FCC PART 15, SUBPART C
TEST METHOD: ANSI C63.4-1992
TEST REPORT

for

NP130 TRANSMITTER

MODEL: S71612

Prepared for

CODE 3, INC.
10986 NORTH WARSON ROAD
ST. LOUIS MISSOURI, 63114-2029

Prepared by:_____

KYLE FUJIMOTO

Approved by:_____

MICHAEL CHRISTENSEN

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: JULY 27, 2001

	REPORT	APPENDICES					TOTAL
	BODY	***A***	***B***	***C***	***D***	***E***	
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GENERAL REPORT SUMMARY

This electromagnetic emission 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 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 without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: NP130 Transmitter
Model: S71612
S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: Code 3, Inc.
10986 North Warson Road
St. Louis, Missouri 63114-2029

Test Date: July 23, 2001

Test Specifications: EMI requirements
CFR Title 47, Part 15 Subpart C, Sections 15.205, 15.209, and 15.231

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, 450 kHz - 30 MHz	This test was not performed because the EUT operates on batteries only and does not connect to the AC public mains.
2	Radiated RF Emissions, 10 kHz - 3200 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the NP130 Transmitter Model: S71612. 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 specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

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

Code 3, Inc.

Robert E. Kreutzer	Director of Engineering
Roger Miller	Electrical Design Engineer

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
Michael Christensen	Test Engineer

2.4 Date Test Sample was Received

The test sample was received on July 20, 2001

2.5 Disposition of the Test Sample

The test sample has not been returned to Code 3, Inc. as of July 27, 2001.

2.6 Abbreviations and Acronyms

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

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
CFR Title 47, Subpart C	FCC Rules – Radio frequency devices (including digital devices) – Intentional Radiators
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

The NP130 Transmitter Model: S71612 (EUT) was tested as a stand alone unit and tested in three different orthogonal axis. The EUT was continuously transmitting during the test. The antenna is a 17 and one-half centimeter wire hardwired to the PCB. The EUT turns immediately off after the button is released.

Final radiated data was taken in the mode above.

4.1.1 Cable Construction and Termination

There are no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
NP130 TRANSMITTER (EUT)	CODE 3, INC.	S71612	N/A	PSSNP130W

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	June 15, 2001	June 15, 2002
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 15, 2001	June 15, 2002
Preamplifier	Com Power	PA-102	1017	Jan. 5, 2001	Jan. 5, 2002
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 15, 2001	June 15, 2002
Biconical Antenna	Com Power	AB-100	1548	Oct. 16, 2000	Oct. 16, 2001
Log Periodic Antenna	Com Power	AL-100	16101	Oct. 16, 2000	Oct. 16, 2001
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	HP98561A	2522A05178	N/A	N/A
Printer	Hewlett Packard	2225A	2925S33268	N/A	N/A
Plotter	Hewlett Packard	7440A	8726K38417	N/A	N/A
Microwave Preamplifier	Com-Power	PA-122	25195	Jan. 9, 2001	Jan. 9, 2002
Horn Antenna	Antenna Research	DRG-118/A	1053	Jan. 15, 2001	Jan. 15, 2002
Loop Antenna	Com-Power	AL-130	25309	May 21, 2001	May 21, 2002
Radiated Emission Manual Test Software	Compatible Electronics, Inc.	N/A	N/A	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.2 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 not grounded.

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 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak 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 offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this 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 conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics Conducted Emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix D.

Test Results:

This test was not performed because the EUT operates on batteries only and cannot be plugged into the AC public mains.

7.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Model: PA-122 was used for frequencies above 1 GHz. 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 adapter was used only for those readings which are marked accordingly on the data sheets. The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 3.20 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 1992. 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 by the Radiated Emission Manual Test software. 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 gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

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 3 meter test distance to obtain final test data.

7.3 Bandwidth of the Fundamental

The -20 dB bandwidth was checked to see that it was within 0.25% of the fundamental frequency for the Remote Command Unit. A plot of the -20 dB bandwidth is in Appendix D.

8. CONCLUSIONS

The NP130 Transmitter Model: S71612 meets all of the specification limits defined in CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231.

APPENDIX A

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.231 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

Modifications:

No modifications were made to the EUT.

APPENDIX B

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

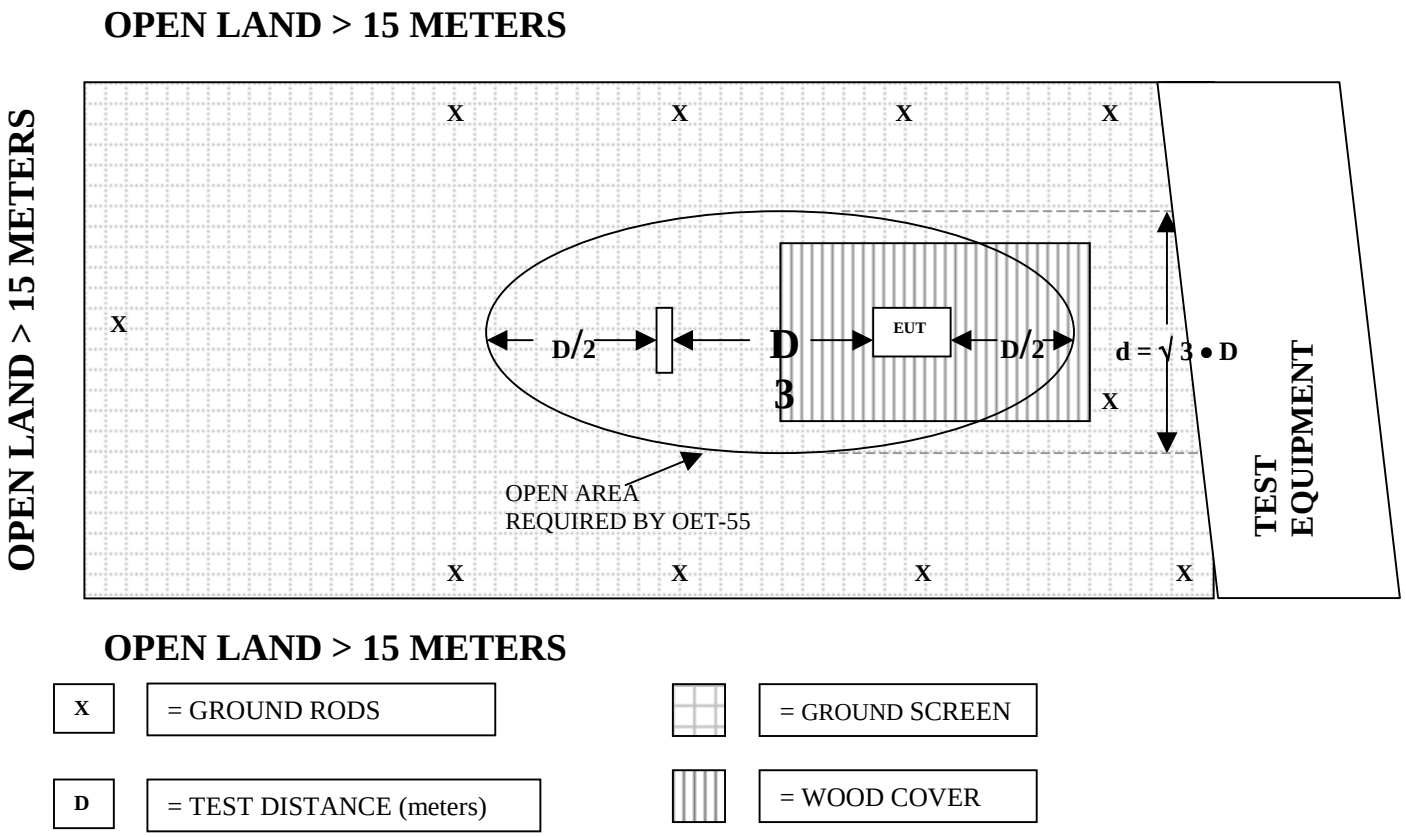
USED FOR THE PRIMARY TEST	NP130 Transmitter Model: S71612 S/N: N/A

There were no additional models covered under this report.

APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED SITE



FRONT VIEW

CODE 3, INC.
NP130 TRANSMITTER
MODEL: S71612
FCC SUBPART C - RADIATED EMISSIONS – 07-23-01

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

CODE 3, INC.
NP130 TRANSMITTER
MODEL: S71612
FCC SUBPART C - RADIATED EMISSIONS – 07-23-01

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

COM-POWER AB-100

BICONICAL ANTENNA

S/N: 01548

CALIBRATION DATE: OCTOBER 16, 2000

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	14.01	120	10.33
35	13.63	125	11.61
40	13.26	140	12.70
45	11.62	150	12.95
50	11.03	160	13.58
60	8.52	175	14.82
70	8.94	180	14.84
80	8.17	200	14.80
90	8.08	250	16.42
100	8.64	300	20.26

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16101

CALIBRATION DATE: OCTOBER 16, 2000

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	12.96	700	19.24
400	16.92	800	21.37
500	16.73	900	22.13
600	16.32	1000	22.19

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: JANUARY 5, 2001

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	39.0	300	38.9
40	39.2	350	38.9
50	39.2	400	38.6
60	39.2	450	38.5
70	38.8	500	38.7
80	38.6	550	38.4
90	38.5	600	38.8
100	38.7	650	38.5
125	39.2	700	38.6
150	38.8	750	38.1
175	38.8	800	37.9
200	39.0	850	38.0
225	38.8	900	37.8
250	38.8	950	36.9
275	39.0	1000	38.2

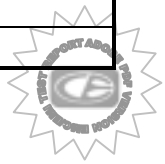
COM-POWER PA-122

MICROWAVE PREAMPLIFIER

S/N: 25195

CALIBRATION DATE: JANUARY 9, 2001

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	33.1	9.5	30.7
1.1	33.0	10.0	31.6
1.2	33.2	11.0	30.6
1.3	33.0	12.0	28.5
1.4	32.4	13.0	31.5
1.5	32.3	14.0	33.2
1.6	32.1	15.0	31.5
1.7	32.0	16.0	30.2
1.8	31.8	17.0	31.6
1.9	32.2	18.0	31.7
2.0	32.6		
2.5	31.9		
3.0	31.7		
3.5	31.7		
4.0	32.3		
4.5	31.5		
5.0	32.3		
5.5	34.2		
6.0	30.9		
6.5	32.0		
7.0	32.1		
7.5	33.0		
8.0	31.9		
8.5	31.9		
9.0	31.3		



ANTENNA RESEARCH DRG-118/A

HORN ANTENNA

S/N: 1053

CALIBRATION DATE: JANUARY 15, 2001

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	25.4	9.5	39.6
1.5	26.7	10.0	39.7
2.0	29.6	10.5	40.8
2.5	30.7	11.0	40.4
3.0	31.2	11.5	42.2
3.5	32.3	12.0	43.0
4.0	33.2	12.5	42.6
4.5	33.2	13.0	41.3
5.0	34.8	13.5	40.3
5.5	35.4	14.0	40.9
6.0	36.6	14.5	44.0
6.5	36.6	15.0	43.3
7.0	38.7	15.5	42.7
7.5	38.6	16.0	42.6
8.0	37.9	16.5	42.8
8.5	37.9	17.0	43.5
9.0	39.9	17.5	44.6
		18.0	42.2

Com-Power Corporation

(949) 587-9800

Antenna Calibration

Antenna Type:		Active Loop Antenna
Model:		AL-130
Serial Number:		25309
Calibration Date:	(mm/dd/yy)	05/21/01
Certificate Number:		071014-R

Frequency MHz	Magnetic (dB/m)	Electric dB/m
0.009	-40.2	11.3
0.01	-40.2	11.3
0.02	-40.9	10.6
0.03	-39.3	12.2
0.04	-39.7	11.8
0.05	-41.0	10.5
0.06	-40.6	10.9
0.07	-40.8	10.7
0.08	-41.1	10.4
0.09	-41.2	10.3
0.1	-41.2	10.3
0.2	-43.5	8.0
0.3	-41.1	10.4
0.4	-41.0	10.5
0.5	-41.0	10.5
0.6	-40.9	10.6
0.7	-40.8	10.7
0.8	-40.8	10.7
0.9	-40.8	10.7
1	-40.3	11.2
2	-39.7	11.8
3	-40.0	11.5
4	-40.2	11.3
5	-39.6	11.9
6	-39.6	11.9
7	-40.0	11.5
8	-40.3	11.2
9	-39.8	11.7
10	-40.6	10.9
12	-40.7	10.8
14	-40.6	10.9
15	-40.7	10.8
16	-40.7	10.8
18	-40.8	10.7
20	-41.6	9.9
25	-42.8	8.7
30	-43.3	8.2

Separation Distance:	1 meter

APPENDIX D

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
418.0000	75.5	59.1 A	H	1.0	90	X		16.9	3.3	0.0	**79.3**	**-0.9**	**80.2**	
418.0000	63.4	47.0 A	H	1.5	0	Y		16.9	3.3	0.0	**67.1**	**-13.1**	**80.2**	
418.0000	74.5	58.1 A	H	1.0	0	Z		16.9	3.3	0.0	**78.2**	**-2.0**	**80.2**	
418.0000	63.4	47.0 A	V	1.5	270	X		16.9	3.3	0.0	**67.1**	**-13.1**	**80.2**	
418.0000	69.7	53.3 A	V	1.5	0	Y		16.9	3.3	0.0	**73.4**	**-6.8**	**80.2**	
418.0000	62.6	46.2 A	V	1.0	180	Z		16.9	3.3	0.0	**66.3**	**-13.9**	**80.2**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
836.0000	77.2	60.8 A	H	1.0	90	X		21.6	4.8	38.0	**49.2**	**-11.0**	**60.2**	
836.0000	72.8	56.4 A	H	1.0	0	Y		21.6	4.8	38.0	**44.8**	**-15.4**	**60.2**	
836.0000	76.7	60.3 A	H	1.0	270	Z		21.6	4.8	38.0	**48.7**	**-11.5**	**60.2**	
836.0000	57.4	41.0 A	V	1.0	180	X		21.6	4.8	38.0	**29.4**	**-30.8**	**60.2**	
836.0000	55.9	39.5 A	V	1.5	90	Y		21.6	4.8	38.0	**27.9**	**-32.3**	**60.2**	
836.0000	68.2	51.8 A	V	1.5	90	Z		21.6	4.8	38.0	**40.2**	**-20.0**	**60.2**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1254.0000	49.9	33.5 A	H	2.0	0	X		26.1	2.6	33.1	**29.0**	**-31.2**	**60.2**	
1254.0000	50.4	34.0 A	H	2.0	90	Y		26.1	2.6	33.1	**29.5**	**-30.7**	**60.2**	
1254.0000	51.2	34.8 A	H	2.0	90	Z		26.1	2.6	33.1	**30.3**	**-29.9**	**60.2**	
1254.0000	54.5	38.1 A	V	1.5	90	X		26.1	2.6	33.1	**33.6**	**-26.6**	**60.2**	
1254.0000	55.5	39.1 A	V	1.0	90	Y		26.1	2.6	33.1	**34.6**	**-25.6**	**60.2**	
1254.0000	51.6	35.2 A	V	2.0	180	Z		26.1	2.6	33.1	**30.7**	**-29.5**	**60.2**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1672.0000	61.9	45.5 A	H	1.5	270	X	LOW	27.7	3.3	32.0	**44.5**	**-9.5**	**54.0**	
1672.0000	60.6	44.2 A	H	2.0	90	Y	LOW	27.7	3.3	32.0	**43.2**	**-10.8**	**54.0**	
1672.0000	58.9	42.5 A	H	1.5	180	Z	MID	27.7	3.3	32.0	**41.5**	**-12.5**	**54.0**	
1672.0000	61.8	45.4 A	V	2.0	270	X	MID	27.7	3.3	32.0	**44.4**	**-9.6**	**54.0**	
1672.0000	64.5	48.1 A	V	2.0	90	Y	HIGH	27.7	3.3	32.0	**47.1**	**-7.0**	**54.0**	
1672.0000	59.5	43.1 A	V	1.5	270	Z	HIGH	27.7	3.3	32.0	**42.1**	**-11.9**	**54.0**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2090.0000	54.9	38.5 A	H	3.0	0	X		29.8	3.6	32.5	**39.4**	**-20.8**	**60.2**	
2090.0000	54.3	37.9 A	H	1.5	90	Y		29.8	3.6	32.5	**38.8**	**-15.2**	**54.0**	
2090.0000	54.7	38.3 A	H	2.0	0	Z		29.8	3.6	32.5	**39.2**	**-14.8**	**54.0**	
2090.0000	54.3	37.9 A	V	1.5	90	X		29.8	3.6	32.5	**38.8**	**-15.2**	**54.0**	
2090.0000	59.6	43.2 A	V	1.5	0	Y		29.8	3.6	32.5	**44.1**	**-9.9**	**54.0**	
2090.0000	54.2	37.8 A	V	1.5	90	Z		29.8	3.6	32.5	**38.7**	**-15.3**	**54.0**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2508.0000	54.9	38.5 A	H	3.0	0	X		30.7	3.5	31.9	**40.8**	**-19.4**	**60.2**	
2508.0000	54.3	37.9 A	H	1.5	90	Y		30.7	3.5	31.9	**40.2**	**-20.0**	**60.2**	
2508.0000	54.7	38.3 A	H	2.0	0	Z		30.7	3.5	31.9	**40.6**	**-19.6**	**60.2**	
2508.0000	54.3	37.9 A	V	1.5	90	X		30.7	3.5	31.9	**40.2**	**-20.0**	**60.2**	
2508.0000	59.6	43.2 A	V	1.5	0	Y		30.7	3.5	31.9	**45.5**	**-14.7**	**60.2**	
2508.0000	54.2	37.8 A	V	1.5	90	Z		30.7	3.5	31.9	**40.1**	**-20.1**	**60.2**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**CODE 3, INC.**	**DATE**	**7/23/01**
EUT	**NP130 TRANSMITTER**	**DUTY CYCLE**	**15%**
MODEL	**S71612**	**PEAK TO AVG**	**16.40**
S/N	**N/A**	**TEST DIST.**	**3 METERS**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2926.0000	38.2	21.8 A	H	1.5	270	X		31.1	4.9	31.7	**26.1**	**-34.1**	**60.2**	
														Note: No Harmonics nor
2926.0000	35.6	19.2 A	H	1.5	180	Y		31.1	4.9	31.7	**23.5**	**-36.7**	**60.2**	**Emissions found beyond**
														the 7th harmonic for the
														EUT
2926.0000	36.1	19.7 A	H	1.5	90	Z		31.1	4.9	31.7	**24.0**	**-36.2**	**60.2**	
2926.0000	35.7	19.3 A	V	1.0	90	X		31.1	4.9	31.7	**23.6**	**-36.6**	**60.2**	
2926.0000	39.0	22.6 A	V	1.5	180	Y		31.1	4.9	31.7	**26.9**	**-33.3**	**60.2**	
2926.0000	39.5	23.1 A	V	1.5	90	Z		31.1	4.9	31.7	**27.4**	**-32.8**	**60.2**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

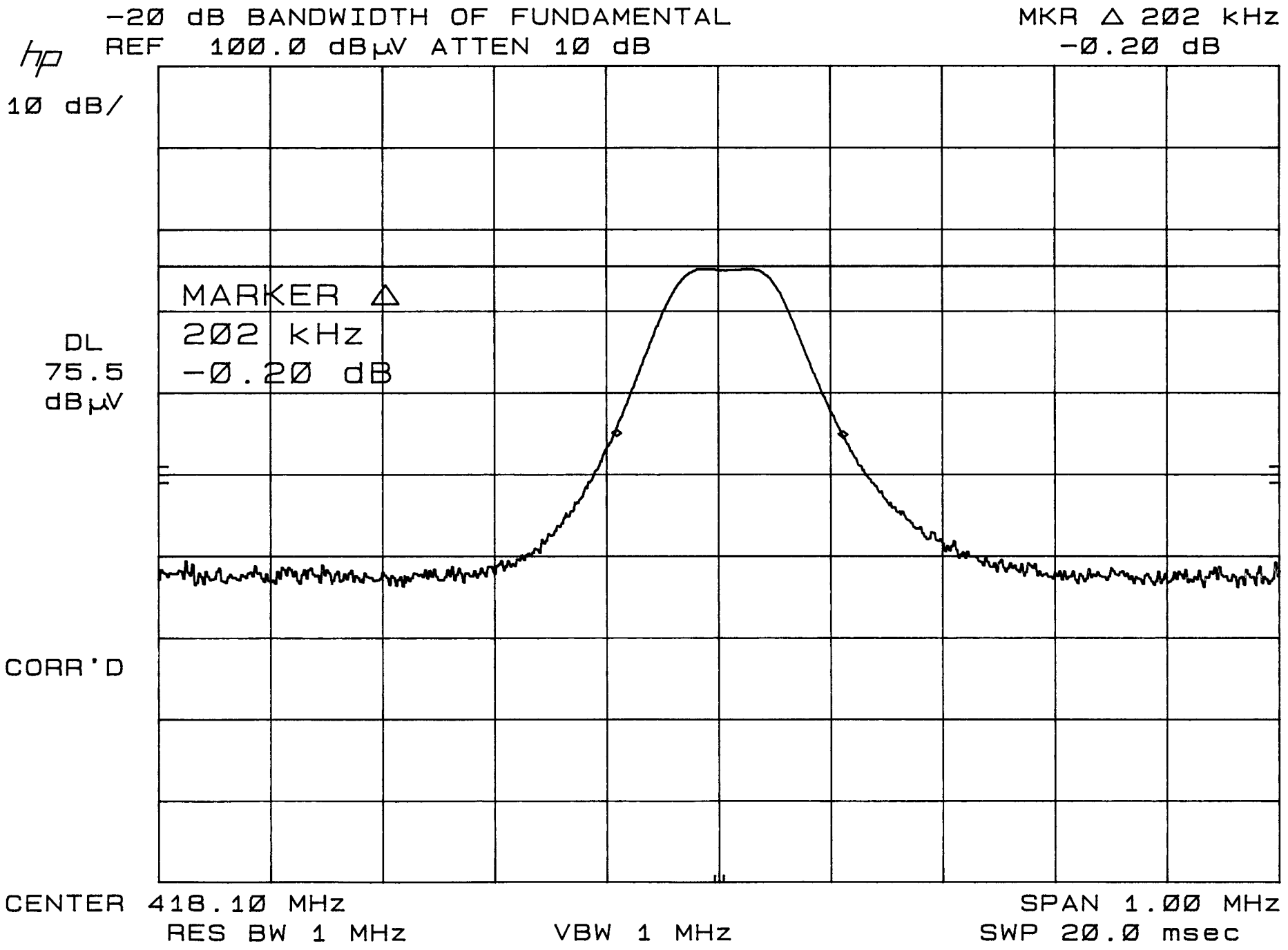
** DELTA = SPEC LIMIT - CORRECTED READING

Test location: Compatible Electronics
Customer : CODE 3, INC. Date : 7/23/2001
Manufacturer : CODE 3, INC. Time : 13.51
EUT name : NP130 Transmitter Model: S71612
Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode : SPURIOUS EMISSIONS FROM THE Tx
TEMPERATURE 81 DEGREES F.
RELATIVE HUMIDITY 35%
TESTED BY: KYLE FUJIMOTO

NO SPURIOUS EMISSIONS FOUND BETWEEN 10 kHz AND
4200 MHz IN EITHER POLARIZATION FOR THE EUT

BANDWIDTH

DATA SHEETS


-20 dB BANDWIDTH OF FUNDAMENTAL
REF 100.0 dBμV ATTEN 10 dB
MKR Δ 202 kHz
-0.20 dB
10 dB/
MARKER Δ
202 kHz
-0.20 dB
DL
75.5
dBμV
CORR'D
CENTER 418.10 MHz
SPAN 1.00 MHz
RES BW 1 MHz
VBW 1 MHz
SWP 20.0 msec

APPENDIX E

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program – Lab Code: 200063-0

Voluntary Control Council for Interference – Registration Numbers: R-983, C-1026, R-984, and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)