Exhibit L: Band Edge Compliance

FCC ID: HN2MPCI3A-20



# Band Edge Compliance of RF Conducted Emissions

Revision 2/4/02

### 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	
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					
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	7KHSA02247		

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# 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(c), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100 kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

**Configuration**: The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low 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. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 25 MHz below the band edge to 25 MHz above the band edge.

Completed by:

NORTHWEST									
EMC		EMISSIONS [	DATA SHEET		Rev BETA 01/30/01				
EUT:	MPCI3A-20			Work Order:	INMC0023				
Serial Number:	002-026			Date:	07/23/02				
Customer:	Intermec Corporation			Temperature:	26 degrees C				
Attendees:	None		Tested by: Greg Kiemel	Humidity:	43% RH				
Customer Ref. No.:	N/A		Power: DC from E-net	Job Site:	EV06				
TEST SPECIFICATION	15								
Specification:	47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.	.4 Year:	1992				
SAMPLE CALCULATI	ONS								
COMMENTS									
Tested in WA22 Acces	ss Point								
EUT OPERATING MO									
Modulated by PRBS a	t maximum data rate, maximum o	utput power							
<b>DEVIATIONS FROM T</b>	EST STANDARD								
None									
REQUIREMENTS									
Maximum level of any	spurious emission at the edge of	the authorized band is 20 dB down	n from the fundamental						
RESULTS			AMPLITUDE						
Pass			-41.2 dB						
SIGNATURE									
Tested By:									
DESCRIPTION OF TES	ST								
DESCRIPTION OF TEX		Band Edge Complia	ance - Low Channel						
		Band Euge Complia	ance - LOW Channel						



	Mkr 🛆 -16	.05MHz					
8.0	Ref Lv1*8.0d	Bm	10dB/	Atten 10	dB		
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-32.0					h h		
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-52.0			Andrewsking		ካህላሳው		
-62.Q	rylen	wordstropmethical managed and the					
-72.0			-				
-82.0							
-92.0							
	Freq 2.400	OOGHz		Span 50MH:	z		
	ResBW 100kHz		/idBW 300kHz	SWP	50mS		
	LEVEL	SPAN H	freq 2.400 00GHz				
	KINOB 2	KNOB 1 H	KEYPAD Te	ktronix 2784			

NORTHWEST									
EMC		EMISSIONS	DATA SH	EET		Rev BETA 01/30/01			
	MPCI3A-20				Work Orde	r: INMC0023			
Serial Number:						: 07/23/02			
	Intermec Corporation					26 degrees C			
Attendees:			Tested by:	Greg Kiemel		: 43% RH			
Customer Ref. No.:				DC from E-net	Job Site				
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Specification:	47 CFR 15.247(c)	Year: Most Current	Method:	FCC 97-114, ANSI C63	.4 Year	: 1992			
SAMPLE CALCULATI									
COMMENTS									
Tested in WA22 Acces	ss Point								
EUT OPERATING MOI	DES								
Modulated by PRBS a	t maximum data rate, maximum ou	itput power							
DEVIATIONS FROM T	EST STANDARD								
None									
REQUIREMENTS									
Maximum level of any	spurious emission at the edge of	the authorized band is 20 dB down	n from the fundamenta	1					
RESULTS			AMPLITUDE						
Pass			-55.2 dB						
SIGNATURE									
ADV.K.P									
Tested By:									
DESCRIPTION OF TES	ST								
Band Edge Compliance - High Channel									

### Band Edge Compliance - High Channel

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-22.Q			<sup>h</sup> y							
-32.0			<u> </u>							
-42.Q				Arranin ha						
-52.0				Wy	mund	:				
-62.Q					Υm.	Marthan Martin Martin	where we have the second of	water a street	4 million would	Marannonant
-72.0										
-82.0										
-92.0										
		483 50GH	[z				c	5pan 50MHz	:	
	ResBW 100	kHz		v	idBW 30	OkHz		SWP	50mS	
	LEVEL		SPAN	Fı	ceq 2	.483 50GHz				
	KNOB 2		KNOB 1	KI	EYPAD		Tektronix	2784		