TIMCO ENGINEERING, Inc.

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

TEST REPORT

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 V6W 1K7 Tel.: 1-604-241-7991 MR. KEVIN YAU, QUALITY MANAGER
MODEL NUMBERS:	VOIP8411B/37
DESCRIPTION OF PRODUCT:	1.9 GHz DECT USB/POTS TELEPHONE
FCC IDs:	PBWB187R26 (BASE) PBWB187R26H (HANDSET)
IC:	3842A-B187
DATE SAMPLE RECEIVED FOR TESTING:	10/9/2006
DATE TESTED:	10/17/2006
TEST RESULTS:	☒ PASS ☐ FAIL

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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.

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 R. DE ARANZETA

Signature: <*Mario R. de Aranzeta*>

Function: ENGINEER

Date: 11/3/2006

1.2 EQUIPMENT UNDER TEST SPECIFICATION

Characterization of test item:

Prototype ☐
Pre-production ☒
Production ☐

Construction of equipment:

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

1.2.1 TRANSMITTER TECHNICAL CHARACTERISTICS

MAXIMUM RATED TRANSMITTER OUTPUT POWER: 0.071W EIRP 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

1.3 RATIONAL FOR SELECTING TEST CONFIGURATION(S):

No deviation from technical specifications

1.4 TEST STANDARDS

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IC RSS-213 & ICES-003
UPCS / LE-PCS Isochronous Device
Base & Handset: 1921.536 – 1928.448 MHz
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2 TEST ENVIRONEMENT

Temperature

Normal test temperature (Tnom): 22 °C

Relative Humidity 50 %

Details of power supply

Normal test voltage Handset (Vnom): 2.4 VDC
Base (Vnom): 9 VDC (from adapter)

3 TEST RESULTS

3.1 RADIATED PEAK TRANSMIT POWER

Clause: 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 ≤ 118.8 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 118.8 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

Results:

3.1.1 HANDSET:

HANDSET	Ascalade Technologies Inc.					
2836AUT6	10/16/2006					
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m
1,921.50	1,921.54	82.3	V	2.84	30.73	115.87
1,921.50	1,921.54	79.7	H	2.84	30.73	113.27
1,928.50	1,928.45	81.4	V	2.84	30.77	115.01
1,928.50	1,928.45	80.1	H	2.84	30.77	113.71

TRANSMITTER SPURIOUS EMISSIONS
Clause: 15.319 (g) and 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 subband and 1.25 MHz above or below the subband; 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. Radiated on an Open Area Test Site at a distance of 3meter.

Results:

3.1.2 HANDSET TRANSMITTER SPURIOUS EMISSIONS :

HANDSET	Ascalade Technologies Inc.						
2836AUT6	10/16/2006						
Tuned Frequency MHz	**Emission Frequency MHz**	**Meter Reading dBuV**	**Ant. Polarity**	**Coax & Filter Loss dB**	**Correction Factor dB/m**	**Field Strength dBuV/m**	**dBc**
1,921.50	3843.08	9.5	V	4.36	33.57	47.43	68.44
1,921.50	3843.08	11.7	H	4.36	33.57	49.63	66.24
1,921.50	5764.62	8.8	V	5.23	35.42	49.45	66.42
1,921.50	5764.62	13.2	H	5.23	35.42	53.85	62.02
1,928.50	3856.9	8.9	V	4.37	33.59	46.86	68.15
1,928.50	3856.9	10.8	H	4.37	33.59	48.76	66.25
1,928.50	5785.35	7.5	V	5.24	35.44	48.18	66.83
1,928.50	5785.35	12.3	H	5.24	35.44	52.98	62.03

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

4 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 1/11/06	1/10/09
Biconnical Antenna	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
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 12/29/04	12/29/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 12/14/05	12/14/07

5 TEST SETUP PHOTOGRAPHS

RADIATED TEST SET UP (HANDSET):