

Exhibit P: EIRP of Fundamental

FCC ID: HN2MG18

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While measuring the fundamental transmit frequency, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:

High

Mid

Low

Operating Modes Investigated:

Typical

Antennas Investigated:

Integral to EUT

Data Rates Investigated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120 VAC, 60 Hz.

Software\Firmware Applied During Test

Exercise software	Intermec Core	Version	1.8.4
Description			
(C)ommon (O)bject (R)esource (E)nvironment, running the D15 GSM Module. The "Phone App" was used to place calls to the base station simulator (HP8922 test set). The software ran on the EUT under Microsoft Windows CE Version 3.0.9348			

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Intermec Corporation	700 GPRS	6007998
AC Adapter	Ault Inc.	PW160	None

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	2.0	No	AC Adapter	AC Mains
DC Power	PA	1.5	Yes	EUT	AC Adapter

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	03/19/2002	12 mo
Antenna, Horn	EMCO	3115	AHC	08/24/2001	12 mo
Signal Generator	Hewlett-Packard	8341B	TGM	01/09/02	12 mo
Antenna, Horn	EMCO	3115	AHF	03/03/02	12 mo

Test Description

Requirement: Per 2.1053 and 24.238, the effective radiated power (EIRP) of the fundamental transmit frequency was measured in the far-field at an FCC-listed semi-anechoic chamber. Spectrum analyzer, signal generator, and linearly polarized antennas were used to measure the effective radiated power. The orientation of the EUT and measurement antenna were manipulated to maximize the level of emissions. The EUT was configured to transmit at the highest output into its integral antenna at low, mid, and high channels.

The substitution method as described in TIA/EIA-603 Section 2.2.12 was used.

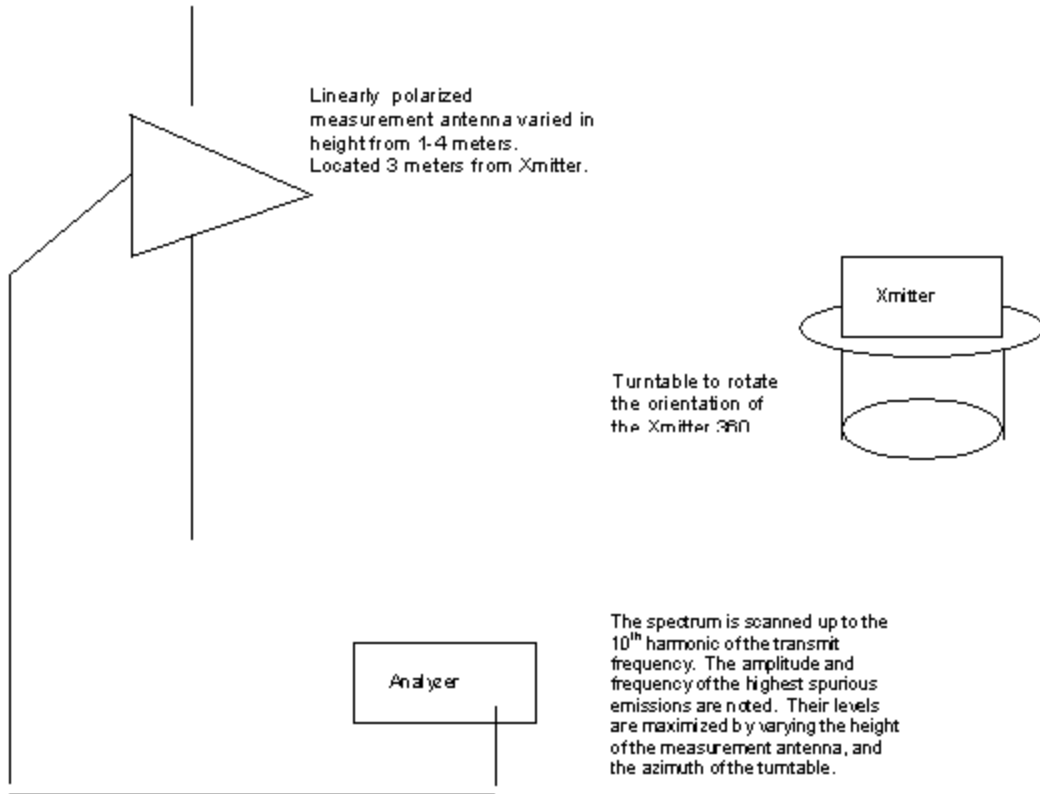
Test Methodology: For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is placed on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the radiated emissions are noted. The transmitter is then replaced with a ½ wave dipole that is tuned to the emission. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the dipole antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for the fundamental transmit frequency.

Bandwidths Used for Measurements

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 – 0.15	1.0	0.2	0.2
0.15 – 30.0	10.0	9.0	9.0
30.0 – 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
<i>Measurements were made using the bandwidths and detectors specified. No video filter was used.</i>			

Test Setup Diagram



Completed by:

NORTHWEST

EMC

Apparent Power Data Sheet

REV
d1.90
04/23/2002

EUT: Model 700 GPRS	Work Order: INMC0017
Serial Number: 6007998	Date: 4/28/02 15:17
Customer: INTERMEC Corporation	Temperature: 66
Attendees: none	Humidity: 35%
Cust. Ref. No.:	Power: 120 V, 60 Hz
	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC 24.232(b)	Year: 2001
Method: TIA/EIA-603	Year: 1998

SAMPLE CALCULATIONS
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator


COMMENTS
 EUT transmitting at max output power..

EUT OPERATING MODES

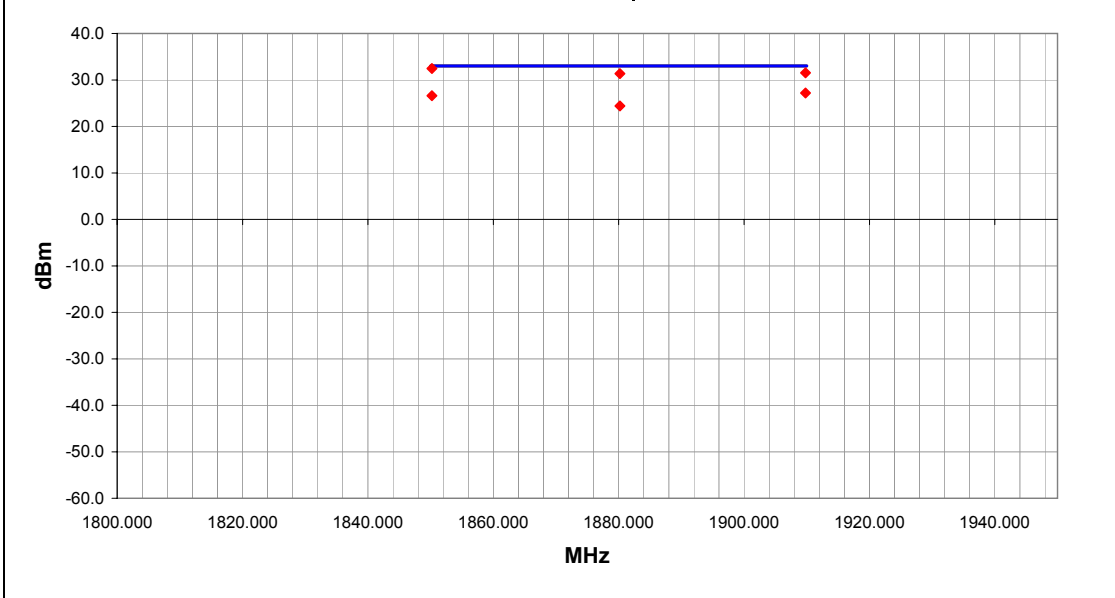
DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass	3	2

Other



 Tested By:



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.200	357.0	1.7	V-Horn	PK	32.5	33.0	-0.5	"Fundamental Xmit Frequency, Channel 512"
1909.800	356.0	1.6	V-Horn	PK	31.5	33.0	-1.5	"Fundamental Xmit Frequency, Channel 810"
1880.200	360.0	1.6	V-Horn	PK	31.3	33.0	-1.7	"Fundamental Xmit Frequency, Channel 662"
1909.800	163.0	1.2	H-Horn	PK	27.2	33.0	-5.8	"Fundamental Xmit Frequency, Channel 810"
1850.200	162.0	1.7	H-Horn	PK	26.6	33.0	-6.4	"Fundamental Xmit Frequency, Channel 512"
1880.200	271.0	1.0	H-Horn	PK	24.4	33.0	-8.6	"Fundamental Xmit Frequency, Channel 662"