

Exhibit M: Occupied Bandwidth

FCC ID: HN2MPCI3A-20

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, 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:

Low
Mid
High

Operating Modes Investigated:

Typical

Data Rates Investigated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

DC from E-net

Software\Firmware Applied During Test

Exercise software	AP Monitor	Version	V5.97
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Description

A notebook PC controls the radio through a serial port connection on the WA22 access point. Hyper Terminal running in Windows 98 address the AP monitor commands for setting the transmit channel and data rate.

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 - 802.11(b) radio module installed in WA22 Access Point	Intermec	MPCI3A-20	022-026
Power bridge	Intermec	071579	U01156281006901
Laptop PC	Panasonic	CF-35	7KHS02247

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Serial cable	Yes	1.5	No	Access Point	Laptop
Ethernet cable	No	7.5	No	Power Bridge	Access Point
AC power	No	1.9	No	Power Bridge	AC mains

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	Tektronix	2784	AAO	03/08/2001	24 mo

Test Description

Requirement: Per 47 CFR 15.247(a)(2), the 6 dB bandwidth of a direct sequence channel must be at least 500kHz. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

Configuration: The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation.

Completed by:



NORTHWEST EMC EMISSIONS DATA SHEET Rev BETA 01/30/01

EUT: MPC13A-20	Work Order: INMC0023
Serial Number: 002-026	Date: 07/23/02
Customer: Intermec Corporation	Temperature: 26 degrees C
Attendees: None	Humidity: 43% RH
Customer Ref. No.: N/A	Power: DC from E-net
Tested by: Greg Kiemel	Job Site: EV06

TEST SPECIFICATIONS			
Specification: 47 CFR 15.247(a)(2)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992

SAMPLE CALCULATIONS

COMMENTS

Tested in WA22 Access Point

EUT OPERATING MODES

Modulated by PRBS at maximum data rate

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The minimum 6dB bandwidth is 500KHz

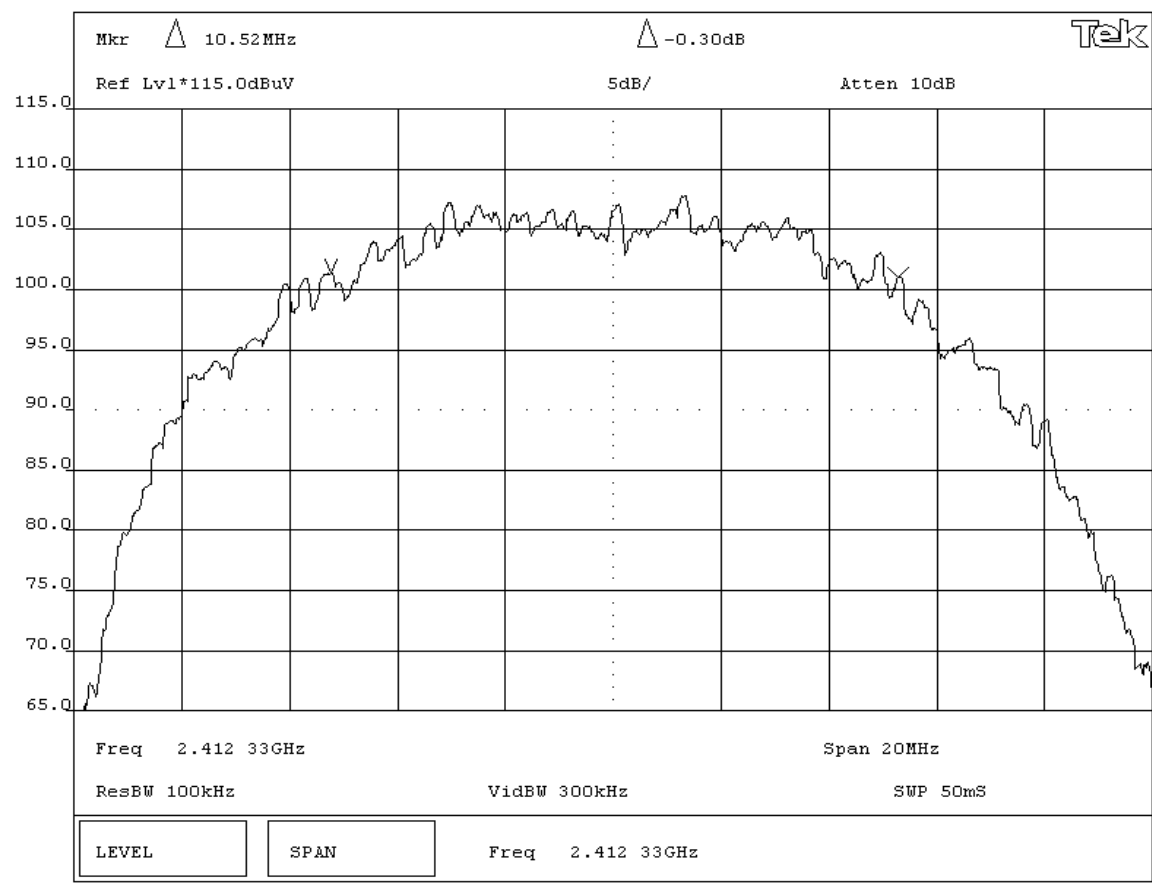
RESULTS	BANDWIDTH
Pass	10.52 MHz

SIGNATURE

Tested By: *Greg Kiemel*

DESCRIPTION OF TEST

Occupied Bandwidth - Low Channel



EUT: MPC13A-20	Work Order: INMC0023
Serial Number: 002-026	Date: 07/23/02
Customer: Intermec Corporation	Temperature: 26 degrees C
Attendees: None	Humidity: 43% RH
Customer Ref. No.: N/A	Power: DC from E-net
Tested by: Greg Kiemel	Job Site: EV06

TEST SPECIFICATIONS			
Specification: 47 CFR 15.247(a)(2)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992

SAMPLE CALCULATIONS			

COMMENTS

Tested in WA22 Access Point

EUT OPERATING MODES

Modulated by PRBS at maximum data rate

DEVIATIONS FROM TEST STANDARD

None


REQUIREMENTS

The minimum 6dB bandwidth is 500KHz

RESULTS

Pass BANDWIDTH 9.6 MHz

SIGNATURE

Tested By: 

DESCRIPTION OF TEST

Occupied Bandwidth - High Channel

