

*FCC PART 15, SUBPART B
 CLASS B TEST REPORT
 (MEASURED TO CISPR 22 B LIMITS)*

for
**SMARTSCM SOCKETMODEM
 PARALLEL
 MODEL: SC56H0, SC336H0, SC144H0**

Prepared for
**CONEXANT SYSTEMS
 4311 JAMBOREE ROAD
 NEWPORT BEACH, CALIFORNIA 92660**

Prepared by: _____
CARLOS SANDOVAL

Approved by: _____
JOHN ETHINGTON

**COMPATIBLE ELECTRONICS INC.
 19121 EL TORO ROAD
 SILVERADO, CALIFORNIA 92676
 (949) 589-0700**

DATE: APRIL 2, 2001

REPORT BODY	APPENDICES					TOTAL
	A	B	C	D	-	
PAGES	16	2	2	10	13	- 43

This report shall not be reproduced except in full, without the written approval of Compatible Electronics.



TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
1. PURPOSE	6
2. ADMINISTRATIVE DATA	7
2.1 Location of Testing	7
2.2 Traceability Statement	7
2.3 Cognizant Personnel	7
2.4 Date Test Sample was Received	7
2.5 Disposition of the Test Sample	7
2.6 Abbreviations and Acronyms	7
3. APPLICABLE DOCUMENTS	8
4. Description of Test Configuration	9
4.1 Description of Test Configuration - EMI	9
4.1.1 Cable Construction and Termination	10
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	11
5.1 EUT and Accessory List	11
5.2 EMI Test Equipment	12
6. TEST SITE DESCRIPTION	13
6.1 Test Facility Description	13
6.2 EUT Mounting, Bonding and Grounding	13
7. Test Procedures	14
7.1 RF Emissions	14
7.1.1 Conducted Emissions Test	14
7.1.2 Radiated Emissions Test	15
8. CONCLUSIONS	16



LIST OF APPENDICES

APPENDIX	TITLE
A	Modifications to the EUT
B	Additional Models Covered Under This Report
C	Diagrams, Charts and Photos <ul style="list-style-type: none">• Test Setup Diagrams• Antenna and Effective Gain Factors• Radiated and Conducted Emissions Photos
D	Data Sheets

LIST OF FIGURES

FIGURE	TITLE
1	Conducted Emissions Test Setup
2	Plot Map And Layout of Test Site



GENERAL REPORT SUMMARY

This electromagnetic emission and immunity test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel (except where specified) according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full with the written permission of Compatible Electronics.

The immunity data included in this report are not covered by NVLAP accreditation. This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: SmartSCM Socketmodem Parallel
MODEL: SC56H0
S/N: Prototype

Product Description: This device is used to add connectivity to telephone lines, configured via the internal bus of a PC.

Modifications: Modifications made to the EUT can be found in Appendix A.

Manufacturer: Conexant Systems
4311 Jamboree Road
Newport Beach, CA. 92660

Test Date: August 15, 2000

Test Specifications: EMI requirements
FCC Title 47, Part 15 Subpart B, CLASS B per CISPR 22 Limits
Test Procedure: ANSI C63.4: 1992.

Test Deviations: The test procedure was not deviated from during the testing.



SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	Complies with the Class B requirements of FCC Title 47, Part 15 Subpart B, as measured to the limits described in CISPR Publication 22: 1993.
2	Radiated RF Emissions, 30 MHz – 1000 MHz.	Complies with the Class B requirements of FCC Title 47, Part 15 Subpart B, as measured to the limits described in CISPR Publication 22: 1993.



1.**PURPOSE**

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Conexant, SmartSCM Socketmodem Parallel, MODEL: SC56H0. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by C.I.S.P.R. Publication 22 for Information Technology Equipment from 150 kHz to 1 GHz. Title 47, part 15 of the FCC rules, the FCC accepts the international standards set forth in C.I.S.P.R. Publication 22.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 19121 El Toro Road, Silverado, California 92676.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Conexant Systems

Compatible Electronics Inc

John Ethington
Victor Ratinoff

2.4 Date Test Sample was Received

The test sample was received on August 14, 2000.

2.5 Disposition of the Test Sample

The test sample was returned to Conexant, August 26, 2000.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

2.0 Abbreviations and Acronyms

The following abbreviations and ac-

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network



3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CISPR 22 1993	Limits and methods of measurement of radio interference characteristics of information technology equipment.
CISPR 16 1993	Specification for radio disturbance and immunity measuring apparatus and methods.
FCC Title 47, Subpart B.	FCC Rules - Radio frequency devices (including digital devices).
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.



4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

Setup and operation of the equipment under test.

The Equipment Under Test (EUT) was configured as a table top device with peripherals connected so that at least one interface port of each type was connected to one external peripheral. The EUT was tested in both active and idle modes of operation. The EUT was tested in worst case as stated in the following configuration description.

The EUT (SmartSCM Socketmodem Parallel, MODEL: SC56H0) was installed in a Demo Board which was installed in a Compaq host computer and was connected to a remotely located Teltone phone line simulator via its telephone line port. The host computer was also connected to a Microscan video monitor, an external Hayes modem, a HP printer, a Compaq mouse and a Compaq keyboard via its video, serial, parallel, mouse and keyboard ports respectively. The remotely located telephone line simulator was connected to a Rockwell modem via its second telephone line port. The remotely located IBM Clone computer was connected to the Rockwell modem, Tatung monitor, Supergate Tech keyboard and Logitech mouse via its serial, video, keyboard and mouse ports respectively.

The EUT was exercised continuously by a program in the host computer, which was sending to and receiving data from EUT and in turn sent over the telephone lines to a Telephone line simulator. The host computer is also displaying live full screen H's on the monitor during the test which were originated at the remotely located clone computer.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The cables and peripherals were moved to maximize the emissions. The final conducted as well as radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix C.



4.1.1**Cable Construction and Termination****Cable 1**

This is a 2 meter braid and foil shielded round cable connecting the Compaq host computer to the Microscan monitor. It has a DB15 metallic type connector at the computer end and is hardwired at the monitor end. The shield of the cable is grounded to the chassis via its connector and it is bundled to 1 meter.

Cable 2

This is a 3 meter braid and foil shielded connecting the Compaq host computer to the Hewlett Packard printer. It has a DB-25 connector at the computer end and a Centronics connector at the printer end. The shield of the cable is grounded to the chassis via the connector. This cable is bundled to a length of one meter.

Cable 3

This is a 2 meter braid and foil shielded connecting the Compaq host computer to the external Hayes modem. It has a DB-9 connector at the computer end and a DB-25 connector at the modem end. The shield of the cable is grounded to the chassis via the connector. This cable is bundled to a length of one meter.

Cable 4

This is a 2 meter unshielded round cable connecting the Compaq host computer to the Compaq keyboard. It has a 6-pin mini DIN metallic type connector at the computer end and is hardwired at the keyboard end.

Cable 5

This is a 2 meter unshielded round cable connecting the Compaq host computer to the Compaq mouse. It has a 6-pin mini DIN metallic type connector at the computer end and is hardwired at the mouse end.

Cable 6

This is a 50 foot un-shielded round cable connecting the modem port of the EUT to the first port of the Teltone telephone line simulator. It has an RJ-11 connector at both ends of the cable.

Cable 7

This is a 5 foot braid and foil shielded round cable connecting the clone computer to the Teltone telephone line simulator. It has a DB-9 metallic type connector at the computer end and a DB-25 metallic type connector at the TLS end.

Cable 8

This is a 5 foot braid and foil shielded round cable connecting the clone computer to the Tatung monitor. It has a DB15 metallic type connector at the computer end and is hardwired at the monitor end.

Cable 9

This is a 2 meter foil shielded round cable connecting the clone computer to the Supergate Tech keyboard. It has a 6-pin mini DIN metallic type connector at the computer end and is hardwired at the keyboard end.

Cable 10

This is a 2 meter foil shielded round cable connecting the clone computer to the Logitech mouse. It has a 6-pin mini DIN metallic type connector at the computer end and is hardwired at the mouse end.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER
SMARTSCM SOCKETMODEM PARALLEL (EUT)	CONEXANT	SC90-D300-011	PROTOTYPE
DEMO BOARD (EUT HOST)	CONEXANT.	TE28-D410-001	NONE
AC ADAPTER (EUT HOST)	FCI	MW48-0500800	NONE
DESKTOP COMPUTER (HOST)	COMPAQ	M5133	670HVT5X203
MONITOR (HOST)	MICROSCAN	LM-1448	248S035210
KEYBOARD (HOST)	COMPAQ	RT66S6TW	23N39DX11277
MOUSE (HOST)	COMPAQ	M-S36	171189-401
PRINTER	HP	C2642A	SG6671A0FW
EXTERNAL MODEM	HAYES	231AA	21031083346
TELEPHONE LINE SIMULATOR	TELTON	TLS-5	064989
EXTERNAL MODEM	ROCKWELL	WCEM-S	NONE
DESKTOP COMPUTER	AT CLONE	PENTIUM	NONE
MONITOR	TATUNG	CM14SBM	68491614
KEYBOARD	SUPERGATE TECH.	SG-1000	5411172704
MOUSE	LOGITECH	811312-01	LZA71764915



5.2 EMI Test Equipment

Equipment Type	Manufacturer	Model Number	Serial Number	Cal Date	Cal. Due Date
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01217	Jan. 24, 2000	Jan. 24, 2001
Spectrum Analyzer – Disp.	Hewlett Packard	85662A	2810A15687	Jan. 24, 2000	Jan. 24, 2001
Spectrum Analyzer - RF	Hewlett Packard	8566B	2747A04633	Jan. 24, 2000	Jan. 24, 2001
Preamplifier	Com Power	PA-102	01200	Jan. 31, 2000	Jan. 31, 2001
RF Attenuator	Pasternack	PE7002-10	None	Jan. 31, 2000	Jan. 31, 2001
LISN – (EUT SIDE)	Com Power	LI-215	12039	Feb 02, 2000	Feb. 02, 2001
LISN – (Accessory SIDE)	Com Power	LI-215	12063	Feb 02, 2000	Feb. 02, 2001
Biconical Antenna	Com Power	AB-900	15108	Apr. 04, 2000	Apr. 04, 2001
Log Periodic Antenna	Com Power	AL-100	16074	Jan. 03, 2000	Jan. 03, 2001
Antenna Mast	Com Power	AM-400	None	NCR	N/A
Turntable	Com Power	TT-100	None	NCR	N/A
Computer	Hewlett Packard	Pavilion 4530	US92100357	NCR	N/A
Keyboard	Hewlett Packard	5183-7399	B91617789	NCR	N/A
Mouse	Hewlett Packard	M-S34	LZC91158065	NCR	N/A
Monitor	Sony	CPD-100GS	7030391	NCR	N/A
Printer	Hewlett Packard	C5886A	CN859130FZ	NCR	N/A
Comb-Generator	Com Power	CG-501	1418	NCR	N/A
Comb-Generator	Com Power	CG-520	25168	NCR	N/A



6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was grounded only through the ground prong on the power cord.



7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The HP 8566B spectrum analyzer was used as a measuring meter along with the HP 85650A quasi-peak adapter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak detector was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the spectrum analyzer offset was adjusted accordingly to read the actual data measured. The LISN output was read by the HP 8566B spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 1992. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequencies ranges of 0.15 MHz to 1.6 MHz, 1.6 MHz to 5 MHz and 5 MHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable and peripheral placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the spectrum analyzer span adjusted to 1 MHz.

The final data was collected under program control by the HP 9000/300 in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave.



7.1.2

Radiated Emissions Test

The spectrum analyzer was used as a measuring meter. A preamplifier was used to increase the sensitivity of the instrument. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps. The quasi-peak was used only for those readings that are marked accordingly on the data sheets. The following antennas and measurement bandwidths were used as specified in the following table.

FREQUENCY RANGE (MHz)	TRANSDUCER	EFFECTIVE MEASUREMENT BANDWIDTH
30 to 300	BICONICAL ANTENNA	120 kHz
300 to 1000	LOG PERIODIC ANTENNA	120 kHz

The final data was taken with a frequency span of 1 MHz, but the frequency span was reduced during the preliminary investigations as deemed necessary to distinguish between emissions from the EUT and any ambients.

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to CISPR 16: 1993. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 10 meter test distance to obtain final test data for the frequencies of 30 MHz to 1.0 GHz. The EUT was set up as shown in figure 2 in Appendix C of this report. Photographs of the test equipment, and EUT setup during the test are located in Appendix C. The final qualification data sheets are located in Appendix D.

Test Results:

The EUT complies with the limits of the **Class B** specification limits defined by C.I.S.P.R. Publication 22: 1993 for radiated emissions.



8. CONCLUSIONS

The Conexant, SmartSCM Socketmodem Parallel (EUT), MODEL: SC56H0 meets all of the **Class B** specification limits defined by C.I.S.P.R. Publication 22; for Information Technology Equipment, from 150 kHz to 1 GHz, and Title 47, Part 15 of the FCC Rules. The FCC accepts the international standards set forth in C.I.S.P.R. Publication 22.

The minimum margin of the radiated emissions test for the Conexant, SmartSCM Socketmodem Parallel (EUT), MODEL: SC56H0 is: 1.71 dB at 166.26 MHz.



APPENDIX A

MODIFICATIONS TO THE EUT



MODIFICATIONS TO THE EUT

There were no modifications made to the EUT during the test:



APPENDIX B

ADDITIONAL MODELS COVERED UNDER THIS REPORT



ADDITIONAL MODELS COVERED UNDER THIS REPORT

There are two additional models covered in this report which are Smart SCM modems, models: SC336H0 and SC144H0. The difference between these models and the unit tested is the top speed of the modem. The unit tested is the fastest speed.



APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS



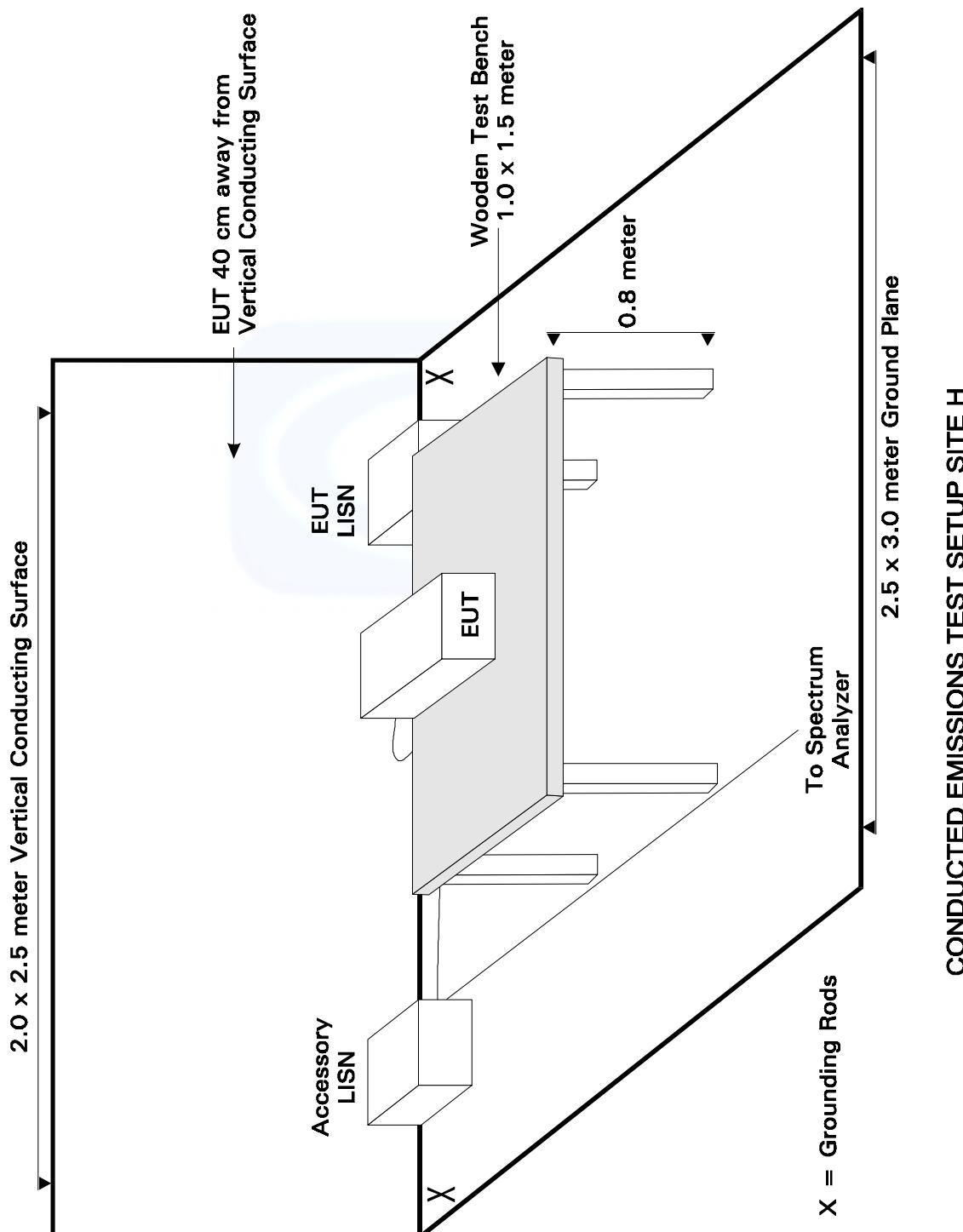
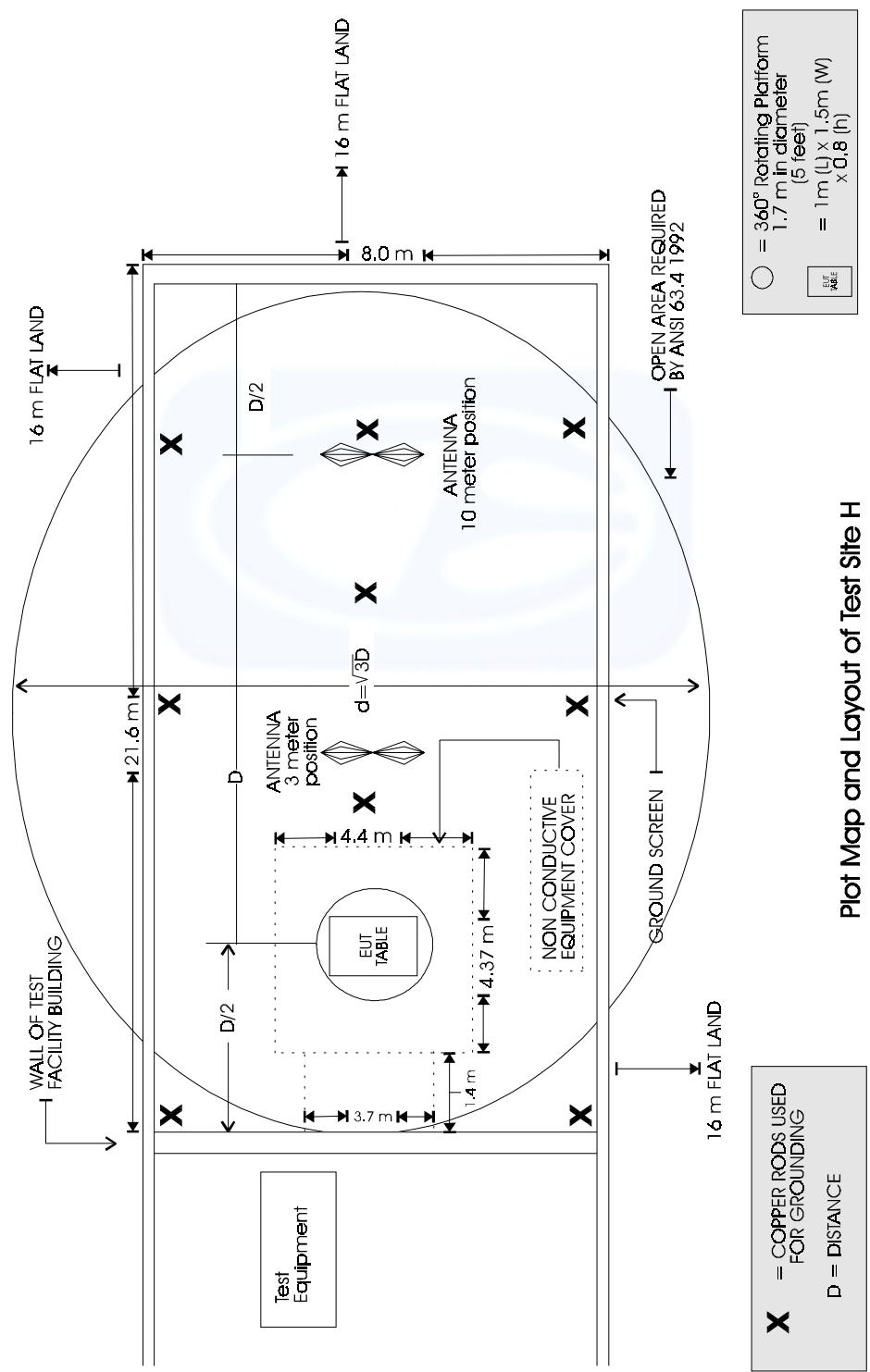
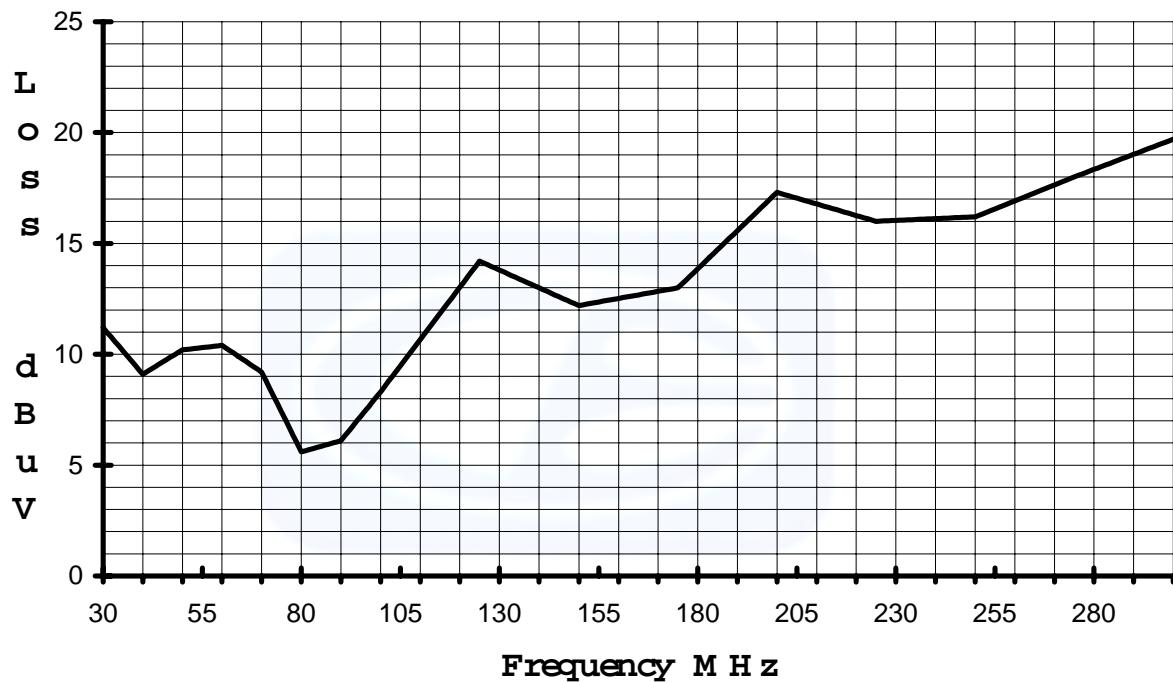
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

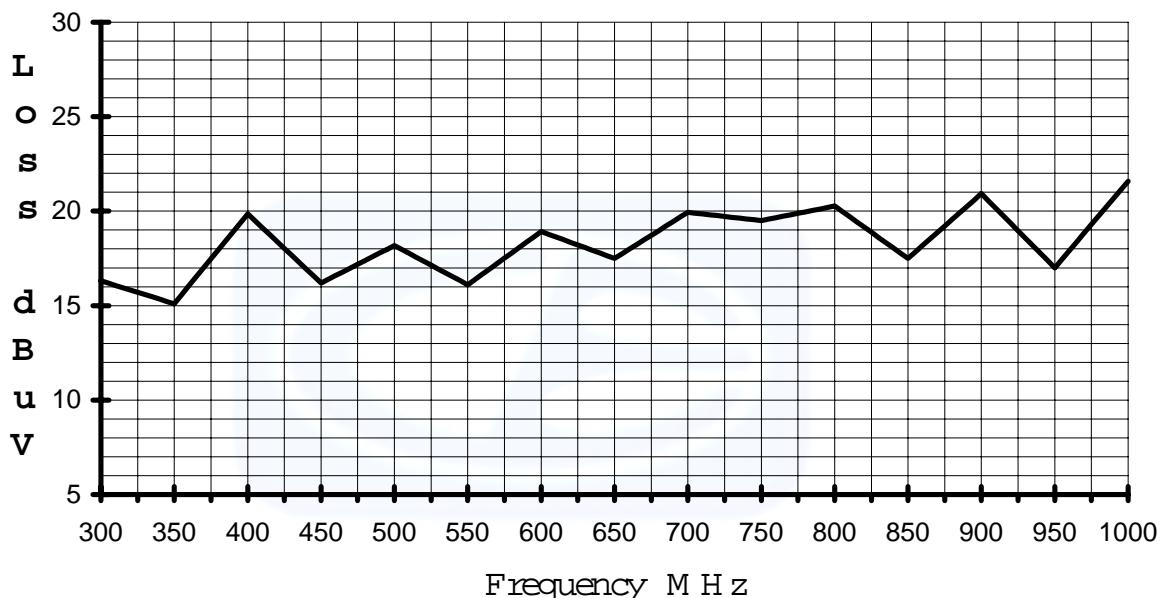
FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

Plot Map and Layout of Test Site H

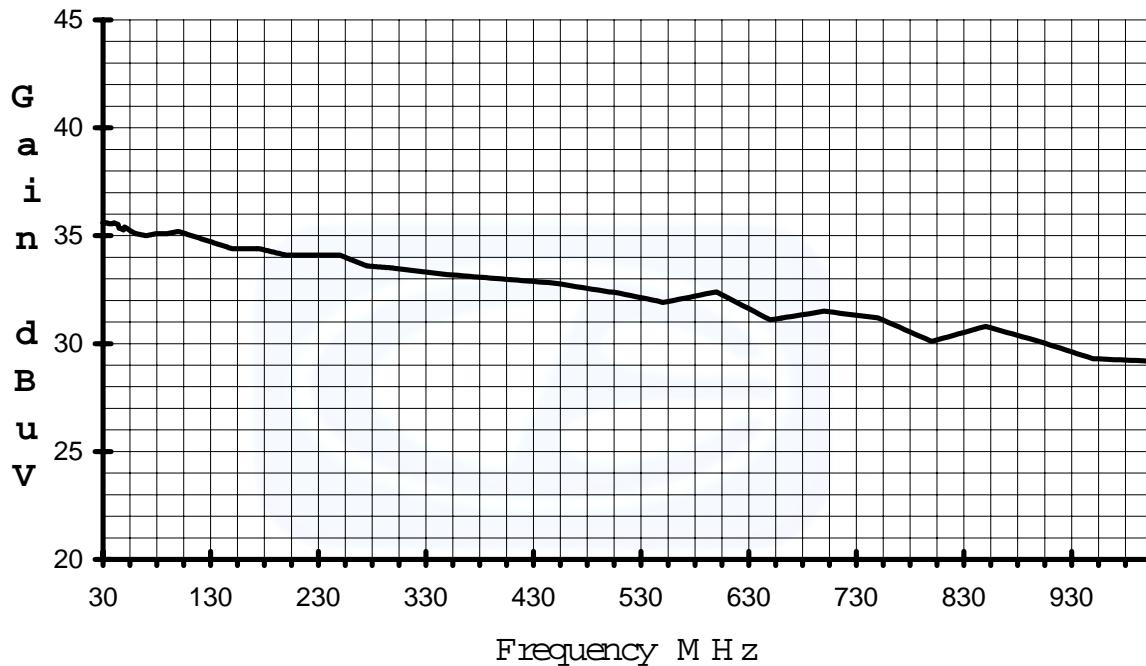
**Antenna Factors Biconical Antenna Model: AB-900 S/N :
15108**



Antenna factors Log Periodic Antenna Model: AL-100 S/N:
16074



Preamplifier Effective Gain at 10m. Model: CPPA-102 SN:
01200



RADIATED EMISSIONS – 30MHz TO 1000MHz

COMPANY:	Conexant	DATE:	08-15-00
EUT:	SmartSCM Socketmodem Parallel	ENGINEER:	John Ethington
P/N:	SC90-D300-011	S/N:	PROTOTYPE
SPEC:	CISPR22	CLASS:	B

**FRONT VIEW****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

RADIATED EMISSIONS – 30MHz TO 1000MHz

COMPANY:	Conexant	DATE:	08-15-00
EUT:	SmartSCM Socketmodem Parallel	ENGINEER:	John Ethington
P/N:	SC90-D300-011	S/N:	PROTOTYPE
SPEC:	CISPR22	CLASS:	B

**REAR VIEW****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

CONDUCTED EMISSIONS

COMPANY:	Conexant	DATE:	08-14-00
EUT:	SmartSCM Socketmodem Parallel	ENGINEER:	John Ethington
P/N:	SC90-D300-011	S/N:	PROTOTYPE
SPEC:	CISPR22	CLASS:	B

**FRONT VIEW**

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



CONDUCTED EMISSIONS

COMPANY:	Conexant	DATE:	08-14-00
EUT:	SmartSCM Socketmodem Parallel	ENGINEER:	John Ethington
P/N:	SC90-D300-011	S/N:	PROTOTYPE
SPEC:	CISPR22	CLASS:	B

**REAR VIEW****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX D

DATA SHEETS



Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 19.36
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock 4.032, Host System Clock: 66.6MHz

Qualification Scan
 Tested By: John Ethington

Pol	Freq	Rdng	Cable	Ant	Amp	Cor'd	limit	Delta
			loss	factor	gain	rdg = R	= L	R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	52.49	54.20	0.85	10.25	36.18	29.12	30.00	-0.88
2V	52.50	51.53	0.85	10.25	36.18	26.45Qp	30.00	-3.55
3V	56.52	49.70	0.93	10.33	36.13	24.83	30.00	-5.17
4V	76.68	50.10	1.07	6.80	36.13	21.83	30.00	-8.17
5V	84.74	50.40	1.10	5.84	36.20	21.14	30.00	-8.86
6V	108.92	48.70	1.21	10.41	36.21	24.10	30.00	-5.90
7V	112.95	49.50	1.26	11.36	36.17	25.94	30.00	-4.06
8V	116.98	47.00	1.30	12.31	36.13	24.48	30.00	-5.52
9V	125.05	42.80	1.40	14.20	36.20	22.20	30.00	-7.80
10V	133.03	45.00	1.43	13.56	36.04	23.95	30.00	-6.05
11V	133.11	43.10	1.43	13.55	36.04	22.05	30.00	-7.95
12V	141.17	42.30	1.46	12.91	35.90	20.77	30.00	-9.23
13V	149.26	43.50	1.50	12.26	35.90	21.36	30.00	-8.64
14V	166.26	51.50	1.57	12.72	36.06	29.73	30.00	-0.27
15V	166.26	50.06	1.57	12.72	36.06	28.29Qp	30.00	-1.71
16V	169.43	41.90	1.58	12.82	36.04	20.26	30.00	-9.74
17V	173.40	41.50	1.59	12.95	36.01	20.03	30.00	-9.97
18V	181.48	41.20	1.65	14.11	36.18	20.79	30.00	-9.21
19V	197.61	38.00	1.78	16.89	35.94	20.73	30.00	-9.27
20V	232.72	47.00	1.90	16.58	36.00	29.48	37.00	-7.52
21V	265.99	45.60	1.96	17.32	35.74	29.14	37.00	-7.86
22V	306.51	40.50	2.21	16.54	35.67	23.58	37.00	-13.42
23V	310.54	45.60	2.22	16.68	35.66	28.85	37.00	-8.15
24V	314.55	40.40	2.23	16.83	35.64	23.81	37.00	-13.19
25V	318.60	41.30	2.24	16.97	35.63	24.88	37.00	-12.12
26V	322.62	40.90	2.25	17.11	35.61	24.65	37.00	-12.35
27V	330.71	41.30	2.26	17.40	35.58	25.38	37.00	-11.62
28V	332.47	41.20	2.26	17.46	35.57	25.36	37.00	-11.64
29V	346.81	39.90	2.29	17.97	35.51	24.65	37.00	-12.35
30V	350.85	42.20	2.31	18.12	35.50	27.12	37.00	-9.88

Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 19.36
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock 4.032, Host System Clock: 66.6MHz

Qualification Scan

Tested By: John Ethington

Pol	Freq	Rdng	Cable	Ant	Amp	Cor'd	limit	Delta
			loss	factor	gain	rdg = R	= L	R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
31V	365.69	46.00	2.39	18.64	35.53	31.50	37.00	-5.50
32V	366.94	42.80	2.40	18.69	35.53	28.35	37.00	-8.65
33V	398.95	43.00	2.59	19.82	35.60	29.82	37.00	-7.18
34V	407.40	42.10	2.61	19.74	35.59	28.87	37.00	-8.13
35V	432.18	44.00	2.66	19.32	35.54	30.45	37.00	-6.55
36V	435.51	39.00	2.67	19.26	35.53	25.41	37.00	-11.59
37V	443.57	40.60	2.69	19.13	35.51	26.90	37.00	-10.10
38V	451.64	41.10	2.70	18.99	35.49	27.31	37.00	-9.69
39V	465.41	39.10	2.73	18.76	35.41	25.18	37.00	-11.82
40V	467.79	42.40	2.74	18.72	35.39	28.46	37.00	-8.54
41V	475.79	41.40	2.75	18.59	35.35	27.39	37.00	-9.61
42V	479.83	40.90	2.76	18.52	35.32	26.86	37.00	-10.14
43V	483.89	40.40	2.77	18.45	35.30	26.32	37.00	-10.68
44V	491.97	40.80	2.78	18.31	35.25	26.65	37.00	-10.35
45V	500.01	40.60	2.80	18.18	35.20	26.38	37.00	-10.62
46V	508.07	39.10	2.85	18.24	35.17	25.02	37.00	-11.98
47V	516.16	40.80	2.90	18.30	35.14	26.86	37.00	-10.14
48V	524.22	40.00	2.95	18.36	35.10	26.20	37.00	-10.80
49V	531.89	45.60	2.99	18.42	35.07	31.93	37.00	-5.07
50V	532.28	43.50	2.99	18.42	35.07	29.84	37.00	-7.16
51V	544.38	39.60	3.07	18.51	35.02	26.15	37.00	-10.85
52V	548.38	41.60	3.09	18.54	35.01	28.22	37.00	-8.78
53V	556.42	41.80	3.11	18.60	35.08	28.43	37.00	-8.57
54V	564.51	41.10	3.13	18.66	35.17	27.71	37.00	-9.29
55V	565.11	41.00	3.13	18.66	35.18	27.61	37.00	-9.39
56V	580.65	40.50	3.16	18.78	35.37	27.07	37.00	-9.93
57V	596.77	43.20	3.19	18.90	35.56	29.73	37.00	-7.27
58V	598.36	43.20	3.20	18.91	35.58	29.72	37.00	-7.28
59V	612.90	41.90	3.23	19.05	35.29	28.89	37.00	-8.11
60V	620.95	40.90	3.24	19.13	35.10	28.18	37.00	-8.82

Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 19.36
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock 4.032, Host System Clock: 66.6MHz

Qualification Scan
 Tested By: John Ethington

Pol	Freq	Rdng	Cable	Ant	Amp	Cor'd	limit	Delta
	MHz	dBuV	loss	factor	gain	rdg = R	= L	R-L
			dB	dB	dB	dBuV	dBuV/m	dB
61V	629.03	39.30	3.26	19.22	34.90	26.87	37.00	-10.13
62V	637.11	39.70	3.27	19.30	34.71	27.56	37.00	-9.44
63V	645.18	43.00	3.29	19.38	34.52	31.16	37.00	-5.84
64V	653.20	39.50	3.31	19.46	34.43	27.84	37.00	-9.16
65V	653.25	40.20	3.31	19.46	34.43	28.54	37.00	-8.46
66V	657.27	40.70	3.31	19.50	34.47	29.05	37.00	-7.95
67V	664.83	41.90	3.33	19.58	34.55	30.26	37.00	-6.74
68V	665.31	41.40	3.33	19.59	34.55	29.76	37.00	-7.24
69V	669.33	39.20	3.34	19.63	34.59	27.57	37.00	-9.43
70V	677.41	39.00	3.35	19.71	34.67	27.39	37.00	-9.61
71V	681.47	41.70	3.36	19.75	34.71	30.10	37.00	-6.90
72V	685.50	42.10	3.37	19.79	34.76	30.51	37.00	-6.49
73V	689.53	40.00	3.38	19.83	34.80	28.42	37.00	-8.58
74V	693.56	38.70	3.39	19.87	34.84	27.13	37.00	-9.87
75V	697.58	39.40	3.40	19.92	34.88	27.83	37.00	-9.17
76V	701.61	42.20	3.40	19.95	34.89	30.65	37.00	-6.35
77V	705.64	42.30	3.40	19.96	34.87	30.79	37.00	-6.21
78V	709.67	40.10	3.40	19.97	34.84	28.63	37.00	-8.37
79V	713.68	38.40	3.40	19.99	34.82	26.97	37.00	-10.03
80V	895.15	38.40	3.98	20.90	34.15	29.13	37.00	-7.87
81V	903.19	39.20	4.01	20.95	34.06	30.10	37.00	-6.90

Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 20.52
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock: 4.032MHz, Host System Clock: 66.6MHz

Qualification Scan
 Tested By: John Ethington

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1H	4.72	40.60	0.60	11.20	36.20	16.20	30.00	-13.80
2H	52.08	45.80	0.84	10.24	36.18	20.70	30.00	-9.30
3H	56.09	41.20	0.92	10.32	36.14	16.30	30.00	-13.70
4H	76.36	52.70	1.06	6.91	36.13	24.55	30.00	-5.45
5H	84.72	44.50	1.10	5.84	36.20	15.24	30.00	-14.76
6H	116.99	40.70	1.30	12.31	36.13	18.18	30.00	-11.82
7H	125.06	40.50	1.40	14.20	36.20	19.90	30.00	-10.10
8H	133.03	41.30	1.43	13.56	36.04	20.25	30.00	-9.75
9H	141.34	41.00	1.47	12.89	35.90	19.46	30.00	-10.54
10H	149.25	39.90	1.50	12.26	35.90	17.76	30.00	-12.24
11H	166.19	44.10	1.56	12.72	36.06	22.32	30.00	-7.68
12H	169.41	39.80	1.58	12.82	36.04	18.16	30.00	-11.84
13H	173.42	41.30	1.59	12.95	36.01	19.83	30.00	-10.17
14H	197.60	39.80	1.78	16.89	35.94	22.53	30.00	-7.47
15H	199.51	41.40	1.80	17.22	35.91	24.51	30.00	-5.49
16H	200.49	46.30	1.80	17.29	35.90	29.49	30.00	-0.51
17H	200.49	43.19	1.80	17.29	35.90	26.38Qp	30.00	-3.62
18H	232.73	42.90	1.90	16.58	36.00	25.38	37.00	-11.62
19H	232.74	45.30	1.90	16.58	36.00	27.78	37.00	-9.22
20H	265.99	40.30	1.96	17.32	35.74	23.84	37.00	-13.16
21H	310.52	40.60	2.22	16.68	35.66	23.85	37.00	-13.15
22H	318.65	40.20	2.24	16.97	35.63	23.78	37.00	-13.22
23H	322.20	40.10	2.24	17.10	35.61	23.83	37.00	-13.17
24H	338.78	39.50	2.28	17.69	35.54	23.92	37.00	-13.08
25H	350.88	36.70	2.31	18.12	35.50	21.62	37.00	-15.38
26H	366.96	41.50	2.40	18.69	35.53	27.05	37.00	-9.95
27H	395.02	42.80	2.57	19.68	35.59	29.46	37.00	-7.54
28H	398.95	44.10	2.59	19.82	35.60	30.92	37.00	-6.08
29H	402.72	42.80	2.61	19.81	35.59	29.63	37.00	-7.37
30H	407.37	43.90	2.61	19.74	35.59	30.67	37.00	-6.33

Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 20.52
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock: 4.032MHz, Host System Clock: 66.6MHz

Qualification Scan

Tested By: John Ethington

Pol	Freq	Rdng	Cable	Ant	Amp	Cor'd	limit	Delta
	MHz	dBuV	loss	factor	gain	rdg = R	= L	R-L
31H	432.21	38.20	2.66	19.32	35.54	24.65	37.00	-12.35
32H	443.57	39.30	2.69	19.13	35.51	25.60	37.00	-11.40
33H	451.64	38.40	2.70	18.99	35.49	24.61	37.00	-12.39
34H	459.70	39.70	2.72	18.86	35.44	25.83	37.00	-11.17
35H	464.51	38.70	2.73	18.78	35.41	24.79	37.00	-12.21
36H	467.78	40.10	2.74	18.72	35.39	26.16	37.00	-10.84
37H	475.81	39.10	2.75	18.59	35.35	25.09	37.00	-11.91
38H	479.85	37.30	2.76	18.52	35.32	23.26	37.00	-13.74
39H	483.90	41.40	2.77	18.45	35.30	27.32	37.00	-9.68
40H	491.96	38.20	2.78	18.32	35.25	24.05	37.00	-12.95
41H	500.04	41.20	2.80	18.18	35.20	26.98	37.00	-10.02
42H	508.10	39.10	2.85	18.24	35.17	25.02	37.00	-11.98
43H	516.17	41.10	2.90	18.30	35.14	27.16	37.00	-9.84
44H	524.23	40.30	2.95	18.36	35.10	26.50	37.00	-10.50
45H	532.26	41.30	2.99	18.42	35.07	27.64	37.00	-9.36
46H	544.35	38.60	3.07	18.51	35.02	25.15	37.00	-11.85
47H	548.40	40.40	3.09	18.54	35.01	27.02	37.00	-9.98
48H	556.47	40.10	3.11	18.60	35.08	26.73	37.00	-10.27
49H	564.51	40.90	3.13	18.66	35.17	27.51	37.00	-9.49
50H	572.57	42.00	3.15	18.72	35.27	28.59	37.00	-8.41
51H	580.63	39.50	3.16	18.78	35.37	26.07	37.00	-10.93
52H	588.71	38.60	3.18	18.84	35.46	25.15	37.00	-11.85
53H	596.75	40.70	3.19	18.90	35.56	27.23	37.00	-9.77
54H	612.90	39.90	3.23	19.05	35.29	26.89	37.00	-10.11
55H	620.96	42.60	3.24	19.13	35.10	29.88	37.00	-7.12
56H	629.05	40.90	3.26	19.22	34.90	28.47	37.00	-8.53
57H	637.09	41.00	3.27	19.30	34.71	28.86	37.00	-8.14
58H	645.15	42.00	3.29	19.38	34.52	30.15	37.00	-6.85
59H	653.24	39.10	3.31	19.46	34.43	27.44	37.00	-9.56
60H	657.34	40.80	3.31	19.50	34.47	29.15	37.00	-7.85

Test location: Compatible Electronics
 Customer : Date : 8/15/2000
 Manufacturer : Conexant System Time : 20.52
 EUT name : SmartSCM Socketmodem Parallel Model: SC56H0
 Specification: Cispr_B Test distance: 10.0 mtrs Lab: H
 Distance correction factor(20*log(test/spec)) : 0.00
 Test Mode :
 Xtal: 28.224MHz, Clock: 4.032MHz, Host System Clock: 66.6MHz

Qualification Scan
 Tested By: John Ethington

Pol	Freq	Rdng	Cable	Ant	Amp	Cor'd	limit	Delta
	MHz	dBuV	loss	factor	gain	rdg = R	= L	R-L
			dB	dB	dB	dBuV	dBuV/m	dB
61H	664.83	42.60	3.33	19.58	34.55	30.96	37.00	-6.04
62H	677.38	39.70	3.35	19.71	34.67	28.09	37.00	-8.91
63H	681.45	38.80	3.36	19.75	34.71	27.20	37.00	-9.80
64H	685.49	38.60	3.37	19.79	34.75	27.01	37.00	-9.99
65H	689.52	38.30	3.38	19.83	34.80	26.72	37.00	-10.28
66H	693.55	38.70	3.39	19.87	34.84	27.13	37.00	-9.87
67H	697.57	39.10	3.40	19.92	34.88	27.53	37.00	-9.47
68H	701.61	42.10	3.40	19.95	34.89	30.55	37.00	-6.45
69H	705.64	42.30	3.40	19.96	34.87	30.79	37.00	-6.21
70H	709.66	40.70	3.40	19.97	34.84	29.23	37.00	-7.77
71H	713.68	39.90	3.40	19.99	34.82	28.47	37.00	-8.53
72H	721.75	40.60	3.40	20.01	34.77	29.24	37.00	-7.76
73H	725.78	40.20	3.40	20.03	34.75	28.88	37.00	-8.12
74H	729.83	40.30	3.40	20.04	34.72	29.02	37.00	-7.98
75H	733.83	39.90	3.40	20.05	34.70	28.65	37.00	-8.35
76H	838.68	37.80	3.80	20.53	34.44	27.68	37.00	-9.32
77H	854.81	38.60	3.82	20.63	34.55	28.50	37.00	-8.50
78H	895.13	36.60	3.98	20.90	34.15	27.33	37.00	-9.67
79H	903.18	38.20	4.01	20.95	34.06	29.10	37.00	-7.90
80H	911.24	37.30	4.02	21.00	33.94	28.38	37.00	-8.62



Conexant Systems 115VAC
 SmartSCM Socketmodem Parallel
 MN: SC56H0
 CISPR22-B / Black Lead
 TEST ENGINEER : _____
 John Ethington

41 highest peaks above -50.00 dB of AVERAGE limit line

Peak criteria : 3.00 dB, Curve : Peak

Peak# Freq(MHz)Amp(dBu)Limit(dB) Delta(dB)

1	0.455	49.84	46.79	3.05
2	0.731	48.04	46.00	2.04
3	0.568	47.84	46.00	1.84
4	0.840	47.54	46.00	1.54
5	0.621	47.14	46.00	1.14
6	0.345	50.06	49.09	0.97
7	1.005	46.44	46.00	0.44
8	1.112	46.14	46.00	0.14
9	0.150	55.69	56.00	-0.31
10	0.890	45.24	46.00	-0.76
11	0.949	45.14	46.00	-0.86
12	0.290	49.67	50.54	-0.87
13	1.224	45.04	46.00	-0.96
14	0.669	44.84	46.00	-1.16
15	0.508	43.94	46.00	-2.06
16	1.388	43.65	46.00	-2.35
17	1.270	43.64	46.00	-2.36
18	1.466	43.35	46.00	-2.65
19	1.027	43.24	46.00	-2.76
20	1.497	43.05	46.00	-2.95
21	0.481	43.34	46.32	-2.98
22	0.398	44.85	47.90	-3.05
23	4.006	42.76	46.00	-3.24
24	1.774	42.35	46.00	-3.65
25	0.298	46.47	50.31	-3.85
26	1.167	41.94	46.00	-4.06
27	0.310	45.86	49.97	-4.10
28	0.752	41.84	46.00	-4.16
29	4.927	41.77	46.00	-4.23
30	1.333	41.75	46.00	-4.25
31	1.412	41.55	46.00	-4.45
32	1.305	41.45	46.00	-4.55
33	1.664	41.35	46.00	-4.65
34	1.136	41.34	46.00	-4.66
35	1.682	41.25	46.00	-4.75
36	1.604	41.25	46.00	-4.75
37	1.578	41.05	46.00	-4.95
38	1.249	40.94	46.00	-5.06
39	2.451	40.85	46.00	-5.15
40	1.879	40.85	46.00	-5.15
41	1.929	40.45	46.00	-5.55



Conexant Systems 115VAC
 SmartSCM Socketmodem Parallel
 MN: SC56H0
 CISPR22-B / Black Lead
 TEST ENGINEER : _____
 John Ethington

41 highest peaks above -50.00 dB of AVERAGE limit line

Peak criteria : 0.30 dB, Curve : Average

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

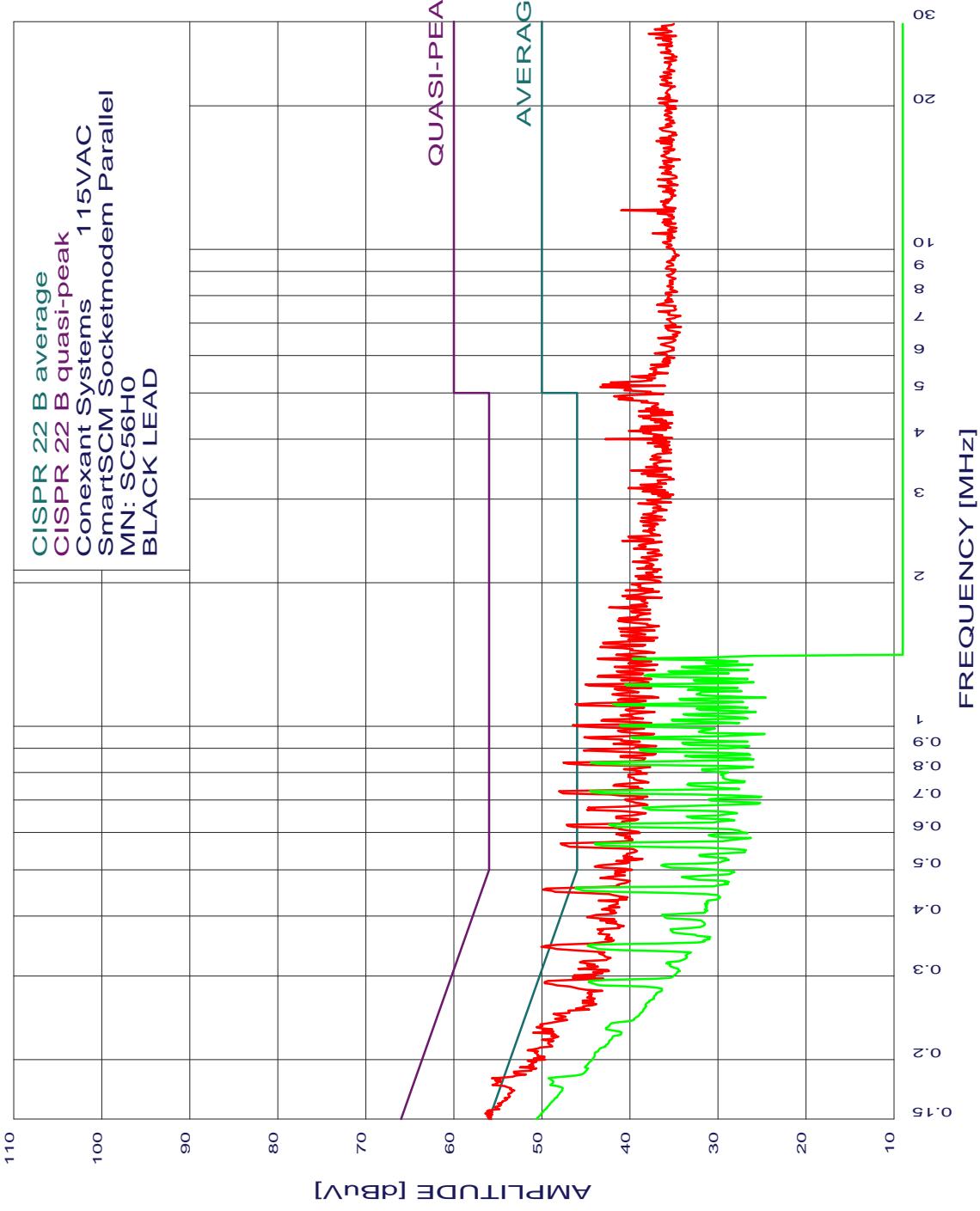
1	0.457	46.18	46.75	-0.57
2	0.731	44.54	46.00	-1.46
3	0.840	44.39	46.00	-1.61
4	0.568	43.99	46.00	-2.01
5	0.621	42.36	46.00	-3.64
6	1.112	41.92	46.00	-4.08
7	0.347	44.81	49.04	-4.24
8	1.005	41.11	46.00	-4.89
9	0.183	49.25	54.37	-5.12
10	0.150	50.59	56.00	-5.41
11	1.224	40.55	46.00	-5.45
12	0.177	49.04	54.62	-5.59
13	0.291	44.66	50.49	-5.83
14	0.949	39.87	46.00	-6.13
15	1.388	39.66	46.00	-6.34
16	0.895	38.84	46.00	-7.16
17	0.676	38.50	46.00	-7.50
18	1.277	38.36	46.00	-7.64
19	0.193	45.07	53.92	-8.86
20	0.511	36.38	46.00	-9.62
21	0.233	42.71	52.34	-9.63
22	1.305	35.61	46.00	-10.39
23	1.033	35.21	46.00	-10.79
24	0.402	36.32	47.80	-11.49
25	1.142	34.36	46.00	-11.64
26	1.333	34.08	46.00	-11.92
27	0.924	34.02	46.00	-11.98
28	1.061	33.91	46.00	-12.09
29	0.484	34.07	46.27	-12.20
30	0.868	33.71	46.00	-12.29
31	0.648	33.52	46.00	-12.48
32	0.756	33.47	46.00	-12.53
33	1.192	33.43	46.00	-12.57
34	0.374	35.36	48.42	-13.06
35	1.249	32.69	46.00	-13.31
36	1.167	32.42	46.00	-13.58
37	1.089	32.38	46.00	-13.62
38	0.975	32.14	46.00	-13.86
39	0.538	32.09	46.00	-13.91
40	0.318	35.81	49.75	-13.93
41	0.813	31.79	46.00	-14.21



**COMPATIBLE
ELECTRONICS**

8/15/2000 17:27:46

**EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average**





Conexant Systems 115VAC
 SmartSCM Socketmodem Parallel
 MN: SC56H0
 CISPR22-B / White Lead
 TEST ENGINEER : _____
 John Ethington

41 highest peaks above -50.00 dB of AVERAGE limit line

Peak criteria : 3.00 dB, Curve : Peak

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

1	0.452	49.55	46.84	2.71
2	0.728	48.25	46.00	2.25
3	0.559	47.65	46.00	1.65
4	0.836	47.15	46.00	1.15
5	0.615	47.15	46.00	1.15
6	1.000	46.95	46.00	0.95
7	0.150	56.49	56.00	0.49
8	0.341	49.56	49.17	0.39
9	1.112	46.05	46.00	0.05
10	0.890	45.65	46.00	-0.35
11	1.217	45.05	46.00	-0.95
12	1.270	44.36	46.00	-1.64
13	0.511	44.35	46.00	-1.65
14	1.381	44.06	46.00	-1.94
15	0.290	48.47	50.54	-2.06
16	0.944	43.75	46.00	-2.25
17	1.167	43.45	46.00	-2.55
18	1.466	43.36	46.00	-2.64
19	0.672	43.25	46.00	-2.75
20	0.641	42.95	46.00	-3.05
21	1.489	42.76	46.00	-3.24
22	4.006	42.69	46.00	-3.31
23	1.027	42.35	46.00	-3.65
24	0.326	45.57	49.57	-4.00
25	1.656	41.96	46.00	-4.04
26	1.050	41.95	46.00	-4.05
27	1.078	41.85	46.00	-4.15
28	1.764	41.76	46.00	-4.24
29	1.544	41.56	46.00	-4.44
30	0.919	41.55	46.00	-4.45
31	1.412	41.46	46.00	-4.54
32	1.298	41.36	46.00	-4.64
33	0.368	43.86	48.55	-4.69
34	0.780	41.05	46.00	-4.95
35	1.793	40.76	46.00	-5.24
36	1.870	40.66	46.00	-5.34
37	2.451	40.57	46.00	-5.43
38	1.604	40.56	46.00	-5.44
39	1.326	40.46	46.00	-5.54
40	2.169	40.37	46.00	-5.63
41	0.863	40.35	46.00	-5.65



Conexant Systems 115VAC
 SmartSCM Socketmodem Parallel
 MN: SC56H0
 CISPR22-B / White Lead
 TEST ENGINEER : _____
 John Ethington

36 highest peaks above -50.00 dB of AVERAGE limit line

Peak criteria : 3.00 dB, Curve : Average

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

1	0.457	45.93	46.75	-0.82
2	0.731	44.73	46.00	-1.27
3	0.621	44.13	46.00	-1.87
4	0.565	43.71	46.00	-2.29
5	1.005	43.66	46.00	-2.34
6	0.840	42.83	46.00	-3.17
7	0.347	45.13	49.04	-3.91
8	1.112	41.69	46.00	-4.31
9	0.890	41.23	46.00	-4.77
10	0.150	50.53	56.00	-5.47
11	1.277	40.27	46.00	-5.73
12	1.388	40.16	46.00	-5.84
13	1.217	38.96	46.00	-7.04
14	0.944	38.31	46.00	-7.69
15	0.291	42.63	50.49	-7.86
16	0.511	37.78	46.00	-8.22
17	1.167	36.61	46.00	-9.39
18	0.672	36.24	46.00	-9.76
19	1.305	35.01	46.00	-10.99
20	1.027	34.84	46.00	-11.16
21	1.192	34.07	46.00	-11.93
22	0.919	33.98	46.00	-12.02
23	0.785	33.37	46.00	-12.63
24	0.645	33.10	46.00	-12.90
25	1.136	33.01	46.00	-12.99
26	0.756	32.98	46.00	-13.02
27	1.084	32.79	46.00	-13.21
28	0.374	34.91	48.42	-13.51
29	0.538	32.18	46.00	-13.82
30	0.868	32.01	46.00	-13.99
31	1.361	31.78	46.00	-14.22
32	0.479	32.08	46.36	-14.28
33	1.249	31.23	46.00	-14.77
34	0.702	31.13	46.00	-14.87
35	1.333	30.96	46.00	-15.04
36	1.061	29.49	46.00	-16.51



COMPATIBLE ELECTRONICS

8/15/2000 17:43:09

