

Report No. S8105-03

**RADIATED EMISSIONS**

**DATA**

**FOR**

**QUALCOMM PERSONAL ELECTRONICS**

**10300 Campus Point Drive**

**San Diego, CA 92121**

**Prepared by**

**TÜV PRODUCT SERVICE**

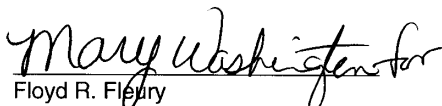
**10040 Mesa Rim Road  
San Diego, CA 92121-2912**

Report No. S8105-03



Measurement Requirements (Paragraph 2.993)

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, EIC

**Emissions Test Conditions: SPURIOUS RADIATED EMISSIONS**

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

**Test Equipment Used :**

	<b>Model No.</b>	<b>Prop. No.</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Serial No.</b>
■ -	3104	235	Antenna, Biconical	EMCO	3031
■ -	8566B	407	Spectrum Analyzer	Hewlett Packard	2311A02209
■ -	85662B	406	Spectrum Analyzer Display	Hewlett Packard	2309A04682
■ -	3146	418	Log Periodic Antenna	EMCO	--

Remarks: \_\_\_\_\_

\_\_\_\_\_



REPORT No: S-8393 TESTED BY: *dm* SPEC: FCC Part 22 para 22.917

CUSTOMER: Qualcomm TEST DIST: 3 Meters

E U T: QCP 860 TEST SITE: 3

EUT MODE: transmit - full power BICONICAL: N/A  
AMPS

DATE: 11-Aug-98 LOG PERIODIC: 418

NOTES: OTHER: 453

RBW & VBW 1 MHz

FREQ (MHz)	VERTICAL (dBuv)		HORIZONTAL (dBuv)		CORRECTION FACTOR (dB/m)	MAX LEVEL (dBuV/m)		SPEC LIMIT (dBuV/m)		MARGIN (dB)		EUT Rotatio	Antenna Height
	pk	av	pk	av		pk	av	pk	av	pk	av		
836.49	100.1		85.7		26.8	126.9							
1672.98	38.5		35.8		31.2	69.7		84.4		-14.7			
2509.47	42.3		41.8		34.7	77.0		84.4		-7.45			
3345.96	21		18.9		38.3	59.3		84.4		-25.1			
4182.45	22.9		20.6		40.1	63.0		84.4		-21.4			
5018.94	14.2		14		41.8	56.0		84.4		-28.4			
5855.43	16.1		20.8		43.9	64.7		84.4		-19.7			
6691.92	8		8.1		44.8	52.9		84.4		-31.5			
7528.41	9.9		13.9		46.0	59.9		84.4		-24.5			
8364.9	4.8		5.1		47.0	52.1		84.4		-32.3			
824.04	99.5		86.5		26.7	126.2							
1648.08	36.9		36.8		31.0	67.9		84.4		-16.5			
2472.12	44.8		41.6		34.5	79.3		84.4		-5.09			
3296.16	18.3		21.1		38.1	59.2		84.4		-25.2			
4120.2	18.9		19		40.3	59.3		84.4		-25.1			
4944.24	9.2		9.1		41.5	50.7		84.4		-33.7			
5768.28	11.3		14		43.7	57.7		84.4		-26.7			
6592.32	7.1		10.7		44.6	55.3		84.4		-29.1			
7416.36	8		11.5		45.9	57.4		84.4		-27			
8240.4	4.9		5.8		46.9	52.7		84.4		-31.7			
848.97	99.4		85.5		27.0	126.4							
1697.94	37.3		24.5		31.3	68.6		84.4		-15.8			
2546.91	36.3		34.7		34.9	71.2		84.4		-13.2			
3395.88	27.2		20.6		38.4	65.6		84.4		-18.8			
4244.85	18.1		20.9		40.0	60.9		84.4		-23.5			
5093.82	12.9		13.7		42.0	55.7		84.4		-28.7			
5942.79	13		21.1		44.1	65.2		84.4		-19.2			
6791.76	7.9		12.6		44.9	57.5		84.4		-26.9			
7640.73	10.3		16.1		46.2	62.3		84.4		-22.1			
8489.7	4.7		5.5		47.1	52.6		84.4		-31.8			



REPORT No: S-8393 TESTED BY: dmo *dm* SPEC: FCC Part 22 para 22.917

CUSTOMER: Qualcomm TEST DIST: 3 Meters

E U T: QCP 860 TEST SITE: 3

EUT MODE: transmit - full power BICONICAL: N/A

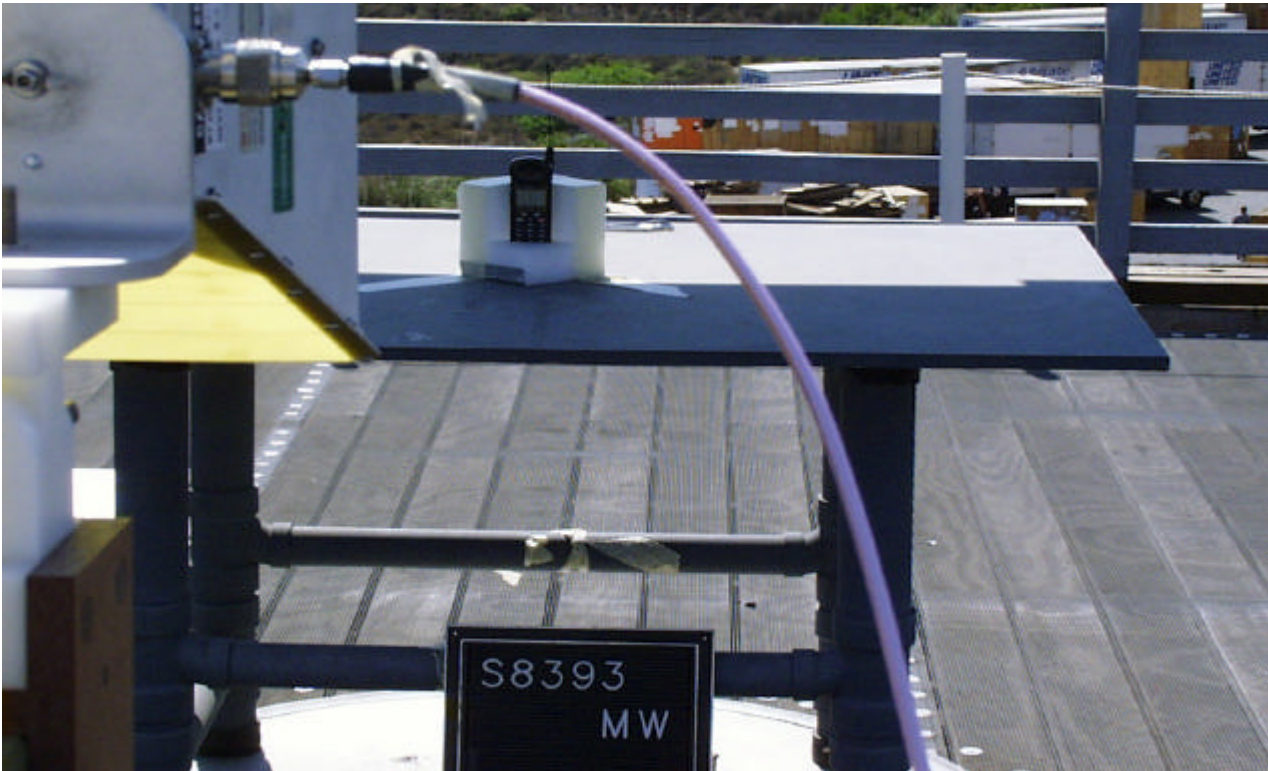
DATE: 11-Aug-98 LOG PERIODIC: 418

NOTES: OTHER: 453

RBW & VBW 1 MHz  
 CDMA MODE

FREQ (MHz)	VERTICAL (dBuv)		HORIZONTAL (dBuv)		CORRECTION FACTOR (dB/m)	MAX LEVEL (dBuV/m)		SPEC LIMIT (dBuV/m)		MARGIN (dB)		Rotatio	EUT	Antenna Height
	pk	av	pk	av		pk	av	pk	av	pk	av			
824.04	97		76		26.7	123.7								
1648.08	23.5		7		31.0	54.5		84.4		-29.9				
2472.12	34.1		27.4		34.5	68.6		84.4		-15.8				
3296.16	11.3		10		38.1	49.4		84.4		-35				
4120.2	4.7		4		40.3	45.0		84.4		-39.4				
4944.24	nf		nf		41.5			84.4						
836.49	95.9		82.2		26.8	122.7								
1672.9	24.5		10.7		31.2	55.7		84.4		-28.7				
2509.31	40		27.8		34.7	74.7		84.4		-9.75				
3345.72	7.7		6.7		38.3	46.0		84.4		-38.4				
4182.13	6.3		4.2		40.1	46.4		84.4		-38				
5018.54	nf		nf		41.8									
848.97	95.5		84.5		27.0	122.5								
1697.9	31		12.9		31.3	62.3		84.4		-22.1				
2546.83	34.6		23.9		34.9	69.5		84.4		-14.9				
3395.76	16.2		9.6		38.4	54.6		84.4		-29.8				
4244.69	7.7		8.7		40.0	48.7		84.4		-35.7				
5093.62	-0.9		2.8		42.0	44.8		84.4		-39.6				





Testing Facilities  
Certificates of Approval



Report No. S8105-03



**FEDERAL COMMUNICATIONS COMMISSION**

7435 Oakland Mills Road  
Columbia, MD 21046  
Telephone: 301-725-1585 (ext-218)  
Facsimile: 301-344-2050

July 15, 1998

IN REPLY REFER TO  
31040/SIT  
1300F2

TUV Product Service  
10040 Mesa Rim Road  
San Diego, CA 92121-2912

Attention: Dave Marshall

Re: Measurement facility located at San Diego ( 3 meter site )

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has also been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list is available on the Internet at the FCC Website [www.fcc.gov](http://www.fcc.gov) under Electronic Filing.

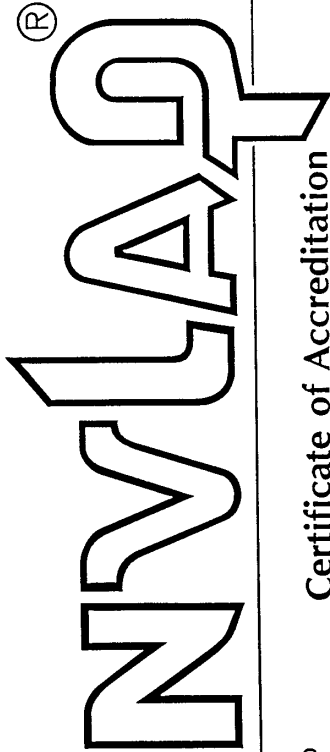
Sincerely,

A handwritten signature in black ink that reads 'Thomas W. Phillips'. The signature is written in a cursive style.

Thomas W. Phillips  
Electronics Engineer  
Customer Service Branch



United States Department of Commerce  
National Institute of Standards and Technology



ISO/IEC GUIDE 25:1990  
ISO 9002:1987

Certificate of Accreditation

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, 1998

Effective through

For the National Institute of Standards and Technology  
NVLAP Lab Code: 100268-0

NVLAP-01C (11-95)



ISO/IEC GUIDE 25:1990  
ISO 9002:1987

### Scope of Accreditation



Page: 1 of 1

**ELECTROMAGNETIC COMPATIBILITY  
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100268-0

**TUV PRODUCT SERVICE, INC.**  
10040 Mesa Rim Road  
San Diego, CA 92121-1034  
Mr. John G. Smith  
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, 1998

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (11-95)