

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 25, Paragraph 25.202)

7R Floury

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



Emissions Test Conditions: SPURIOUS RADIATED EMISSIONS

Roof (small open area test site)

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

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Cal Due Date
HP8566B	407	Spectrum Analyzer	Hewlett Packard	2311A02209	02/02
HP8445B	809	Automatic Preselector	Hewlett Packard	1442A01127	N/A*
AMF-3D-010180-35-10P	752	Amplifier 20 dB	Miteq	614344	N/A*
FF6548-2	781	2000 MHz High Pass Filter	Sage Laboratories	004	N/A*
3115	251	Double Ridge Antenna	EMCO	2495	10/01
AA-190-30.00.0	732	30 foot HFreq. Cable (1 - 18 GHz)	United Microwave Pro		N/A*
AA-190-06.00.0	657	High Freq. Cable	United Microwave Pro		N/A*

Remarks: (*) Verified

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FCC Part 25, Paragraph 25.202

Globalstar ODU and Globalstar AFUT

Low, mid and high channels tested. All emissions (spurious and harmonics) were greater than 20 dB below the limit. Frequency range investigated from lowest RF frequency generated up to the 10th harmonic.

Operating Mode: Transmit Full Power

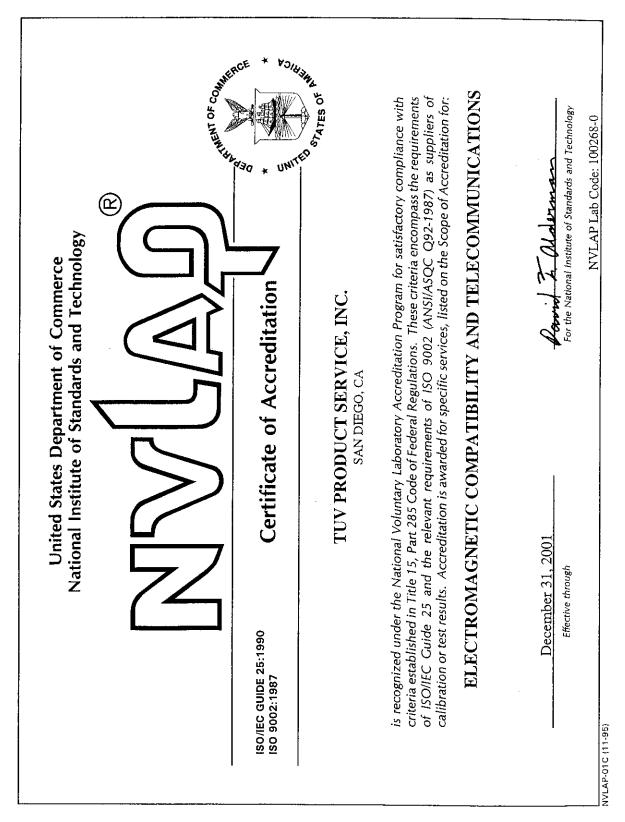
RBW and VBW = 1 MHz for peak for fundamental and harmonics. RBW and VBW = 30 kHz 20 video samples for average for fundamental.



Testing Facilities

Certificates of Approval





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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

December 31, 2001

Effective through

Pavid L. Molerman

For the National Institute of Standards and Technology

NVLAP-01S (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.

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

December 31, 2001

Effective through

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For the National Institute of Standards and Technology

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ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

. 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)

December 31, 2001

Effective through

Pavid L. Moleman

For the National Institute of Standards and Technology

NVLAP-01S (11-95)

Exhibit 14 Frequency Stability

The test results reported in the following 2 tables are abstracted from the conducted design verification test (DVT) results on 8 sample DVT RAU RF Boards as will be reported in the in-progress Fixed Phone RF Board Design Verification Test Plan, 80-98415-1 X3.

Table 1 presents the mean values of measured frequency variation in parts per million (ppm) at cold (-30 $^{\circ}$ C), ambient, and hot (60 $^{\circ}$ C) temperatures. Table 2 presents the minimum, maximum, and mean values over all temperatures for the 7 boards tested.

Test Equipment

Equipment	Serial Number	Cal Date	Cal Due			
Leader DC Power Supply	DE14268	September 14, 2000	September 14, 2001			
HP 8593EM Spectrum Analyzer	3412A00107	February 1, 2001	February 12, 2002			

Table 1. Mean Variation in TX Frequency with Temperature

					Delta	
	-30 C	Ambient	60 C	Spec.	Amb. To Cold	Amb. To Hot
TX ppm	1.18	0.31	0.36	5.00	0.87	0.04

Table 2. Variation Range for TX Frequency over Temperature Range

	Data for Hot, Cold, Ambient			Test		Design
	Min.	Max.	Mean	Limit	Std. Dev.	Cpk
TX ppm	-0.49	2.30	0.65	5.00	0.78	1.9

Statistical Manufacturing Margin

Cpk = (Average - spec. Limit) / 3*Sigma Value