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A				29/09/2009	M. Reuben	S.Cohen

EMC Laboratory

Homelogix

FCCID: GCD-SP-N6G
Manufactured by
ROSSLARE Enterprises LTD.

Test Report

According to FCC Part 15B Requirements

October 2009

	Function/Title	Name	Signature	Date
Prepared by	Technical Writer	M. Reuben		28/07/2009
Checked by	Test Engineer	I. Arbitman		28/07/2009
Approved by	EMC Lab. Manager	S.Cohen		6-Aug-09

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1 INTRODUCTION

a. Scope

This document describes the measurement procedures and tests for FCC part 15b of the Homelogix Manufactured by Rosslare Ltd.

b. Description of equipment Under Test.

Equipment Under Test:	Homelogix
FCCID	GCD-SP-N6G
Manufacturer:	Rosslare Ltd.
Serial Numbers:	0825-433A0
Mode of Operation:	RX MODE
Receiver operating frequency:	433.92 MHZ
Year of Manufacture:	2008

c. Applicant Information:

Applicant:	Rosslare Ltd.
Applicant Address	Suite 912 Wing Fat Industrial Building, 12 Wang Tai Road, Kowloon Bay, Hong- Kong
Telephone:	+972-3-9386838
FAX:	+972-3-9386830
The testing was observed by:	ALLAN GREEN
Following applicant's personnel:	ALLAN GREEN

d. Test Performance:

Date of reception for testing:	15/01/2009
Dates of testing	15/01/2009 – 25/01.2009
Test Laboratory Location	Elbit Systems Land and C ⁴ I – Tadiran Ltd., EMC LAB, Hashoftim 26 Holon 58102 ISRAEL Tel: 972-3-5574476 Fax: 972-3-5575320
Applicable EMC Specification:	
Code of Federal Regulations	47, FCC Docket 89-103, Part 15: Radio Frequency Devices, Sections 15.209, 15.231, 15.205 & 15.207

2 TEST SUMMARY AND SIGNATURES.

Elbit Systems Land and C⁴I – Tadiran Ltd., EMC Laboratory has completed testing of E.U.T in accordance with the requirements of the FCC Part 15 Regulations for Class B equipment.

The E.U.T was found to comply with the requirements of the FCC Part 15b Regulations given below

Test	Test Description	Section	PASS/FAIL
3	Radiation emission	15.109	PASS
5	Power Line Conducted Interference	15.107	PASS

	Function/Title	Name	Signature	Date
Test performed by	Test Engineer	I. Arbitman		23/07/2009
Test Report prepared by	Technical Writer	M. Reuben		23/07/2009
Test Report Approved by	EMC Lab. Manager	S Cohen		30/07/2009

3 E.U.T INFORMATION

a. E.U.T description

- (1) Station for Rosslare's SecuraCare Wireless Intrusion system. The Homelogix includes a transceiver that works on 433.92 or 868.35 MHz, depending on the device model. The device receives supervisory signals from the SecuraCare wireless devices during an intrusion event, or a supervisory period (between 20-60 min, depending on model). The Homelogix sends and receives ACK signals to the SA-80 Wireless siren during normal operation. The range of the devices from the Homelogix is a maximum of 300 meters, in line of sight. The Homelogix also acts as a telephone, with full features and recognition of standard dial tone. In an event of an emergency, the Homelogix will dial out to system programmed numbers, with a recorded message. The Homelogix also allows the user to dial into the phone via PSTN and configure the system, or listen-in (half-duplex)

b. E.U.T Test Configuration

E.U.T. test configuration is shown in figure bellow

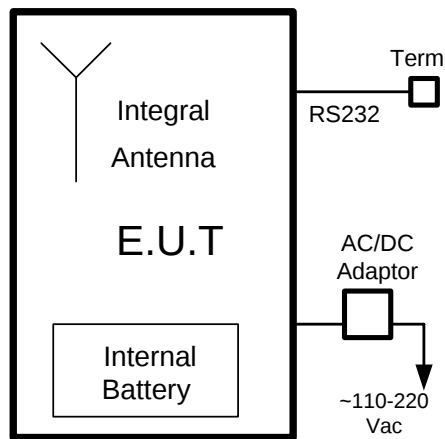


Figure 1: Test Configuration

c. E.U.T Mode of Operation description

- (1) RX Mode

4 RADIATED EMISSION PART 15.109-TEST RESULTS

a. Preliminary Radiated emission Test Result According Part 15.109

E.U.T Homelogix
S/N: 0825-433A0
Test Method: ANSI 63.4
Date: 23/07/2009
Relative Humidity: 29%
Ambient Temperature: 21c
Air Pressure: 1053hpa
Test Setup: Figure 1

Testing Engineer: I. Arbitman



Date 23/07/2009

b. Test Results Summary & Conclusions

The E.U.T was found in compliance with 15.109

c. Limits of Radiated Interference Field Strength according 15.109

The test unit shall meet the limits of Table 7.c for Class B equipment.

Table 7.c: Limits for 15.109 Class B equipment

Frequency Range (MHz)	Quasi-peak Limits (dBμV/m)
30 - 88	40
88 - 216	43
216 - 960	46
960 - 2000	54

d. Test Instrumentation and Equipment

Table 7.d: Test Instrumentation and Equipment

Item	Model	Manufacturer	Next Date Calibration
Spectrum Analyzer	8593E	HP	24/06/2010
Double Ridge Guide Antenna(1-18GHz)	DRG-118/A	ARA	09/12/2009
Broadband Antenna	BTA-L	FRANKONIA	28/07/2010
Low Noise Amplifier (0-1GHz)	AM-1300-N	MITEQ	06/01/2010
Low Noise Amplifier (1-4GHz)	AMM 003N	Avantek	12/06/2010
Low Noise Amplifier (2-18GHz)	PE 2-38	Planar	14/09/2009

e. Preliminary Results

Table 7.e: Preliminary Test Results for Unintentional Emissions in RX Mode 15.109

Configuration	Antenna Polarization	Frequency Range MHz	Res. BW (kHz)	Test Results Plot No.	PASS/FAIL
	Both	30-1000	120	1	PASS
		1000-2900	1000	2	PASS
		2900-5000		3	PASS

f. Final Test Results

Table 7.f: Six Highest 15.109

Mode Of Operation	Freq. (MHz)	peak Reading (*) (dB μ V/m)	Limit dB μ V/m	Margin (dB)	Polarity Ver/Hor	Height (m)
RX	30-1000	The Emissions are at least 10db below the unintentional limits				
	1000-5000	No Emission-Background noise only				

g. Test Procedure
See paragraph 7.f

5 POWER LINE CONDUCTED INTERFERENCE PART 15.107- TEST RESULTS

a. Preliminary Radiated emission Test Result According Part 15.207

E.U.T Homelogix
S/N: 0825-433A0
Test Method: ANSI 63.4
Date: 22/01/2009
Relative Humidity: 29%
Ambient Temperature: 21c
Air Pressure: 1053hpa
Test Setup: Figure 1

Testing Engineer: I. Arbitman



Date 22/01/2009

b. Test Results Summary & Conclusions

The E.U.T was found in compliance with 15.107

c. Limits of Radiated Interference Field Strength according 15.107

The test unit shall meet the limits of Table 8c for Class B equipment.

Table 8c: Limits for 15.107 Class B equipment

Frequency (MHz)	Quasi Peak Limits (dBμV)	Average Limits (dBμV)
0.15 – 0.5	66 – 56	56 – 46
0.5 – 5.0	56	46
5.0 – 30	60	50

d. Test Instrumentation and Equipment

Table 8.d: Test Instrumentation and Equipment

Item	Model	Manufacturer	Next Date Calibration
Spectrum Analyzer	8593E	HP	20/05/2009
Double Ridge Guide Antenna(1-18GHz)	DRG-118/A	ARA	09/12/2009
Broadband Antenna(30-1000MHz)	BTA-L	FRANKONIA	15/05/2009
Low Noise Amplifier (0-1GHz)	AM-1300-N	MITEQ	09/04/2009
Low Noise Amplifier (1-4GHz)	AMM 003N	Avantek	11/06/2009
Low Noise Amplifier (2-18GHz)	PE 2-38	Planar	14/09/2009

e. Test Data

Table 6.d: Test Results for Conducted Interference Part 15.107

Tested Line	Freq. Range MHz	Res. BW (kHz)	Test Results Plot No	PASS/FAIL
Neutral	0.15 – 0.50	9	4	PASS
	0.50 - 30		5	PASS
Phase	0.15 – 0.50		6	PASS
	0.50 - 30		7	PASS

6 PLOTS

a. Radiated emission part 15.109

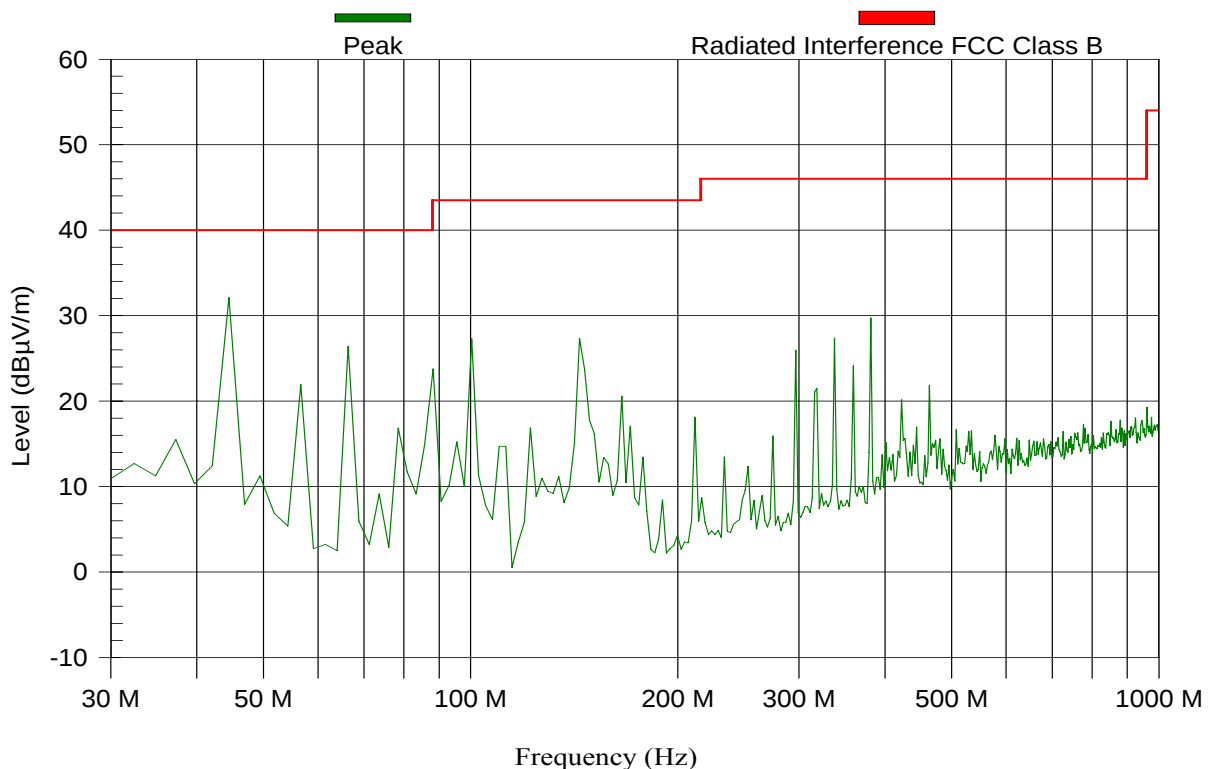
Test Results Plot No 1

FCC 30-1000MHz STBY

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMLOGIX	Spect Analyzer	Hewlett Packard 7405 AC coupling
S/N:		Ref. Level:	70 dB μ V
Date of Test:		RBW:	120 kHz
Test Engineer:	Ilya Arbitman	VBW:	1000 kHz
Antenna:	Frankonia BTA red -L_A 3m	Sweep Time:	Auto: 151.88 ms
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Wednesday, September 09, 2009

10:33:23 AM



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

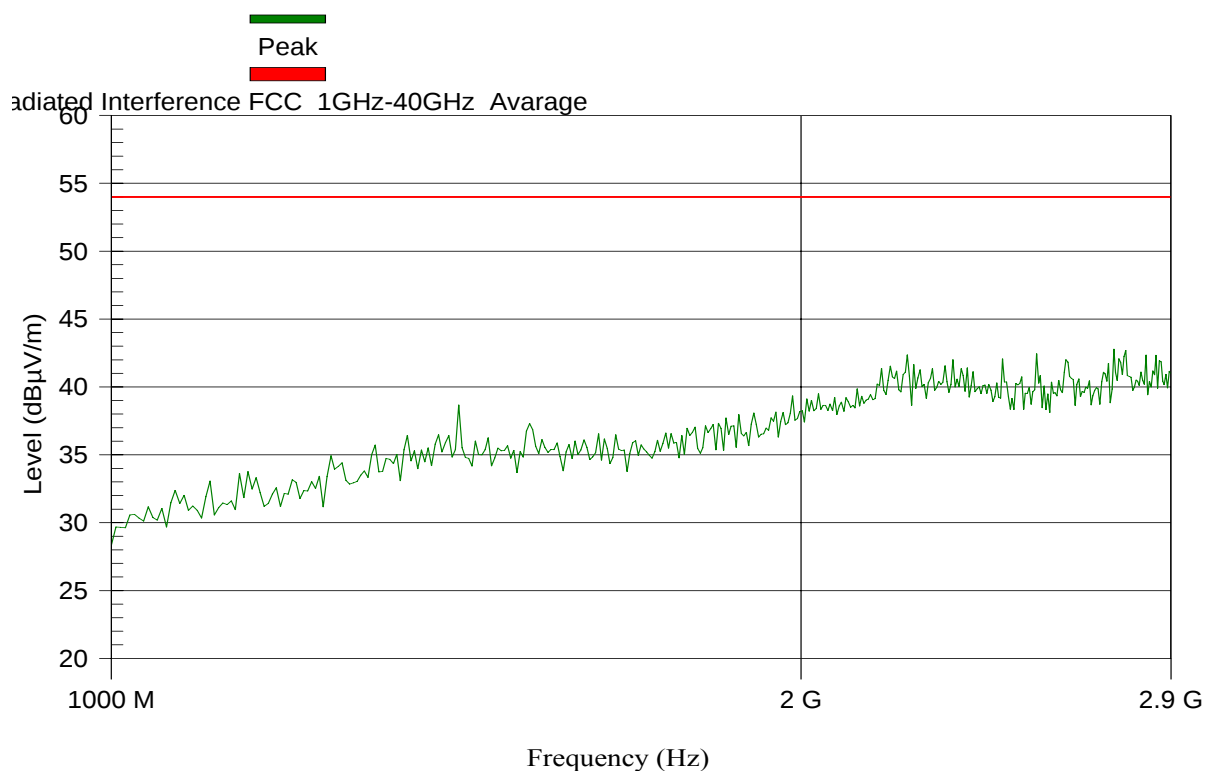
Nr	Frequency (MHz)	PK Value (dB μ V/m)	QP Value (dB μ V/m)	QP Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	44.248	31.6	3.7	40	Pass	5	1	V
2	66.365	28.5	26.7	40	Pass	350	1.1	V

FCC 1-2.9GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMLOGIX	Spect Analyzer	Hewlett Packard 7405 AC coupling
S/N:		Ref. Level:	90 dB μ V
Date of Test:		RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118A 1-18GHz SER 1317	Sweep Time:	Auto: 10 ms
Polarization:	Horizontal and Vertical	Pre Amplifier	pre amp 1GHz-4GHz

TEST REMARKS: Wednesday, September 09, 2009

FCC PART 15.209



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

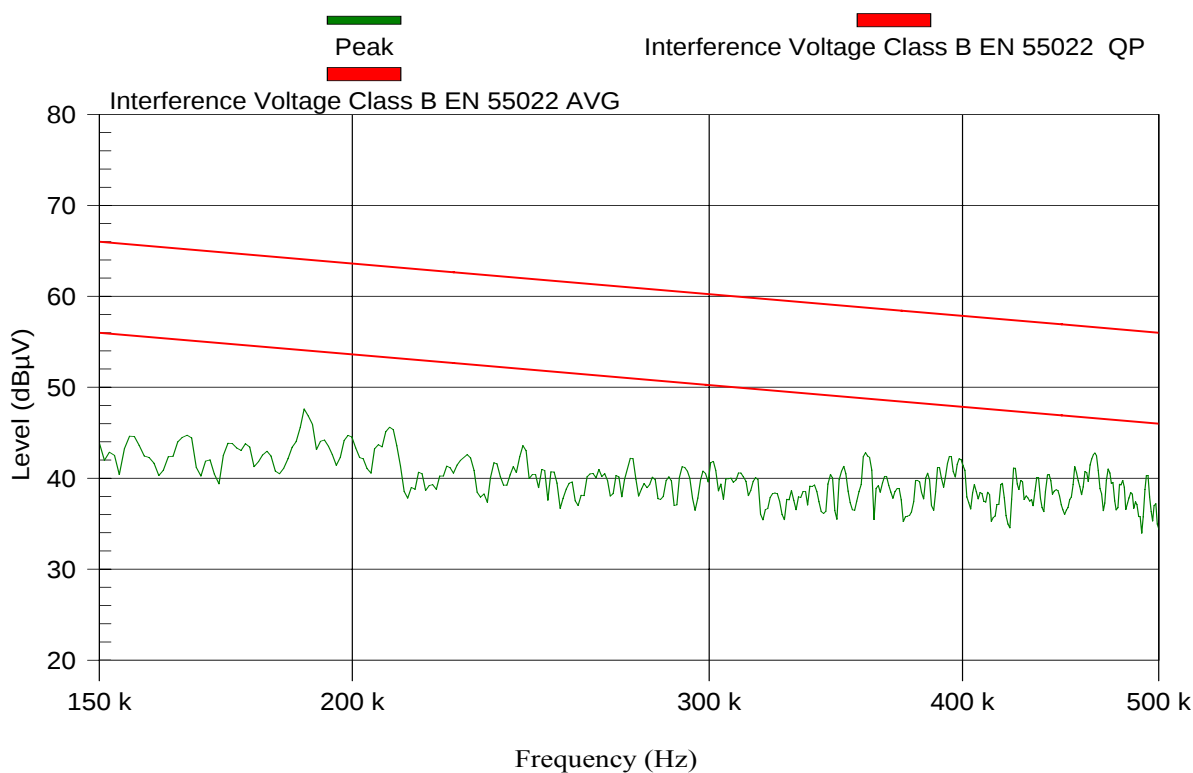
b. Power Line Conducted interference part 15.107

Test Results Plot No 3

FCC Part 15 0.15-0.50 MHz - NEUTRAL

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMOLOGIX	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	0825-433A0	Ref. Level:	80 dB μ V
Date of Test:	25/01/2009	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	1000 kHz
Antenna:	No Description Available	Sweep Time:	Auto: 11.52 ms
Polarization:	1 polarization	Pre Amplifier	Attenuator 20db

TEST REMARKS: Sunday, January 25, 2009 10:16:06 AM
NEUTRAL LEAD; WITH P.S: D48-13.8-0800(2A-107)



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V)	AVG Value (dB μ V)	QP Value (dB μ V)	AVG Limit (dB μ V)	QP Limit (dB μ V)	Result	Line
1	0.15	48.4	34.2	42.6	56	66	Pass	Neutral
2	0.358	44.4	29.9	38.2	48.8	58.8	Pass	Neutral
3	0.39	44.2	29.6	38.1	48.1	58.1	Pass	Neutral
4	0.453	43.6	29.3	37.8	46.8	56.8	Pass	Neutral
5	0.483	43.8	29.2	37.5	46.3	56.3	Pass	Neutral

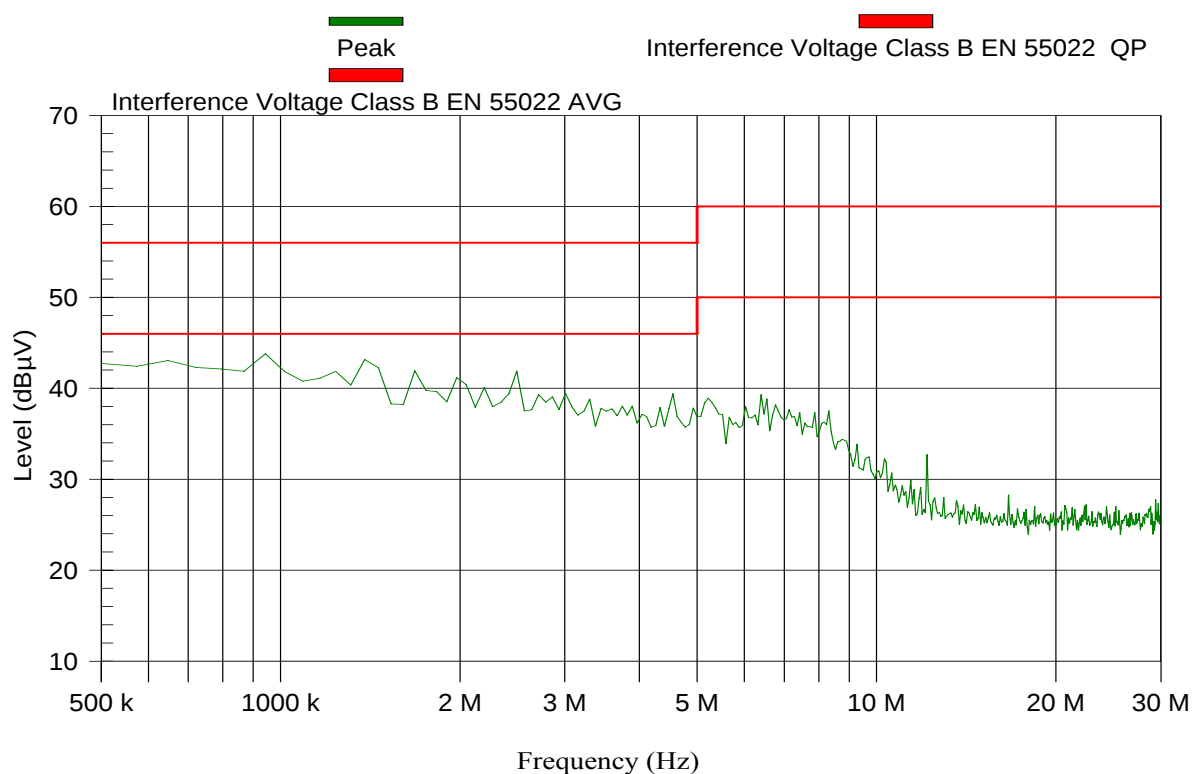
Test Results Plot No 4

FCC Part 15 0.5-30 MHz - NEUTRAL

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMEOLOGIX	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	0825-433A0	Ref. Level:	60 dB μ V
Date of Test:	25/01/2009	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	1000 kHz
Antenna:	No Description Available	Sweep Time:	Auto: 819.45 ms
Polarization:	4 polarization	Pre Amplifier	Attenuator 20db

TEST REMARKS: Sunday, January 25, 2009 10:24:56 AM

NEUTRAL LEAD; WITH P.S: D48-13.8-0800(2A-107)



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V)	AVG Value (dB μ V)	QP Value (dB μ V)	AVG Limit (dB μ V)	QP Limit (dB μ V)	Result	Line
1	0.532	44.9	32.8	39.2	46	56	PASS	Neutral
2	0.94	42.6	28.1	36.6	46	56	PASS	Neutral
3	1.223	43.3	27.5	35.9	46	56	PASS	Neutral
4	1.412	41.4	27.2	35.7	46	56	PASS	Neutral
5	1.715	40.6	26.9	35.3	46	56	PASS	Neutral
6	2.161	40.9	26.5	34.7	46	56	PASS	Neutral

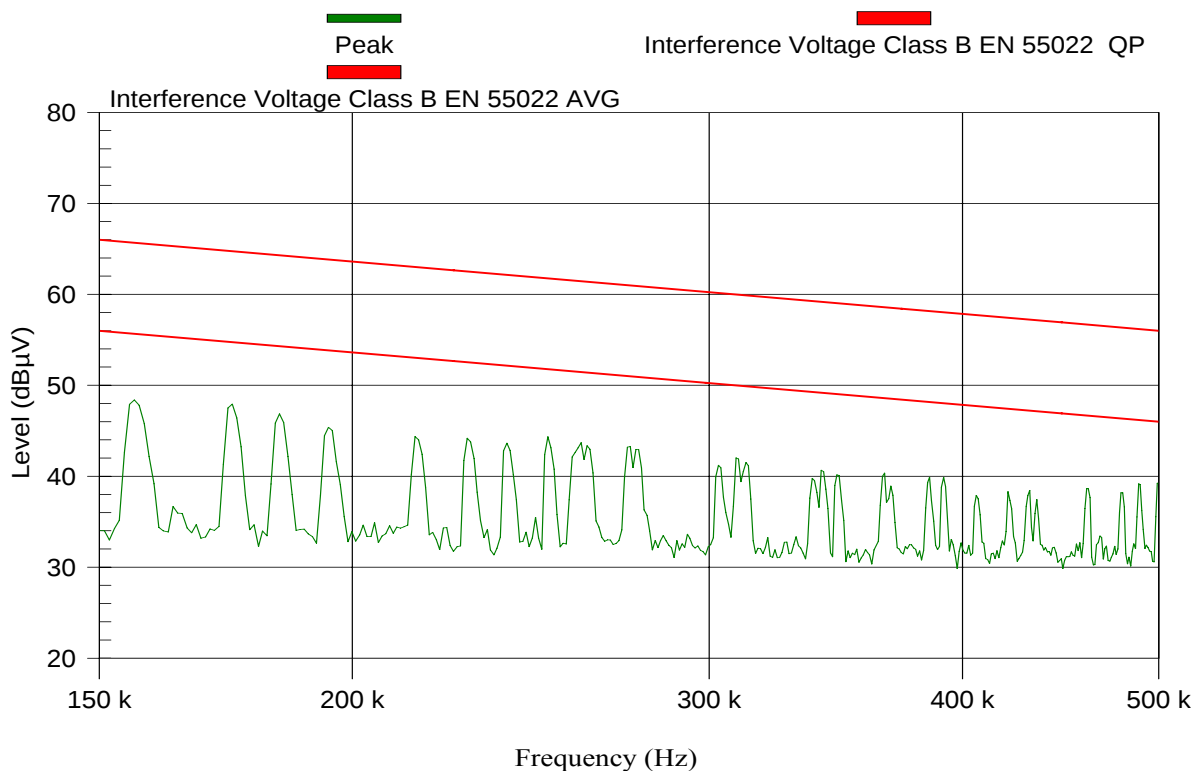
Test Results Plot No 5

FCC Part 15 0.15-0.50 MHz - PHASE

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMELOGIX	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	0825-433A0	Ref. Level:	80 dB μ V
Date of Test:	25/01/2009	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	1000 kHz
Antenna:	No Description Available	Sweep Time:	Auto: 11.52 ms
Polarization:	2 polarization	Pre Amplifier	Attenuator 20db

TEST REMARKS: Sunday, January 25, 2009 10:29:16 AM

PHASE LEAD; WITH P.S: D48-13.8-0800(2A-107)



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V)	AVG Value (dB μ V)	QP Value (dB μ V)	AVG Limit (dB μ V)	QP Limit (dB μ V)	Result	Line
1	0.15	48.6	3.6	41.8	56	66	Pass	Line 1

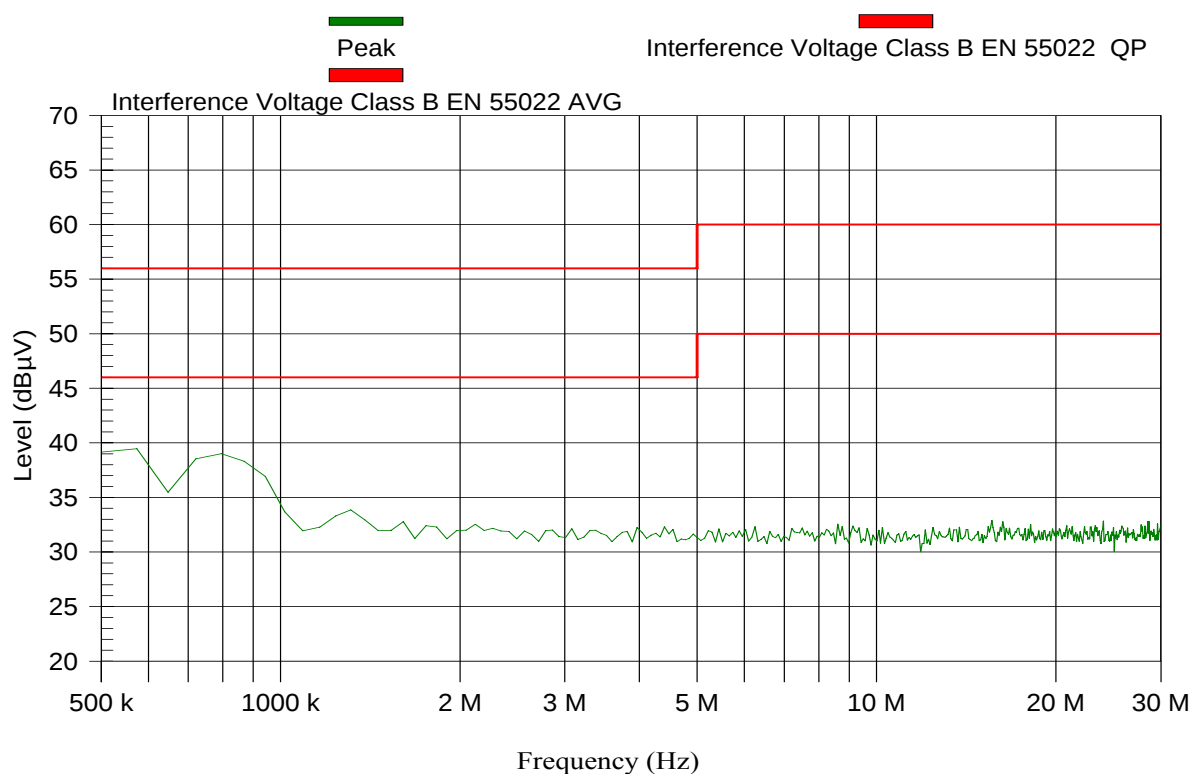
Test Results Plot No 6

FCC Part 15 0.5-30 MHz - PHASE

Test & EUT General Information		Receiver Setting	
EUT Name:	HOMELOGIX	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	0825-433A0	Ref. Level:	80 dB μ V
Date of Test:	25/01/2009	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	1000 kHz
Antenna:	No Description Available	Sweep Time:	Auto: 819.45 ms
Polarization:	3 polarization	Pre Amplifier	Attenuator 20db

TEST REMARKS: Sunday, January 25, 2009 10:30:30 AM

PHASE LEAD; WITH P.S: D48-13.8-0800 (2A-107)



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

7 CORRECTION FACTORS

DOUBLE RIDGE HORN Model 3105 S/N:00-50C2-1C-C468 2052 Antenna Factor

Frequency (MHz)	Antenna Factor (db/m)
1000	24.4
2000	26.2
3000	30
4000	32.6
5000	33.8
6000	34.9
7000	36.2
8000	36.9
9000	37.8
10000	38.4
11000	39.1
12000	40.1
13000	42
14000	40.6
15000	39.3
16000	40.3

Antenna Factor for broadband antenna model BTA-L S/N:00-50C2-1C-C468 980045L

Frequency (KHz)	Ant. Factor (db/m)	Frequency (KHz)	Ant. Factor (db/m)
30	19.05	300	14.35
32	19.13	310	14.28
34	18.74	320	14.43
36	18.03	330	14.13
38	16.61	340	14.48
40	15.44	350	14.89
45	13.66	360	15.12
50	11.52	370	15.70
55	10.04	380	15.78
60	7.68	390	16.22
65	6.11	400	16.45
70	5.47	425	16.99
75	5.98	450	17.59
80	6.86	475	17.28
85	7.20	500	17.69
90	7.47	525	18.91
95	7.23	550	19.06
100	7.20	575	18.20
105	7.30	600	18.87
110	7.37	625	18.81
115	7.02	650	19.64
120	6.82	675	19.92
125	7.05	700	20.66
130	7.83	725	21.08
135	9.61	750	21.53
140	7.93	775	22.39
145	8.03	800	22.66
150	8.29	825	22.87
160	8.72	850	22.65
170	9.18	875	23.12
180	9.05	900	23.70
190	9.80	925	23.40
200	10.61	950	23.43
210	10.34	975	23.30
220	11.21	1000	24.02
230	11.69		
240	11.62		
250	11.85		
260	12.45		
270	13.16		
280	13.48		
290	13.74		

8 ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms are applicable in this document

BW	Bandwidth
R.BW	Resolution Bandwidth
V.BW	Video Bandwidth
db	Decibel
EMI	Electromagnetic interference
E.U.T	Equipment under test
LISN	Line impedance stabilization network
S/N	Serial number
QP	Quasi peak
PK	Peak

9 PHOTOGRAPHS

