944	8.1		9.2		42.8	52.0		84.4		-32.4				

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836.49	93.3		99.1		26.2	**125.3**		-		-		97	1.6	
1672.98	34.8		41.3		31.3	**72.6**		84.4		-11.8		156	1.5	
2509.47	32.2		32.2		36.4	**68.6**		84.4		-15.8				
3345.96	34.3		36.1		39.3	**75.4**		84.4		-9		158	1	
4182.45	16.4		19.6		42.9	**62.5**		84.4		-21.9				
5018.94	7.3		10.3		44.6	**54.9**		84.4		-29.5				
5855.43	11.7		14.3		46.0	**60.3**		84.4		-24.1				

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848.97	92.6		98.9		26.3	**125.2**		-		-		99	1.8	
1697.94	35.4		37.7		31.3	**69.0**		82.4		-13.4				
2546.91	31.9		38.1		36.4	**74.5**		82.4		-7.9		231	1.4	
3395.88	32.7		32.5		39.3	**72.0**		82.4		-10.4		110	1.1	
5093.82	8.8		10.1		44.6	**54.7**		82.4		-27.7				
5942.63	12.5		11.9		46.0	**58.5**		82.4		-23.9				

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CUSTOMER: Qualcomm, Inc. TEST DIST: 3 Meters

E U T: Model PDQ-800 Cellular Phone TEST SITE: 3

EUT MODE: Transmit, CDMA BICONICAL: N/A

DATE: 09-Dec-98 LOG PERIODIC: 418

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RBW & VBW = 100 kHz below 1 GHz.

RBW & VBW = 1 MHz above 1 GHz.

FREQ (MHz)	VERTICAL (dBuv) pk	av	HORIZONTAL (dBuv) pk	av	CORRECTION FACTOR (dB/m)	MAX LEVEL (dBuV/m) pk	av	SPEC LIMIT (dBuV/m) pk	av	MARGIN (dB) pk	av	EUT Rotatio	Antenna Height	
824.04	87.9		97.6		25.8	**123.4**		-		-				
1648.08	27		31.4		28.1	**59.5**		84.4		-24.9				
2472.1	17		25.5		32.3	**57.8**		84.4		-26.6				
3296.2	23.8		26.3		34.3	**60.6**		84.4		-23.8				
4120.2	7.8		9.1		43.0	**52.1**		84.4		-32.3				
4944.2	-1.9		-1.9		42.8	**40.9**		84.4		-43.5				
5768.3	-1.9		0.4		45.9	**46.3**		84.4		-38.1				

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836.49	91.7		97.4		25.8	**123.2**		-		-				
1672.98	29.3		36.3		28.1	**64.4**		84.4		-20				
2509.5	24.5		25.3		32.3	**57.6**		84.4		-26.8				
3346	26.5		28.7		34.3	**63.0**		84.4		-21.4				
4182.5	7.9		9.9		43.1	**53.0**		84.4		-31.4				
5018.9	-1.3		-0.8		44.6	**43.8**		84.4		-40.6				
5855.4	-1.9		4.6		46.0	**50.6**		84.4		-33.8				

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848.97	91.2		97		25.8	122.8		-		-				
1698	31.7		37.4		28.1	65.5		84.4		-18.9				
2546.9	17.6		28.3		32.3	60.6		84.4		-23.8				
3395.9	25.1		27.6		34.3	61.9		84.4		-22.5				
4244.8	7.6		9		43.1	52.1		84.4		-32.3				
5093.9	-0.8		-1		44.6	43.8		84.4		-40.6				
5942.8	-1.9		-1.9		46.0	44.1		84.4		-40.3				

TÜV PRODUCT SERVICE 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 619 546 3999 FAX 619 546 0364

Testing Facilities

Certificates of Approval

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TÜV PRODUCT SERVICE

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100268-0

TUV PRODUCT SERVICE, INC.
10040 Mesa Rim Road
San Diego, CA 92121-1034
Mr. Floyd R. Fleury
Phone: 619-546-3999 Fax: 619-546-0364

NVLAP Code	*Designation / Description*
International Special Committee on Radio Interference (CISPR) Methods	
12/CIS22	IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment
Federal Communications Commission (FCC) Methods	
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
Australian Standards referred to by clauses in AUSTEL Technical Standards	
12/T51	AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment

December 31, 1999
Effective through

For the National Institute of Standards and Technology

NVLAP-01S (11-95)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

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/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS
FCC

December 31, 1999
Effective through

For the National Institute of Standards and Technology

NVLAP Lab Code: 100268-0

NVLAP-01C (11-95)

TÜV PRODUCT SERVICE

TÜV
PRODUCT SERVICE

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

December 1, 1998

Mr. Floyd R. Fleury
TUV Product Service, Inc.
10040 Mesa Rim Road
San Diego, CA 92121-1034

NVLAP Lab Code: 100268-0

Dear Mr. Fleury:

I am pleased to inform you that continuing accreditation for specific test methods in Electromagnetic Compatibility & Telecommunications, FCC is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until December 31, 1999, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP logo in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Jon Crickenberger, Sr. Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

Sincerely,

James L. Cigler, Chief
Laboratory Accreditation Program

Enclosure(s)

NIST

Photograph of Test Setup

TÜV PRODUCT SERVICE 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 619 546 3999 FAX 619 546 0364

Photograph of Test Setup

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