

TIMCO ENGINEERING INC.

849 NW State Road 45

Newberry, Florida 32669

<http://www.timcoengr.com>

888.472.2424 F 352.472.2030 email: tei@timcoengr.com



Test Report

Product Name: 2.4 GHZ WDCT CONFERENCE TELEPHONE

FCC ID: PWBFH24R16

Applicant:

ASCALADE TECHNOLOGIES INC.

12051 RIVERSIDE WAY

RICHMOND BC V6W 1K7

CANADA

APPLICANT: ASCALADE TECHNOLOGIES INC.

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COVER SHEET

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CLASS II PERMISSIVE CHANGE REQUEST LETTER

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EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
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	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Double-Ridged Horn Antenna	Electro-Metrics	RGA-180	2319	CAL 12/29/04	12/29/06
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
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

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

ANTENNA CONDUCTED EMISSIONS: The RBW=100 kHz, VBW > or = RBW and the spectrum was scanned from 30 MHz to the 10th Harmonic of the fundamental.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth (RBW) of the spectrum analyzer was 100 kHz up to 1GHz and 1.0MHz above 1 GHz with an appropriate sweep speed. The VBW above 1.0 GHz was = 1.0 MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 74°F with a humidity of 44%.

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NAME OF TEST: ANTENNA CONDUCTED SPURIOUS EMISSIONS

RULES PART NUMBER: 15.247(c) Spurious Emissions must be 20 dBc.

2409.696 MHz - 15 dBm
2442.528 MHz - 15.5 dBm
2473.632 MHz - 16.2 dBm

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NAME OF TEST: RADIATED SPURIOUS EMISSIONS

RULES PART NO.: 15.247(c)

REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	S15.209	
of Fundamental:	of Harmonics	30 - 88 MHz	40 dBuV/m @3M
902-928MHz		88 - 216 MHz	43.5
2.4-2.4835GHz		216 - 960 MHz	46
127.38dBuV/m @3m	54 dBuV/m @3m	ABOVE 960 MHz	54dBuV/m

Emissions that fall in the restricted bands (15.205) must be less than or equal to 500 uV/m (54 dBuV/m). Spurious not in a restricted band must be 20 dBc.

TEST DATA:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,409.7	2,409.70	79.0	H	3.19	32.35	114.54	12.84
2,409.7	2,409.70	79.6	V	3.19	32.35	115.14	12.24
2,442.5	2,442.53	78.7	V	3.21	32.44	114.35	13.03
2,442.5	2,442.53	78.9	H	3.21	32.44	114.55	12.83
2,442.5	4,885.00	9.0	H	4.94	34.41	48.35	5.65
2,473.6	2,473.63	79.6	H	3.23	32.53	115.36	12.02
2,473.6	2,473.63	80.7	V	3.23	32.53	116.46	10.92
2,473.6	4,947.00	7.0	V	4.97	34.46	46.43	7.57

Emissions attenuated more than 20 dB below the permissible value are not reported.

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-2003. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was scanned from 30 MHz to 10 GHz. Low loss coax was used above 1 GHz. Measurements were made at Timco Engineering, Inc. 849 NW State Road 45 Newberry, Fl.

PERFORMED BY: Richard Block

DATE: 1/24/2006

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