ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT

TEST REPORT

FOR

WIRELESS NOKIA BATTERY PACK

FCC ID: NQ2AM1100

MODEL NO: AM1100US

REPORT NO: 02U1337-1

ISSUE DATE: JUNE 4, 2002

Prepared for
ADVANCED MOBILE SOLUTIONS
375 RHEEM BLVD.
MORAGA, CA 94556 U.S.A.

Prepared by
COMPLIANCE CERTIFICATION SERVICES
561F MONTEREY ROAD
MORGAN HILL, CA 95037, U.S.A.
TEL: (408) 463-0885
FAX: (408) 463-0888

LAB CODE:200065-0

TABLE OF CONTENTS PAGE NO

1. VERIFICATION OF COMPLIANCE

COMPANY NAME:	ADVANCED MOBILE SOLUTIONS 375 RHEEM BLVD. MORAGA, CA 94556 U.S.A.
CONTACT PERSON:	SEAN KIM
TELEPHONE NUMBER:	(925) 377-3249
EUT DESCRIPTION:	WIRELESS NOKIA BATTERY PACK
MODEL NAME:	AM1100US
DATE TESTED:	5/29/2002, 5/30/2002, 6/4/2002

LIMITS APPLY TO: FCC PART 15 SECTION 15.249	
TECHNICAL LIMITS	**TEST RESULT**
Radiated Emission of Fundamental Frequency	No non-compliance found
Radiated Emission of Harmonic Frequencies	No non-compliance found
Radiated Emission Outside the Band	No non-compliance found
LIMITS APPLY TO: FCC PART 15 SECTION 15.209	
Radiated Emission Digital Device	No non-compliance found
LIMITS APPLY TO: FCC PART 15 SECTION 15.207	
AC Line Conducted Emission	No non-compliance found

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in CFR 47 PART 15 SUBPART C. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

Tested by:
Frank Ibrahim / EMC Engineer
Compliance Certification Services

Reviewed by:
Thu Chan / EMC Senior Engineer
Compliance Certification Services

Warning : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

Wireless Battery Pack.

CHASSIS TYPE	**PLASTIC**
Frequency Range	**902 – 928 MHz**
Number of Channels	**1**
Type of Emission	**CONTINUOUS**
Antenna Requirement	**PERMANENTLY ATTACHED**
Antenna Gain	**< -20 dBi**
No of External Connectors and Types	**One 3-pin customer- made audio connector and one RF GND dangle plug**
Power requirement	**Li-ion 3.7 VDC 1000mAh Battery**

3. TEST LOCATION

All emissions tests were performed at:

Compliance Certification Services
561F Monterey Road
Morgan Hill, CA 95037

CCS has site descriptions on file with the FCC for 10 and 3 meter site configurations. CCS is a NVLAP accredited facility.

4. EQUIPMENT MODIFICATIONS

To achieve compliance Levels, the following change(s) were made during compliance testing:

No changes were required in order to achieve compliance to class B levels.

5. TEST EQUIPMENT LIST

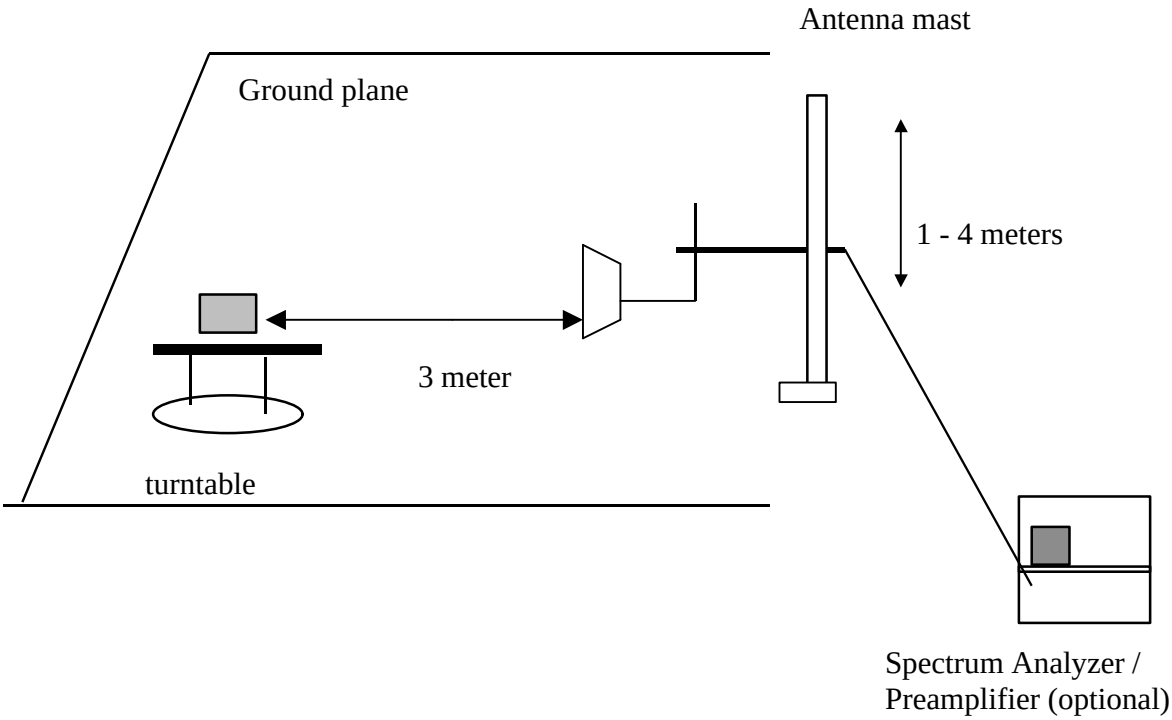
TEST EQUIPMENTS LIST				
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Spectrum Analyzer	HP100Hz - 22GHz	8566B	3014A06685	6/28/02
Spectrum Display	HP	85662A	3026A19146	6/28/02
Quasi-Peak Detector	HP9K - 1GHz	85650A	3145A01654	6/28/02
Pre-Amplifier,25 dB	HP0.1 - 1300MHz	8447D (P8)	2944A06589	8/10/02
Antenna, Bilog	Schaffner-Chase30M-2GHz	CBL6112B	2586	8/2/02
Spectrum Analyzer	HP	8563E	Not Provided	3/13/04
Pre-amplifier,35.5 dB (1 - 26.5GHz)	HP	8449B	3008A00369	5/30/02
Horn Antenna	EMCO	3115	6717	1/31/03
EMI Test Receiver	Rohde & Schwarz	ESHS 20	827129/006	4/17/03
LISN	Fischer 9k - 100MHz	FCC-LISN-50/250-25-2	114	8/8/02
Line Filter	Lindgren 10k - 10GHz	LMF-3489	497	N.C.R.
LISN	Solar Elec. Co.	8012-50-R-24-BNC	837990	8/8/02

6. TEST RESULT SUMMARY

Radiated Emissions

Test Requirement: 15.249(A)(B)(C)

TEST SETUP FOR MEASUREMENT OF FUNDAMENTAL FREQUENCY & HARMONIC



Test Procedures

1) Place the EUT on the turntable as shown. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.

2) The Horn search antenna was place at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.

Setup Photo & Test Results:

29-May-02 FCC Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Equipment for 1-22 GHz
HP8563E Analyzer
HP 8449B Preamp
EMCO 3115 Antenna
Cable 18.0 feet

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Peak Measurements:
1MHz Resolution Bandwidth
1MHz Video Bandwidth

Client : Advanced Mobile Solutions
Project # : 02U1337-1
EUT: 900 MHz Wireless Nokia Battery Pack
Model: AM1100US

f GHz	Dist feet	Read Peak dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Peak Lim dBuV/m	Avg Lim dBuV/m	Peak Mar dB	Avg Mar dB	Notes
1.806	9.84	36.17	24.83	26.2	4.0	-35.5	0.0	1.0	31.9	20.5	74.0	54.0	-42.1	-33.5	V, Noise Floor
2.709	9.84	35.50	23.50	28.9	4.8	-35.5	0.0	1.0	34.7	22.7	74.0	54.0	-39.3	-31.3	V, Noise Floor
3.612	9.84	33.50	22.17	31.8	5.7	-35.5	0.0	1.0	36.5	25.2	74.0	54.0	-37.5	-28.8	V, Noise Floor
4.515	9.84	32.83	21.83	32.0	6.6	-35.5	0.0	1.0	36.9	25.9	74.0	54.0	-37.1	-28.1	V, Noise Floor
5.418	9.84	32.00	21.30	34.0	7.4	-35.5	0.0	1.0	38.9	28.2	74.0	54.0	-35.1	-25.8	V, Noise Floor
6.321	9.84	33.17	21.50	34.2	8.1	-35.5	0.0	1.0	40.9	29.3	74.0	54.0	-33.1	-24.7	V, Noise Floor
7.224	9.84	34.83	26.67	32.5	8.7	-35.5	0.0	1.0	41.5	33.4	74.0	54.0	-32.5	-20.6	V, Noise Floor
8.127	9.84	34.97	23.00	24.2	9.3	-35.5	0.0	1.0	33.9	22.0	74.0	54.0	-40.1	-32.0	V, Noise Floor
9.030	9.84	33.17	22.83	24.2	9.8	-35.5	0.0	1.0	32.7	22.4	74.0	54.0	-41.3	-31.6	V, Noise Floor

f Measurement Frequency
Dist Distance to Antenna
Read Analyzer Reading
AF Antenna Factor
CL Cable Loss
Amp Preamp Gain
D Corr Distance Correct to 3 meters
Avg Average Field Strength @ 3 m
Peak Calculated Peak Field Strength
HPF High Pass Filter
Avg Lim Average Field Strength Limit
Pk Lim Peak Field Strength Limit
Avg Mar Margin vs. Average Limit
Pk Mar Margin vs. Peak Limit

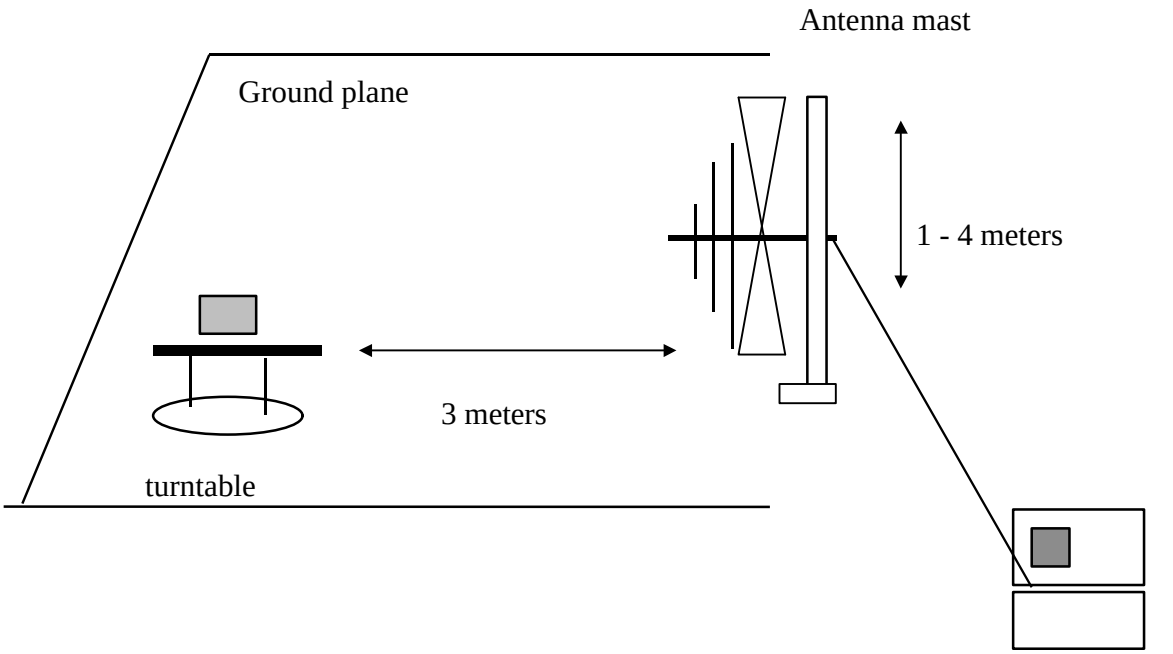
f GHz	Dist feet	Read Peak dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Peak Lim dBuV/m	Avg Lim dBuV/m	Peak Mar dB	Avg Mar dB	Notes
1.806	9.84	35.20	23.78	26.2	4.0	-35.5	0.0	1.0	30.9	19.5	74.0	54.0	-43.1	-34.5	H, Noise Floor
2.709	9.84	33.17	22.17	28.9	4.8	-35.5	0.0	1.0	32.4	21.4	74.0	54.0	-41.6	-32.6	H, Noise Floor
3.612	9.84	34.17	22.17	31.8	5.7	-35.5	0.0	1.0	37.2	25.2	74.0	54.0	-36.8	-28.8	H, Noise Floor
4.515	9.84	32.33	21.67	32.0	6.6	-35.5	0.0	1.0	36.4	25.8	74.0	54.0	-37.6	-28.2	H, Noise Floor
5.418	9.84	30.67	21.50	34.0	7.4	-35.5	0.0	1.0	37.6	28.4	74.0	54.0	-36.4	-25.6	H, Noise Floor
6.321	9.84	31.83	21.50	34.2	8.1	-35.5	0.0	1.0	39.6	29.3	74.0	54.0	-34.4	-24.7	H, Noise Floor
7.224	9.84	33.50	22.67	32.5	8.7	-35.5	0.0	1.0	40.2	29.4	74.0	54.0	-33.8	-24.6	H, Noise Floor
8.127	9.84	33.50	23.00	24.2	9.3	-35.5	0.0	1.0	32.5	22.0	74.0	54.0	-41.5	-32.0	H, Noise Floor
9.030	9.84	33.17	22.83	24.2	9.8	-35.5	0.0	1.0	32.7	22.4	74.0	54.0	-41.3	-31.6	H, Noise Floor

High Frequency Data

Radiated Emissions

Test Requirement: 15.209

TEST SETUP FOR MEASUREMENT OF DIGITAL DEVICE



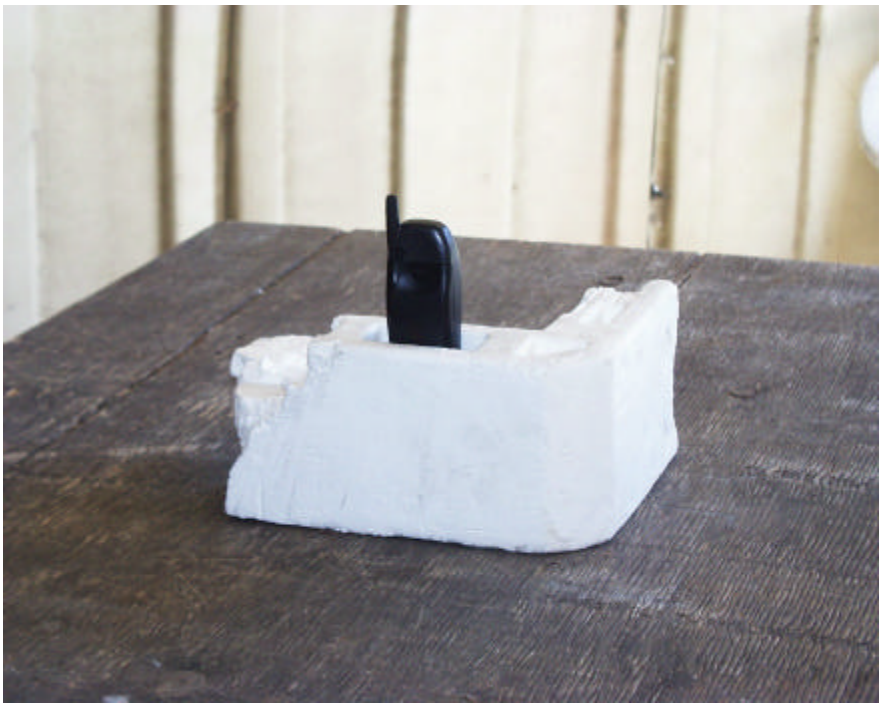
Preamplifier / Spectrum Analyzer

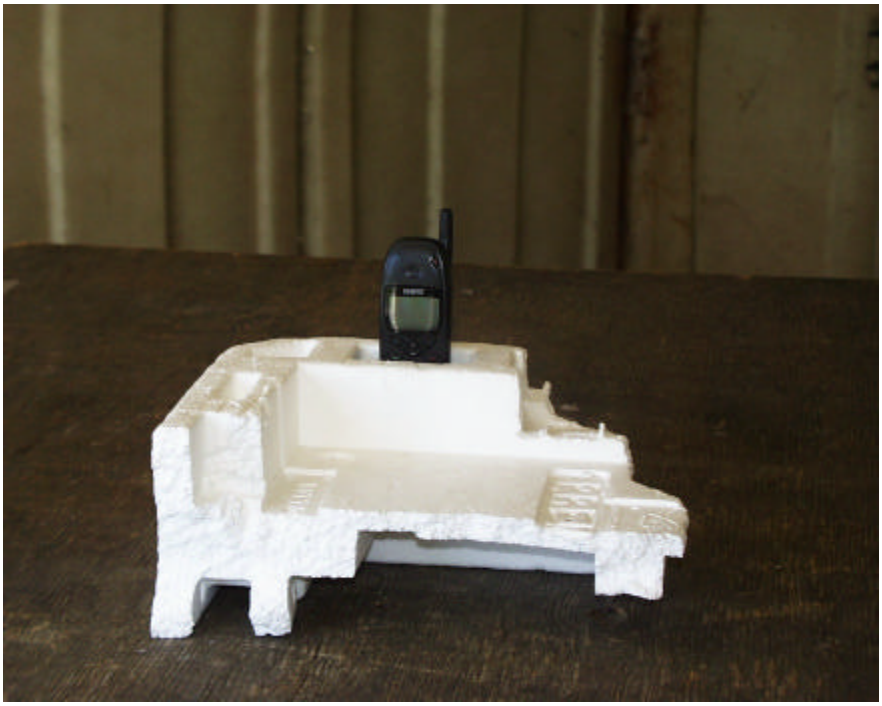
Test Procedures

1) Place the EUT on the turntable as shown. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.

2) The Bilog search antenna was place at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.

Test Setup Photos & Results:





COMPLIANCE Certification Services

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
PHONE: (408) 463-0885 FAX: (408) 463-0888

Project #:	02U1337-1
Report #:	020529B01
Date& Time:	05/29/02 9:32 AM
Test Engr:	Frank Ibrahim

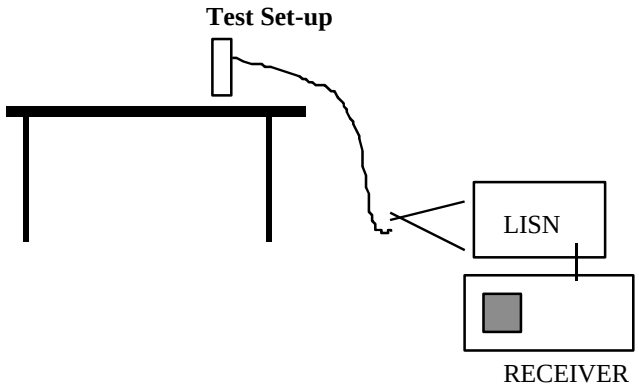
Company:	Advanced Mobile Solutions
EUT Description:	900 MHz Wireless Nokia Battery Pack, Model: AM1100US
Test Configuration :	EUT, Headset
Type of Test:	FCC 15.249
Mode of Operation:	EUT transmitting and receiving

○ A-Site ◉ B-Site ○ C-Site ○ F-Site 6 Worst Data Descending

Freq. (MHz)	Reading (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
903.00	81.10	20.31	7.63	28.90	80.14	94.00	-13.86	3mV	0.00	1.00	P
903.00	81.10	20.31	7.63	28.90	80.14	94.00	-13.86	3mV	0.00	1.00	QP
903.00	73.60	20.31	7.63	28.90	72.64	94.00	-21.36	3mH	0.00	2.00	P
903.00	73.60	20.31	7.63	28.90	72.64	94.00	-21.36	3mH	0.00	2.00	QP
52.22	46.00	7.04	1.79	29.67	25.15	40.00	-14.85	3mV	0.00	1.00	P
140.00	39.20	11.01	2.50	29.43	23.28	43.50	-20.22	3mV	0.00	1.00	P
364.00	39.50	14.81	4.28	29.15	29.44	46.00	-16.56	3mV	0.00	1.00	P
42.33	38.70	11.92	1.64	29.69	22.57	40.00	-17.43	3mH	0.00	1.00	P
42.95	40.50	11.53	1.65	29.68	23.99	40.00	-16.01	3mH	0.00	1.00	P
32.10	40.40	16.09	1.43	29.74	28.19	40.00	-11.81	3mH	0.00	1.00	P

AC Line Conducted Emissions

Test Requirement: 15.207

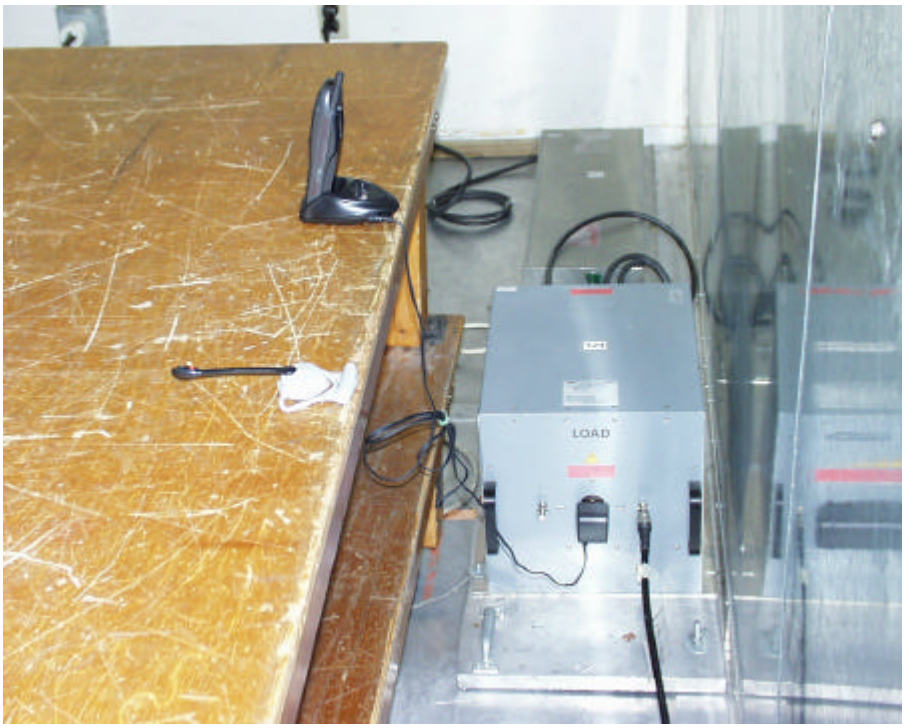


Test Procedure

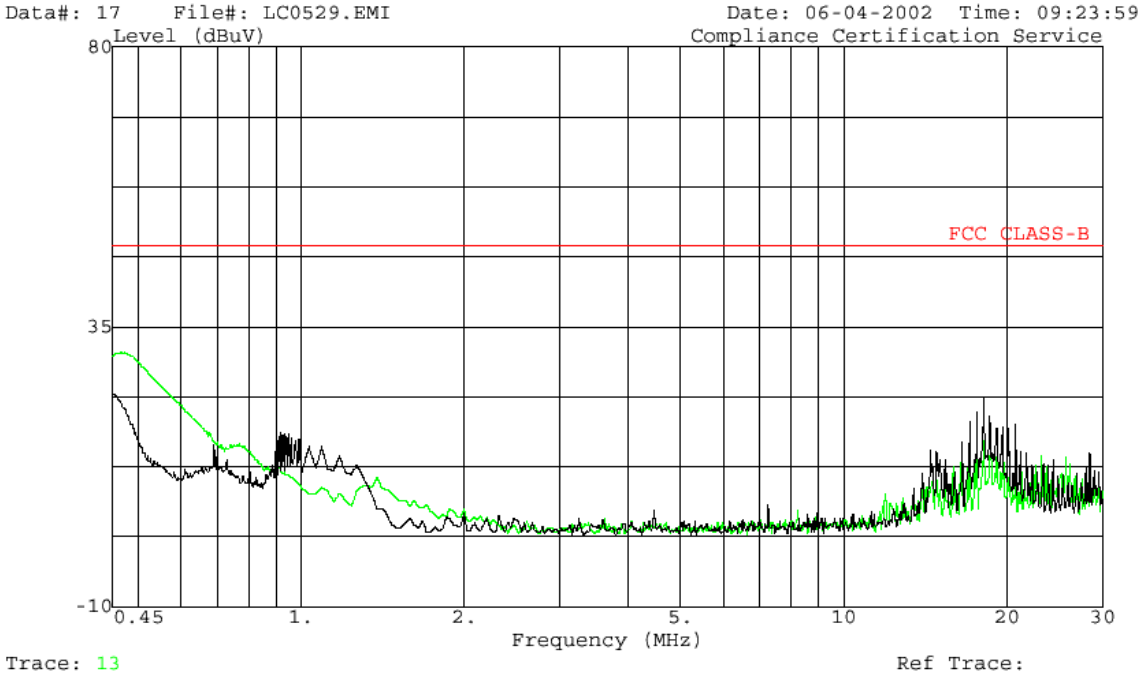
1. The DC is supplied by a AC adapter. The EUT was placed on a wooden table 40 cm from a vertical ground plane and approximately 80 cm above the horizontal ground plane on the floor. The EUT was set to transmit in a normal tone and charge the battery at the same time.

2. Line conducted data was recorded for both NEUTRAL and HOT lines.

Test Setup Photos & Results:



561F Monterey Road,
San Jose, CA 95037 USA
Tel: (408) 463-0885
Fax: (408) 463-0888



Trace: 13 Ref Trace:
Project # : 02U1337-1
Test Engineer: Frank Ibrahim
Company : Advanced Mobile Solutions
EUT : 900 MHz Wireless Nokia Battery Pack
: Model: AM1100US
Test Config : EUT, Headset
Type of Test : FCC CLASS B
Mode of Op. : EUT transmitting and receiving
: PK: L1(GREEN), L2(BLACK)
: 115VAC, 60Hz

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	FCC B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.47	30.81	--	--	0.00	48.00	--	-17.19	--	L1
0.61	21.76	--	--	0.00	48.00	--	-26.24	--	L1
17.60	17.67	--	--	0.00	48.00	--	-30.33	--	L1
0.45	24.14	--	--	0.00	48.00	--	-23.86	--	L2
18.12	23.66	--	--	0.00	48.00	--	-24.34	--	L2
20.73	19.31	--	--	0.00	48.00	--	-28.69	--	L2
6 Worst Data									

Charger used: Nokia ACP-7U
S/N: 02605421FG26116863