TIMCO ENGINEERING, Inc.

849 NW State Road 45
PO Box 370
Newberry, FL 32669

COMPLIANCE TEST REPORT

PER STANDARD (s):

FCC Part 15, Subparts B, C, and D
IC RSS-213 & ICES-003
UPCS / LE-PCS Isochronous Device
Base & Handset: 1921.536 – 1928.448 MHz
ANSI C63.17 - 1998 (or 2005 Draft where applicable)
ANSI C63.4 – 2003

APPLICANT:	ASCALADE TECHNOLOGIES INC. 12051 RIVERSIDE WAY RICHMOND BC V6W 1K7 CANADA
DESCRIPTION OF PRODUCT:	1.9GHz DECT PSTN Cordless Phone w/ VoIP Features
FCC IDs:	PBWDT19R42(Base), PBWDT19R42H (Handset)
IC LABEL:	IC: 3842A-B209
Model Number:	B209 (Base), B209H (Handset)
DATE SAMPLE RECEIVED FOR TESTING:	11/29/2006
DATE TESTED:	12/20/2006
REPORT NO.:	3246AUT6TestReport.PDF
TEST RESULTS:	☒ PASS ☐ FAIL

TABLE OF CONTENTS

1 GENERAL INFORMATION

The test results relate only to the items tested.

1.1 COMPLIANCE STATEMENT

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards. No modifications were made to the equipment during testing in order to demonstrate compliance with these standards.

ACCREDITED

Certificate #0955-01

I attest that the necessary measurements were made, under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669.

Authorized Signatory Name: Mario de Aranzeta

Signature: On File

Function: Chief Engineer

Date: January 10, 2006

Tester: Nam Nguyen

Signature: On File

Date: 12/28/2006

1.2 EQUIPMENT UNDER TEST SPECIFICATION

Description of Equipment Under Test
UPCS / LE-PCS Isochronous Device, Base & Handset, 1921.536 – 1928.448 MHz

Characterization of Test Item
☒ Prototype
☐ Pre-production
☐ Production

Construction of Equipment
☒ Single unit
☐ Multiple units (If multiple units describe each one clearly)

Type of Equipment
☐ Fixed
☐ Mobile
☒ Portable Station

☒ Transmitter	☐ Simplex	☒ Integral antenna (Handset and Base)
☐ Receiver	☒ Duplex	☐ Single antenna connector
☐ Transceiver		☐ Two antenna connector
☒ Battery Charger		☐ Vehicle battery adaptor
☐ Remote Control Head		

Family Model Numbers
Original Family:
Trade Name: Ascalade
Model Number: B209, B209H

Alternative Family 1:
Trade Name: Philips
Model Number: XL340XY/ZZ (XY, ZZ – any combination of wild digits from 0 –9 and/or wild numbers from A – Z)

1.2.1 Transmitter Technical Characteristics

Frequency characteristics (Method of frequency generation):
☐ Crystal
☒ Synthesizer
☐ Other

State the maximum number of channels over which the equipment can operate: N/A

Maximum rated transmitter output power: 70mW for the Base and 72mW for the Handset

1.2.2 Power Source (s)

☐ AC Supply:
State voltage: _____ Single phase: ____ Three phase: ____
AC supply frequency (Hz) _____

☒ External DC supply:
Nominal voltage 2.4VDC NiMH rechargeable battery for Handset and 9VDC via a power adapter for Base

☐ Battery:
- ☐ Nickel Cadmium
- ☐ Lead acid
- ☐ Leclanche
- ☐ Lithium

[The following space is left bland on purpose)

1.3 RATIONAL FOR SELECTING TEST CONFIGURATION(S)

No deviation from technical specifications

1.4 DESCRIPTION ON HOW THE EUT WAS EXERCISED DURING TESTING

(e.g software description, test signal, etc.)

The EUT was set in continuous transmit mode of operation.

1.5 TEST STANDARDS

FCC Part 15, Subparts B, C, and D
IC RSS-213 & ICES-003
ANSI C63.17 - 1998 (or 2005 Draft where applicable)
ANSI C63.4 - 2003

1.6 TEST ENVIRONEMENT

Temperature
Normal test temperature (Tnom): 22 °C
Extreme test temperatures (Tmax): n/a °C
(Tmin): n/a °C

Relative Humidity 50 %

Details of power supply
Normal test voltage Handset (Vnom): 2.4 VDC
Base (Vnom): 9 VDC (from adapter)

Extreme test voltage (Vmax): Not Applicable
(Vmin): Not Applicalbe

2 TEST RESULTS

2.1 RADIATED PEAK TRANSMIT POWER

Rule Parts No.: 15.319 (c)

Test procedure: ANSI C63.17 section 6.1.2

Technical requirements/Limits: The peak transmit power shall not exceed 100 µW multiplied by the square root of the emission bandwidth in hertz measured at 26dBc.
The measured emissions bandwidth is 1.5 MHz max

Limit = 100µW * √(BW in Hz)= 0.122W = 20.8 dBm

and Radiated limit ≤ 118 dBµV/m at 3m by radiated measurement derived from Friis formula as follows $P = (E*d)^2/30G$, where P = 0.122 W = 20.8 dBm

This assumes a G = Numeric gain of TX antenna = 1.585 (2.0 dBi) worst-case across band
d = 3 m

Notes: The calculated limit of 118 dBµV/m assumes free space conditions. This device was measured on a typical test site (OATS) with a reference ground plane as described in ANSI C63.4. This maximum value was obtained with the EUT set up at a height of 80cm. Placing the EUT at a height of 100cm reduces the maximum amplitude measured by about 3-4dB.

Test Conditions: Power output measurements were performed on an Open Area Test Site at a distance of 3meter. The antenna for this device is integral. SA Settings:
RBW ≥ Emission BW (or increased until no more than 0.5 dB change in power), VBW ≥ 3 x RBW
Span = zero, centered on channel center, Sweep: fast enough to resolve transmit pulse
Detection: Peak

Test Results: The test data is presented in the following tables.

Test Item: Base	Applicant: Ascalade Technologies Inc.					
Project: 3246AUT6	Test Date: 12/21/2006					
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m
1,921.50	1,921.54	77.7	V	2.84	30.73	111.27
1,921.50	1,921.54	81.3	H	2.84	30.73	114.87
1,928.50	1,928.45	77.2	V	2.84	30.77	110.81
1,928.50	1,928.45	80.5	H	2.84	30.77	114.11

Test Item: Handset	Applicant: Ascalade Technologies Inc.					
Project: 3247AUT6	Test Date: 12/21/2006					
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m
1,921.50	1,921.54	83.4	V	2.84	30.73	116.97
1,921.50	1,921.54	77.9	H	2.84	30.73	111.47
1,928.50	1,928.45	82	V	2.84	30.77	115.61
1,928.50	1,928.45	79	H	2.84	30.77	112.61

2.2 TRANSMITTER SPURIOUS EMISSIONS

Rule Parts No.: Pt 15.319 (g) and Pt 15.323(d)

Test procedure: ANSI C63.17 section 6.1.1

Technical requirements/Limits: 15.319(g) Not withstanding other technical requirements specified in this subpart, attenuation of emissions below the general emission limits in Section 15.209 is not required. 15.323(d) Emissions outside the sub-band shall be attenuated below a reference power of 112 milliwatts as follows: 30 dB between the sub-band and 1.25 MHz above or below the sub-band; 50 dB between 1.25 and 2.5 MHz above or below the sub-band; and 60 dB at 2.5 MHz or greater above or below the subband. Compliance with the emission limits is based on the use of measurement instrumentation employing peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

Test Conditions: Lowest and Highest channel only. Radiated on an Open Area Test Site at a distance of 3meter.

Test Results: The test data is presented in the following tables.

Test Item: Base	Ascalade Technologies Inc.						
Project: 3246AUT6	12/21/2006						
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax & Filter Loss dB	Correction Factor dB/m	Field Strength dBuV/m	dBc
1,921.50	3843.08	5.7	V	5.5	33.57	44.77	70.1
1,921.50	3843.08	8.3	H	5.5	33.57	47.37	67.5
1,921.50	5764.62	6.1	V	8.23	35.42	49.75	65.12
1,921.50	5764.62	7.4	H	8.23	35.42	51.05	63.82
1,928.50	3856.9	7.5	V	5.67	33.59	46.76	67.35
1,928.50	3856.9	8.2	H	5.67	33.59	47.46	66.65
1,928.50	5785.35	6.2	V	8.6	35.44	50.24	63.87
1,928.50	5785.35	6.9	H	8.6	35.44	50.94	63.17

- The limit for all harmonic emissions are = 60dBc.

Test Item: Handset	Ascalade Technologies Inc.						
Project: 3247AUT6	12/21/2006						
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax & Filter Loss dB	Correction Factor dB/m	Field Strength dBuV/m	dBc
1,921.50	3843.08	5.7	V	5.5	33.57	44.77	72.2
1,921.50	3843.08	6.4	H	5.5	33.57	45.47	71.5
1,921.50	5764.62	3.3	V	8.23	35.42	46.95	70.02
1,921.50	5764.62	5.2	H	8.23	35.42	48.85	68.12
1,928.50	3856.9	5.0	V	5.67	33.59	44.26	71.35
1,928.50	3856.9	7.0	H	5.67	33.59	46.26	69.35
1,928.50	5785.35	4.7	H	8.6	35.44	48.74	66.87
1,928.50	5785.35	5.6	V	8.6	35.44	49.64	65.97

- The limit for all harmonic emissions are = 60dBc.

2.3 GENERAL RADIATED SPURIOUS EMISSIONS

2.3.1 Radiated Spurious Emissions

Rule Parts No.: 15.109, 15.33, and 15.31

Test procedure: ANSI C63.4 - 2003

Technical requirements/Limits:

Emission Frequency (MHz)	Field Strength		At Distance (m)	Detector Type
	(μV/m)	(dBμV/m)		
0.009 – 0.490	2400/f (kHz)	67.6 / kHz	300	AV (9-90 kHz, 110-490 kHz) QP (others)
0.490 – 1.705	24000/f (kHz)	87.6 / kHz	30	QP
1.705 – 30.0	30	29.5	30	QP
30 – 88	100	40	3	QP
88 – 216	150	43.5	3	QP
216 – 960	200	46	3	QP
> 960	500	54	3	AV (> 1GHz)

Test Conditions: Lowest and Highest channel only. Radiated on an Open Area Test Site at a distance of 3meter. PK: RBW ≥ 100 kHz for f < 1 GHz, 1 MHz for f ≥ 1 GHz, VBW ≥ RBW Avg: RBW = 1 MHz for f ≥ 1 GHz, VBW = 10Hz, Linear average. If the emission is pulsed, the device was modified for continuous operations, and the average level was calculated according to part 15.35(c).

Test Results:

Base in Stand-by Mode						
Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dBuV/m
36.32	11	H	0.43	11.92	23.35	16.65
45.79	10.5	V	0.48	10.26	21.24	18.76
54.76	11	V	0.52	11.77	23.29	16.71
65.88	14.7	H	0.55	9.9	25.15	14.85
76.3	10.5	V	0.59	6.77	17.86	22.14
94.98	12.3	V	0.64	10.7	23.64	19.86

[Continued]

Base in Stand-by Mode						
Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dBuV/m
101.24	10.7	H	0.65	11.52	22.87	20.63
128.54	10.9	H	0.68	13.13	24.71	18.79
145.58	10.7	V	0.7	13.23	24.63	18.87
153.84	11.8	V	0.72	14.43	26.95	16.55
184.66	11.8	H	0.84	17.07	29.71	13.79
235.01	12.9	V	0.97	11.35	25.22	20.78
235.06	12.8	H	0.97	11.9	25.67	20.33
256.76	14.8	H	1.01	12.87	28.68	17.32
317.98	13	H	1.12	15.42	29.54	16.46
345.58	16.9	H	1.15	15.16	33.21	12.79
345.62	13.8	V	1.15	14.56	29.51	16.49
373.2	18.5	H	1.17	15.26	34.93	11.07
373.24	16.4	V	1.17	14.8	32.37	13.63
400.92	12.8	V	1.2	16.02	30.02	15.98
463.12	11.1	V	1.26	16.9	29.26	16.74
539.16	14.8	V	1.42	18.2	34.42	11.58
566.76	11.4	H	1.5	19.24	32.14	13.86
649.76	12	H	1.65	19.9	33.55	12.45
896.34	11.1	V	1.95	22.23	35.28	10.72
945.89	11.7	V	2.02	22.9	36.62	9.38

Handset in Stand-By Mode						
Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dBuV/m
30.54	12.6	H	0.4	13.62	26.62	13.38
36.3	12.5	V	0.43	10.29	23.22	16.78
46.6	14	V	0.48	10.42	24.9	15.1
76.44	10.3	H	0.59	6.88	17.77	22.23
82.91	11.5	V	0.61	7.34	19.45	20.55
85.92	12.2	H	0.61	7.38	20.19	19.81
138.28	10.8	H	0.69	13.1	24.59	18.91
145.66	10.9	V	0.7	13.25	24.85	18.65
152.07	15.7	H	0.71	14.19	30.6	12.9
165.88	15.6	H	0.76	14.61	30.97	12.53
182.98	11.6	H	0.83	16.9	29.33	14.17
184.95	10.2	V	0.84	17.3	28.34	15.16

[Continued]

Handset in Stand-By Mode						
Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dBuV/m
207.04	10.6	V	0.91	11.37	22.88	20.62
235.06	12.5	H	0.97	11.9	25.37	20.63
246.52	11.2	V	0.99	12.22	24.41	21.59
262.6	13.7	V	1.03	12.73	27.46	18.54
262.7	19.4	H	1.03	13.11	33.54	12.46
317.93	17.5	H	1.12	15.43	34.05	11.95
317.96	15.2	V	1.12	15.24	31.56	14.44
345.58	15.6	V	1.15	14.56	31.31	14.69
345.62	18.9	H	1.15	15.16	35.21	10.79
373.28	14.8	V	1.17	14.8	30.77	15.23
456.21	19.5	V	1.26	16.86	37.62	8.38
483.83	18.5	V	1.28	17.33	37.11	8.89
483.86	16.7	H	1.28	18.15	36.13	9.87
511.48	15.1	V	1.33	18.06	34.49	11.51

2.3.2 AC Power Lines Conducted Spurious Emissions

Rule Parts No.: Pt 15.315, Pt 15.207, Pt 15.107, Pt 15.31, RSS-GEN, ICES-003

Test procedure: ANSI C63.4 - 2003

Technical requirements/Limits:

FCC

Emission Frequency (MHz)	FCC Conducted Limit (dBµV)	
	Quasi-peak (QP)	Average (AV)
0.15 - 0.5	66 to 56 *	56 to 46 *
0.5 - 5	56	46
5 - 30	60	50
* Decreases with the logarithm of the frequency.		

IC 250 µV (48 dBµV) within 0.45-30 MHz using CISPR method of measurement

Test Conditions:

PK and QP (detector): RBW = 10kHz VBW > RBW
Average: RBW = 10kHz VBW = 10Hz

Test Results:

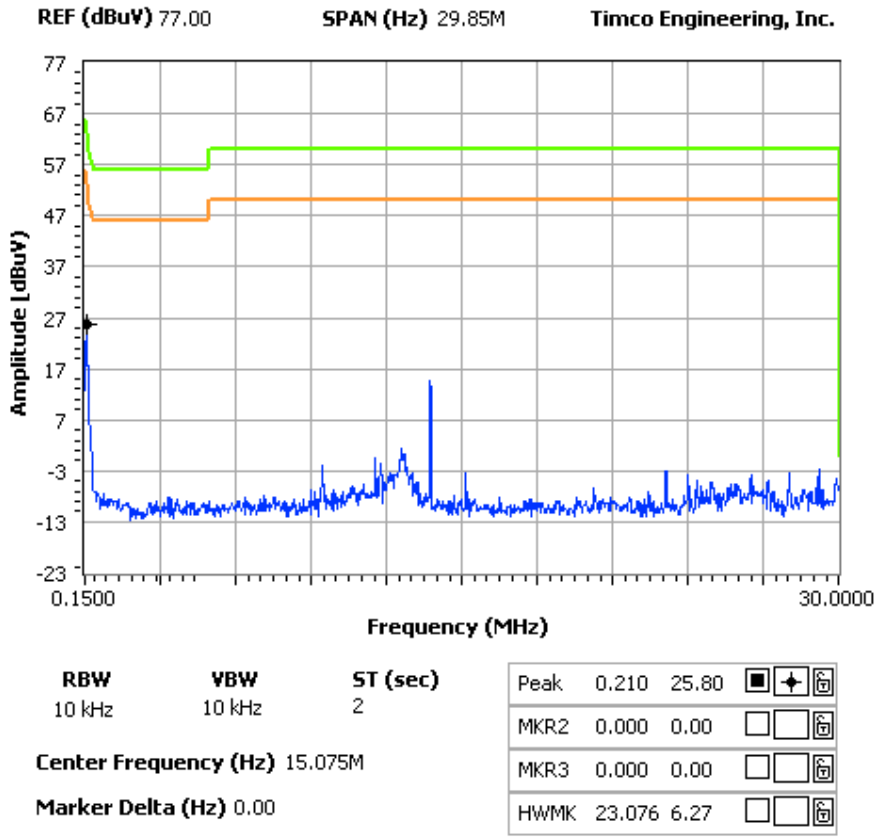
Base is connected to power source through adapter.

Power Line 1

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 1 (BASE)

FCC 15.107 Mask Class B

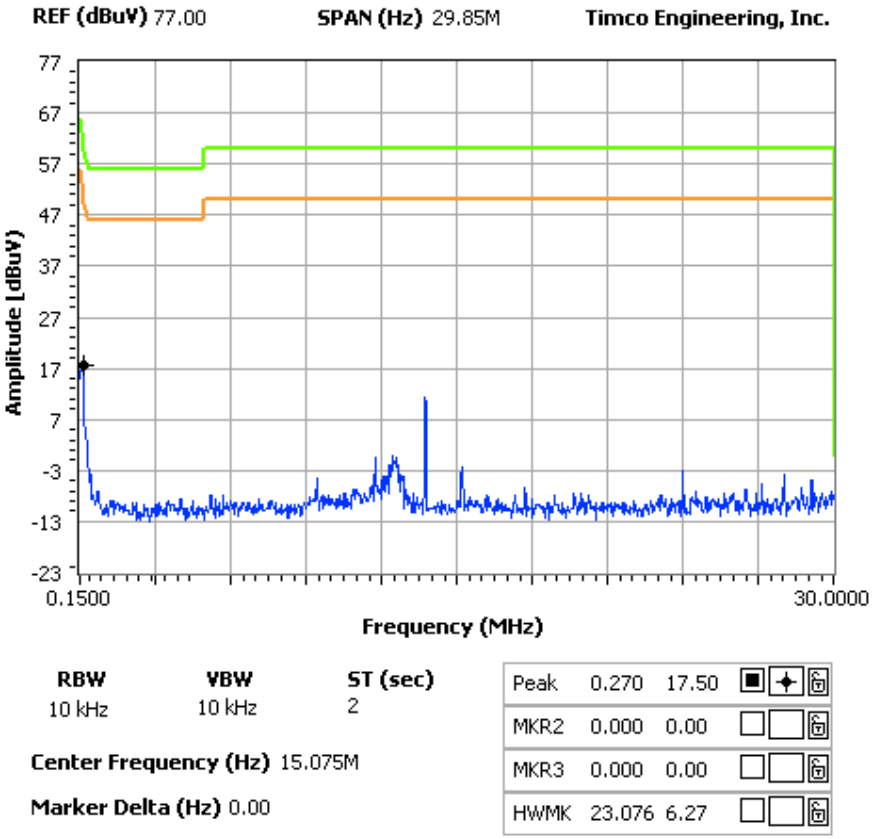


Power Line 2

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 2 (BASE)

FCC 15.107 Mask Class B



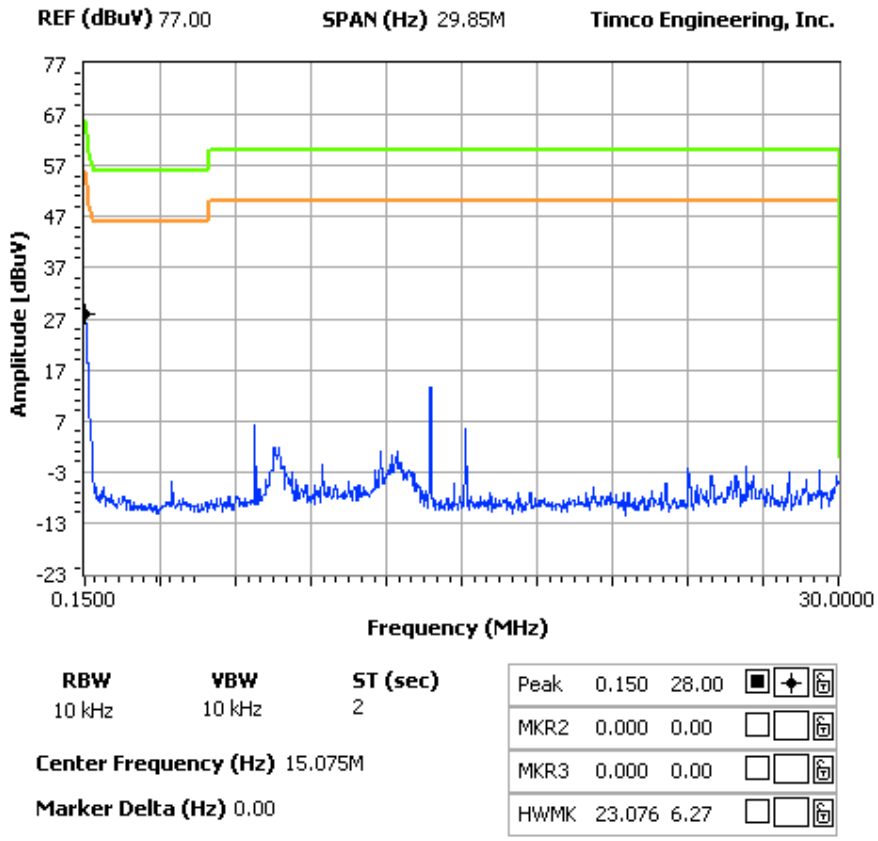
Base is connected to power source and holding the handset.

Power Line 1

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 1 (BASE + HANDSET)

FCC 15.107 Mask Class B

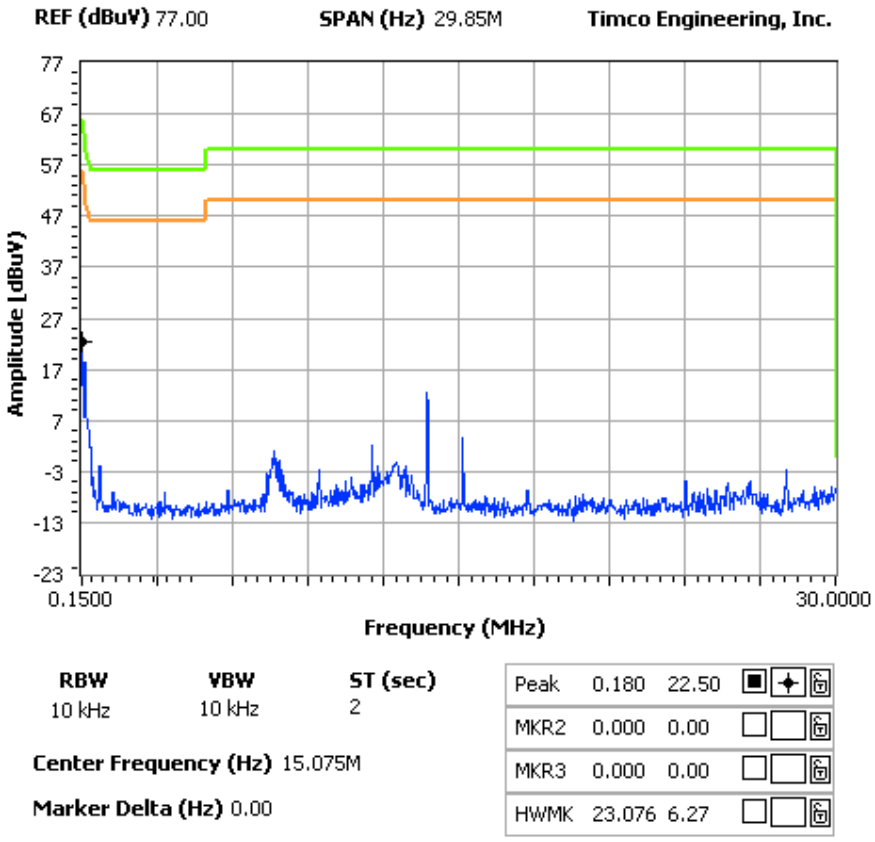


Power Line 2

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 2 (BASE + HANDSET)

FCC 15.107 Mask Class B



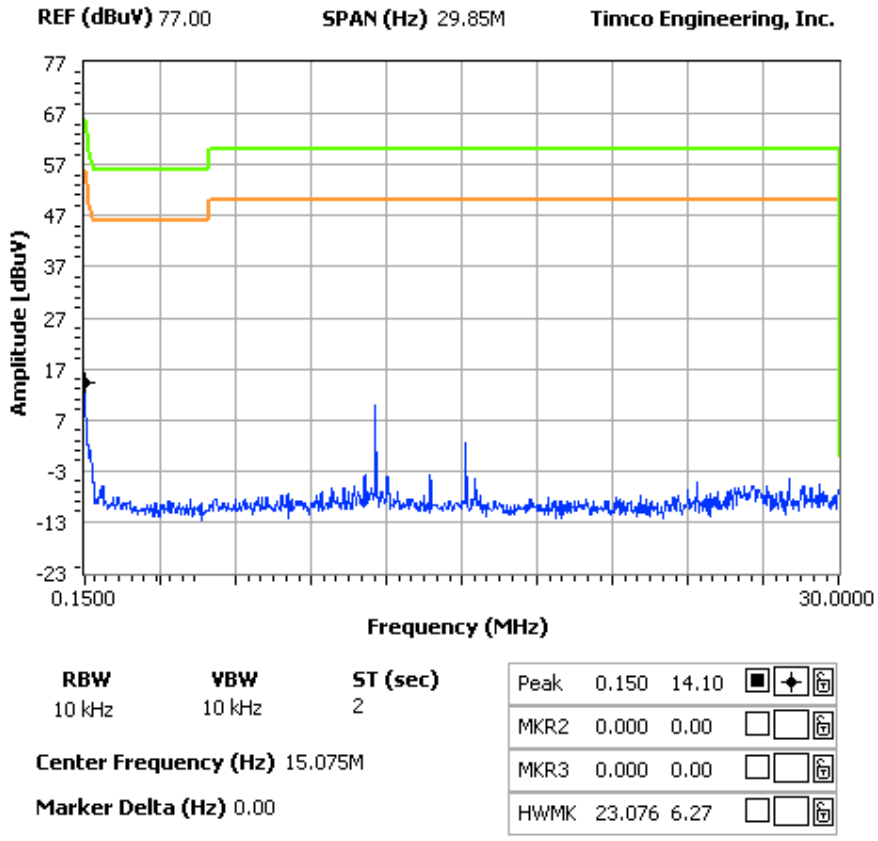
Phone (Handset) is on the charger, which is connected to power source.

Power Line 1

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 1 (HANDSET)

FCC 15.107 Mask Class B

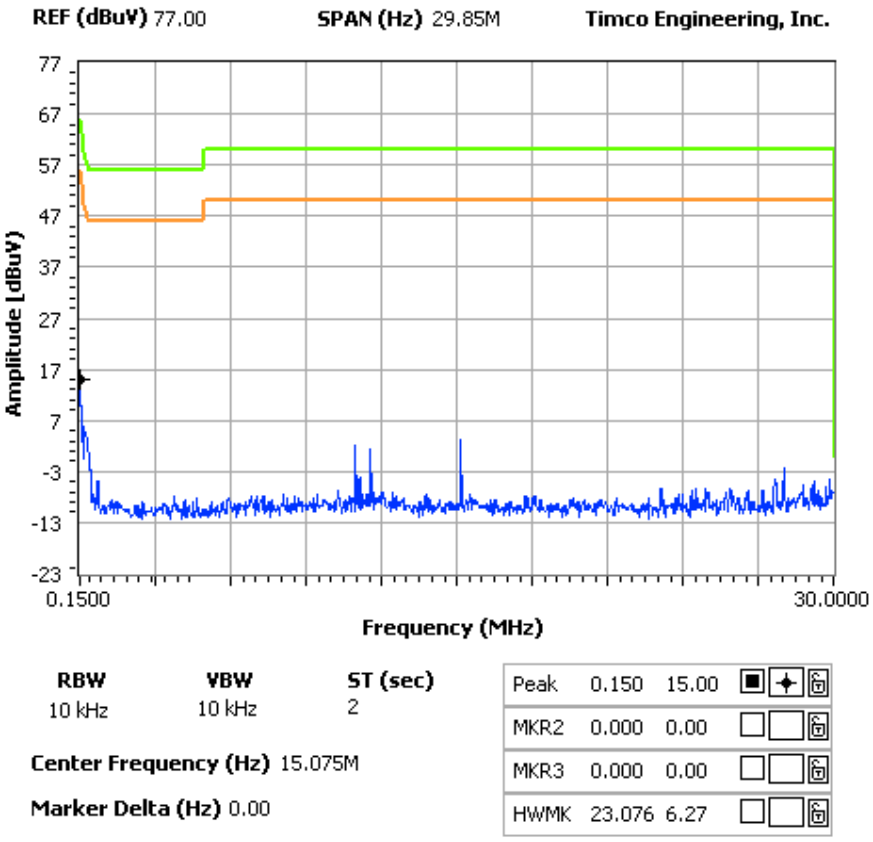


Power Line 2

NOTES:

ASCALADE TECHNOLOGIES INC. - FCC ID:
POWER LINES CONDUCTED PLOT - LINE 2 (HANDSET)

FCC 15.107 Mask Class B



3 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/06	1/12/09
Biconnical Antenna	Eaton	94455-1	1057	CAL 3/18/05	3/18/07
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/06	8/17/04
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 4/13/05	4/13/07
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
Double-Ridged Horn Antenna	Electro-Metrics	RGA-180	2319	CAL 12/29/06	12/29/08
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/06	8/27/08
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 5/8/05	5/8/07