

Justification

The EUT is a CDMA radio module (FCC ID: EHAEM3420). The CDMA radio is installed in an Intermec Handheld Computer, Model 700C. The 700C contains three co-located radio modules (CDMA, 802.11(b) and Bluetooth). The 802.11(b) and Bluetooth radios have been previously certified for portable, co-located use in the 700C (FCC ID: HN22011B-2, FCC ID: EHABTS080). The EUT was tested in standalone mode, and it was tested with these co-located radios in the 700C. In addition to these configurations, the 700C can be installed in an Intermec Printer, Model 6820, or a Handheld Pistol Grip, IP3. The EUT can transmit simultaneously with Bluetooth when the 700C is installed in the printer (FCC ID: EHABTS080-1), or the EUT can transmit simultaneously with RFID when the 700C is installed in the pistol grip (FCC ID: EHARFID915PCC-6).

All possible combinations of harmonic emissions from the CDMA, 802.11(b), and Bluetooth radios were compared numerically. It was determined that there were no possible coincidental harmonics below 1 GHz. All the radios were configured for simultaneous transmission, and the CDMA radio was tested in standalone mode at the channels specified below:

Channels in Specified Band Investigated:

802.11(b):	1, 5, 8, 11
CDMA (Cellular):	54, 55, 310, 395, 467, 477, 602, 727 Low, Mid, High
CDMA (PCS):	1, 35, 41, 932, 1117, 1153, 1175 Low, Mid, High
Bluetooth:	5, 11, 62, 68, 79
RFID:	7, 8, 12, 47, 50, 62, 69, 71, 73

Operating Modes Investigated:**Standalone Mode**

Standalone transmission of CDMA (PCS) Low Channel
Standalone transmission of CDMA (PCS) Mid Channel
Standalone transmission of CDMA (PCS) High Channel
Standalone transmission of CDMA (Cellular) Low Channel
Standalone transmission of CDMA (Cellular) Mid Channel
Standalone transmission of CDMA (Cellular) High Channel

Simultaneous transmission of CDMA (cellular), Bluetooth, and 802.11(b) in 700C and Bluetooth in 6820 Printer

Simultaneous transmission of CDMA (cellular) Ch. 467, Bluetooth Ch. 11, and 802.11(b) Ch. 1
Simultaneous transmission of CDMA (cellular) Ch. 395, Bluetooth Ch. 5, and 802.11(b) Ch. 1
Simultaneous transmission of CDMA (cellular) Ch. 55, Bluetooth Ch. 79, and 802.11(b) Ch. 11
Simultaneous transmission of CDMA (cellular) Ch. 54, Bluetooth Ch. 79, and 802.11(b) Ch. 11

Simultaneous transmission of CDMA (PCS), Bluetooth, and 802.11(b) in 700C and Bluetooth in 6820 Printer

Simultaneous transmission of CDMA (PCS) Ch. 1, Bluetooth Ch. 11, and 802.11(b) Ch. 1
Simultaneous transmission of CDMA (PCS) Ch. 1153, Bluetooth Ch. 11, and 802.11(b) Ch. 1
Simultaneous transmission of CDMA (PCS) Ch. 35, Bluetooth Ch. 68, and 802.11(b) Ch. 11
Simultaneous transmission of CDMA (PCS) Ch. 1153, Bluetooth Ch. 62, and 802.11(b) Ch. 11

Simultaneous transmission of CDMA (PCS) and 802.11(b) in 700C and RFID in IP3 Pistol Grip	
Simultaneous transmission of CDMA (PCS) Ch. 41, 802.11(b) Ch. 11, and RFID Ch. 69	
Simultaneous transmission of CDMA (PCS) Ch. 1175, 802.11(b) Ch. 1, and RFID Ch. 12	
Simultaneous transmission of CDMA (PCS) Ch. 1117, 802.11(b) Ch. 11, and RFID Ch. 7	
Simultaneous transmission of CDMA (PCS) Ch. 932, 802.11(b) Ch. 11, and RFID Ch. 8	
Simultaneous transmission of CDMA (PCS) Ch. 1117, 802.11(b) Ch. 1, and RFID Ch. 50	
Simultaneous transmission of CDMA (PCS) Ch. 1117, 802.11(b) Ch. 1, and RFID Ch. 62	
Simultaneous transmission of CDMA (PCS) Ch. 1175, 802.11(b) Ch. 11, and RFID Ch. 7	
Simultaneous transmission of CDMA (cellular) and 802.11(b) in 700C and RFID in IP3 Pistol Grip	
Simultaneous transmission of CDMA (Cellular) Ch. 477, 802.11(b) Ch. 1, and RFID Ch. 12	
Simultaneous transmission of CDMA (Cellular) Ch. 727, 802.11(b) Ch. 8, and RFID Ch. 47	
Simultaneous transmission of CDMA (Cellular) Ch. 602, 802.11(b) Ch. 1, and RFID Ch. 73	
Simultaneous transmission of CDMA (Cellular) Ch. 310, 802.11(b) Ch. 5, and RFID Ch. 71	
Simultaneous transmission of CDMA (Cellular) Ch. 310, 802.11(b) Ch. 11, and RFID Ch. 71	
Simultaneous transmission of CDMA (cellular), Bluetooth, and 802.11(b) in 700C	
Simultaneous transmission of CDMA (Cellular) Ch. 467, Bluetooth Ch. 11, and 802.11(b) Ch. 1	
Simultaneous transmission of CDMA (Cellular) Ch. 395, Bluetooth Ch. 5, and 802.11(b) Ch. 1	
Simultaneous transmission of CDMA (Cellular) Ch. 55, Bluetooth Ch. 79, and 802.11(b) Ch. 11	
Simultaneous transmission of CDMA (Cellular) Ch. 54, Bluetooth Ch. 79, and 802.11(b) Ch. 11	
Simultaneous transmission of CDMA (PCS), Bluetooth, and 802.11(b) in 700C	
Simultaneous transmission of CDMA (PCS) Ch. 1, Bluetooth Ch. 11, and 802.11(b) Ch. 1	
Simultaneous transmission of CDMA (PCS) Ch. 1153, Bluetooth Ch. 11, and 802.11(b) Ch. 1	
Simultaneous transmission of CDMA (PCS) Ch. 35, Bluetooth Ch. 68, and 802.11(b) Ch. 11	
Simultaneous transmission of CDMA (PCS) Ch. 1153, Bluetooth Ch. 62, and 802.11(b) Ch. 11	

Data Rates Investigated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120 VAC, 60 Hz.

Antennas Investigated:

802.11(b):	Custom internal to 700C
CDMA (Cellular):	805-606-102 Dual Band CDMA 900/1900MHz Antenna (SB555)
CDMA (PCS):	805-666-204 Single Band CDMA 1900MHz Antenna (SB555)
Bluetooth:	Integral PCB trace
RFID:	IP3 integral antenna (internal to IP3)

Software\Firmware Applied During Test

Exercise software	Blue Test CDMA FCC Test PrismTestCe IP3FCC2	Version	Unknown 6/7/04 6/1/04 11/17/03
Description			
The system was tested using special test software to exercise the functions of the device during the testing including channel, band, and operating mode.			

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	Elpac Power Systems	FW1812	014869
Bluetooth Radio in Printer	Intermec Technologies Corporation	8520-0080	Unknown
Printer	Intermec Technologies Corporation	6820	N/A
AC Adapter	Intermec Technologies Corporation	851-064-001	0001771
Handheld Computer	Intermec Technologies Corporation	700C	13790400008
802.11(b) Radio	Intermec Technologies Corporation	2011B	N/A
CDMA Radio	Intermec Technologies Corporation	EM3420	Unknown
Bluetooth Radio in Handheld Computer	Intermec Technologies Corporation	8520-0080	Unknown
RFID Radio in Pistol Grip	Intermec Technologies Corporation	IP3	N/A

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	PA	1.4	No	Handheld Computer	AC Adapter
AC Power	No	2.0	No	AC Adapter	AC Mains
AC Power	No	2.0	No	AC Adapter	AC Mains
DC Leads	PA	1.8	PA	Printer	AC Adapter
Serial	Yes	4.0	No	Printer	Remote laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
Remote laptop	Dell	TS30G	7247346BYK0204A
Equipment isolated from the EUT so as not to contribute to the measurement result is considered to be outside the test setup boundary			

Measurement Equipment					
Description	Manufacturer	Model	Identifier	Last Cal	Interval
Antenna, Horn	EMCO	3160-09	AHG	NCR	NA
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	10/08/2003	12 mo
Antenna, Horn	EMCO	3160-08	AHK	NCR	NA
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	10/08/2003	12 mo
Antenna, Horn	EMCO	3115	AHC	09/18/2003	12 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APJ	01/05/2004	13 mo
Antenna, Biconilog	EMCO	3141	AXE	12/03/2003	24 mo
Pre-Amplifier	Amplifier Research	LN1000A	APS	02/05/2004	13 mo
High Pass Filter	Micro-Tronics	HPM50111	HFO	04/13/2004	13 mo
Attenuator	Pasternack	PE7001-10	ATD	02/03/2004	13 mo
Attenuator		2082-6148-20	ATE	02/03/2004	13 mo
Antenna, Horn	EMCO	3115	AHF	03/18/2004	24 mo
Signal Generator	Hewlett Packard	8341B	TGN	01/23/2004	13 mo
Antenna, Dipole (ADAA included)	Roberts	Roberts	ADA	12/27/2002	24 mo
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	12/23/2003	13 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	12/23/2003	13 mo
Spectrum Analyzer	Tektronix	2784	AAO	02/26/2003	24 mo

Test Description

Requirement: Per 2.1053, the field strength of spurious radiation was measured in the far-field at an FCC Listed semi-anechoic chamber up to 25 GHZ. The applicable limits are 22.917(e) for the cellular band, and 24.238(a) for the PCS band.

Per 22.917(e), the mean power of out of band emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least $43 + 10 \log (P)$ dB. (-13 dBm).

Per 24.238(a), on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. (-13 dBm).

Configuration: The EUT is a CDMA radio module (FCC ID: EHAEM3420). The CDMA radio is installed in an Intermec Handheld Computer, Model 700C. The 700C contains three co-located radio modules (CDMA, 802.11(b) and Bluetooth). The 802.11(b) and Bluetooth radios have been previously certified for portable, co-located use in the 700C (FCC ID: HN22011B-2, FCC ID: EHABTS080). The EUT was tested in standalone mode, and it was tested with these co-located radios in the 700C. In addition to these configurations, the 700C can be installed in an Intermec Printer, Model 6820, or a Handheld Pistol Grip, IP3. The EUT can transmit simultaneously with Bluetooth when the 700C is installed in the printer (FCC ID: EHABTS080-1), or the EUT can transmit simultaneously with RFID when the 700C is installed in the pistol grip (FCC ID: EHARFID915PCC-6).

Spectrum analyzer, signal generator, and linearly polarized antennas were used to measure radiated harmonics and spurious emissions. 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 at low, mid, and high channels. The EUT was tested with each antenna. Only one antenna can be used at a time.

The substitution method as described in TIA/EIA-603 Section 2.2.12 was used for the highest spurious emissions. The EUT was tested individually, then while simultaneously transmitting with a co-located radio.

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 highest emissions are noted. The transmitter is then replaced with a $\frac{1}{2}$ wave dipole that is successively tuned to each of the highest emissions. 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 (ERP or e.i.r.p) is determined for each radiated emission.

For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The final measurements must be made utilizing the substitution method described above. The 3 meter limit was calculated to be 84.3 dBuV/m at 3 meters. This was based upon an output power of 0.224 W.

Simultaneous Transmission: The EUT will be co-located with several other radios. The CDMA radio is installed in an Intermec Handheld Computer, Model 700C. The 700C contains three co-located radio modules (CDMA, 802.11(b) and Bluetooth). The 802.11(b) and Bluetooth radios have been previously certified for portable, co-located use in the 700C (FCC ID: HN22011B-2, FCC ID: EHABTS080). The EUT was tested in standalone mode, and it was tested with these co-located radios in the 700C. In addition to these configurations, the 700C can be installed in an Intermec Printer, Model 6820, or a Handheld Pistol Grip, IP3. The EUT can transmit simultaneously with Bluetooth when the 700C is installed in the printer (FCC ID: EHABTS080-1), or the EUT can transmit simultaneously with RFID when the 700C is installed in the pistol grip (FCC ID: EHARFID915PCC-6).

The following is an excerpt from the FCC / TCB Training Q & A, October 2002, Day 2, Question 7:

Assuming that the radios do not share an antenna, only radiated tests for simultaneous transmission is required. If the radios share an antenna, antenna conducted measurements would also be required. Only one set of worst case simultaneous transmission data is going to be requested to be submitted at this time. The test engineer should indicate the worst case condition and provide justification as to why the worst case condition was chosen. The grantee should be reminded that even if the FCC requests one set of data, they are responsible for compliance for all modes of simultaneous transmission.

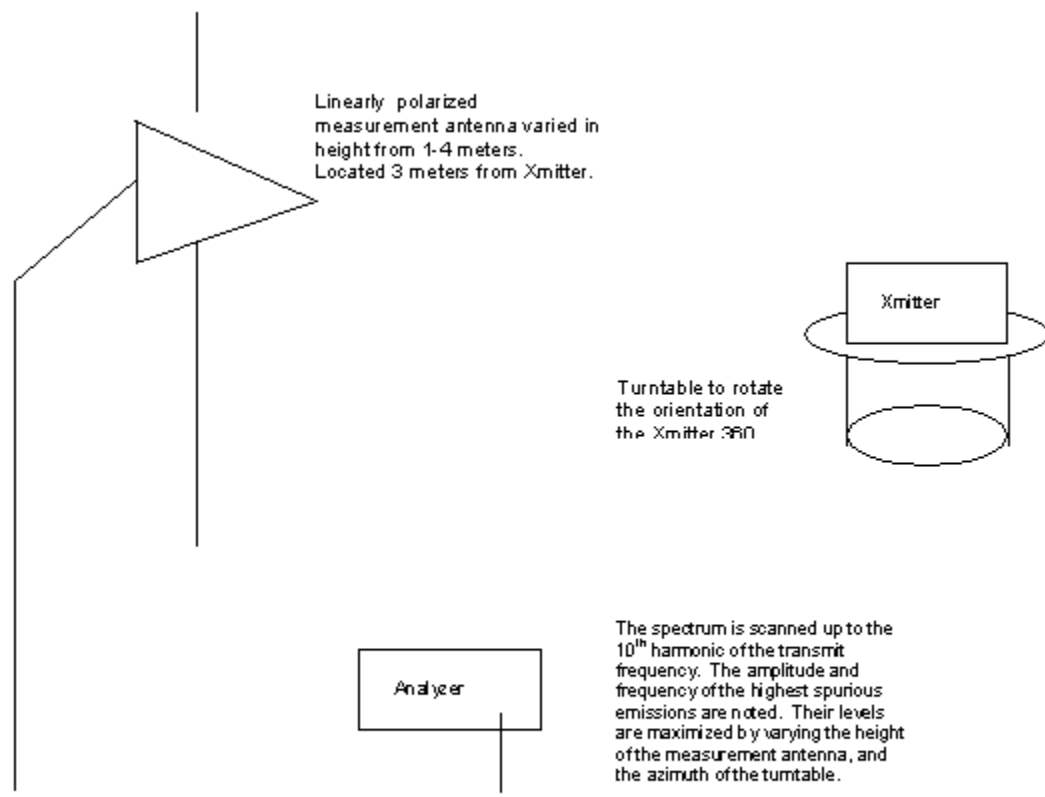
All possible combinations of harmonic emissions from the CDMA, 802.11(b), and Bluetooth radios were compared numerically. It was determined that there were no possible coincidental harmonics below 1 GHz. The frequency range from 1 GHz to 26 GHz was investigated for channel combinations that would produce coincidental harmonics. Compliance with the restricted band at 2483.5 – 2500 MHz was also measured.

All the radios were configured for simultaneous transmission at the channels specified in the previous pages. The highest gain antennas to be used with the radios were tested. The spectrum was scanned throughout the specified range. While scanning, emissions from the radios were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antennas in three orthogonal axes, and adjusting the measurement antenna height and polarization (per ANSI C63.4:2001). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

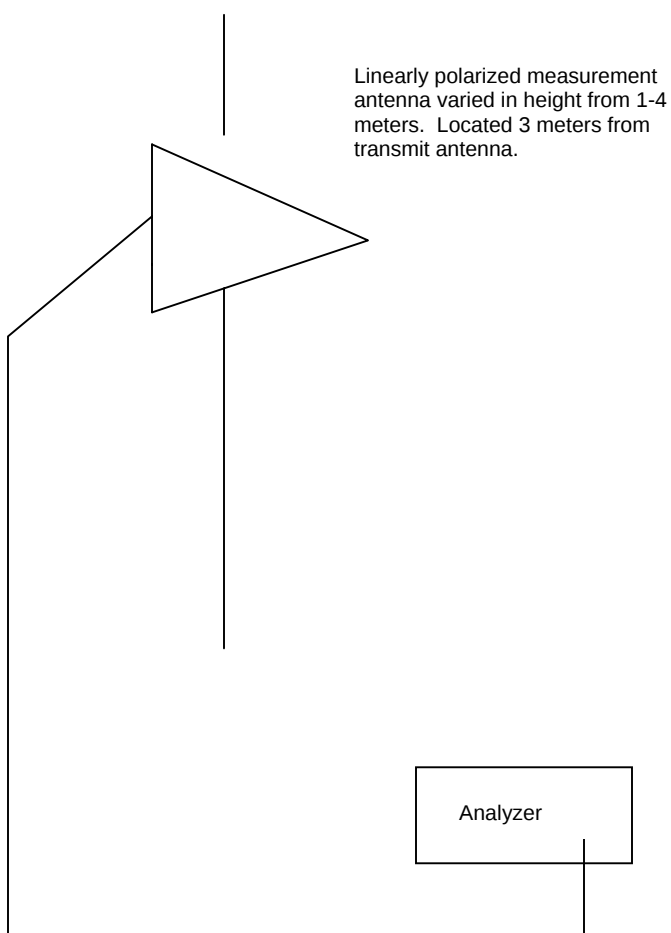
Bandwidths Used for Measurements			
Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 – 0.15	1.0	0.2	0.2
0.15 – 30.0	10.0	9.0	9.0
30.0 – 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
<i>Measurements were made using the bandwidths and detectors specified. No video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

Test Setup Diagram

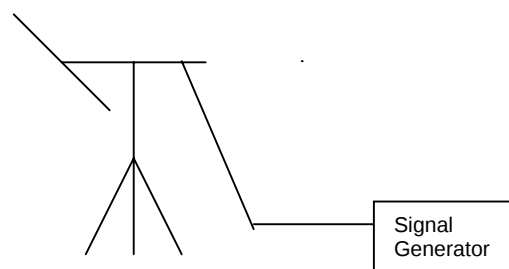
Test Setup for Field Strength Measurements



Test Setup for Power Measurements Utilizing the Antenna Substitution Method



During field strength measurements, the amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a $\frac{1}{2}$ wave dipole (at the same height) that is successively tuned to each of the highest spurious emissions. 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 spectrum analyzer is monitored to verify that the output of the signal generator produces a signal equal in amplitude to a previously measured spurious emission.

Completed by:

Holly Antling

EUT:	CDMA in 700C with 802.11(b), Bluetooth in 700C	Work Order:	ITRM0030
Serial Number:		Date:	06/29/04
Customer:	Intermec Technologies Corporation	Temperature:	75
Attendees:	none	Humidity:	42%
Cust. Ref. No.:		Barometric Pressure	29.9
Tested by:	Holly Ashkannejhad	Power:	120VAC, 60Hz
		Job Site:	EV01

TEST SPECIFICATIONS			
Specification:	FCC 22.917(e)	Year:	2003
Method:	TIA/EIA-603	Year:	2001

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			

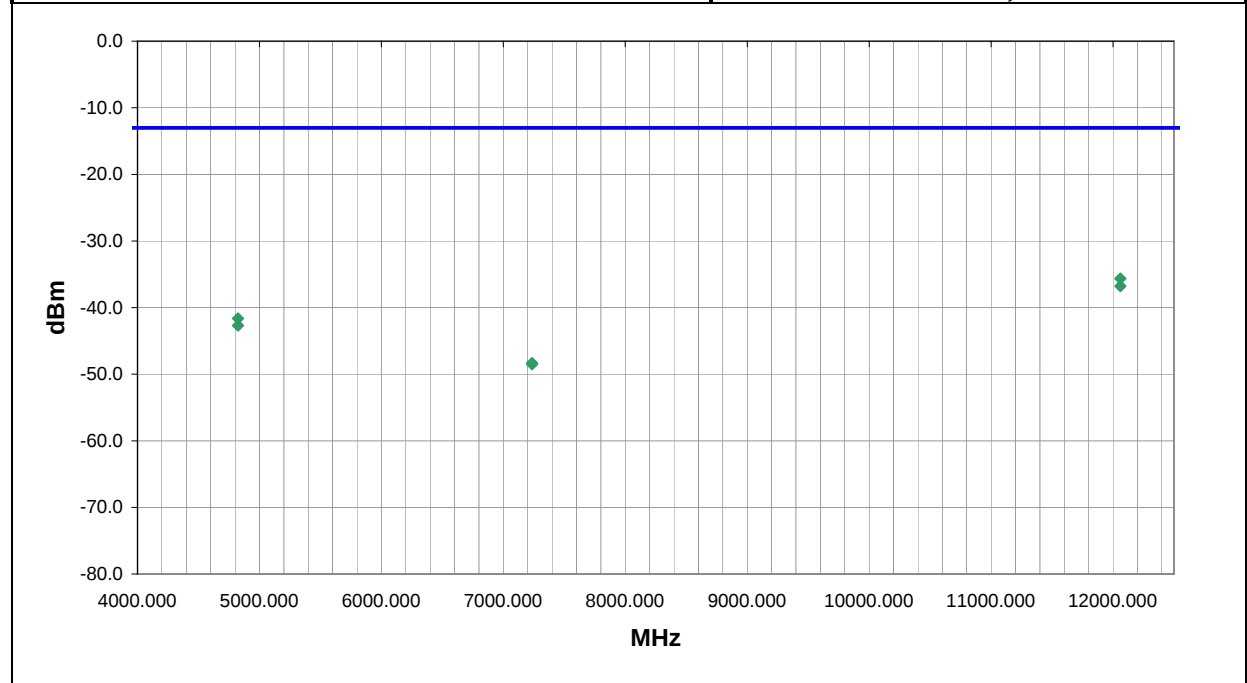
COMMENTS			
Simultaneous transmission of 700C (CDMA(cellular)/802.11b/Bluetooth)			

EUT OPERATING MODES			
Transmitting channel 467 CDMA cellular, 802.11b channel 1, Bluetooth channel 11			

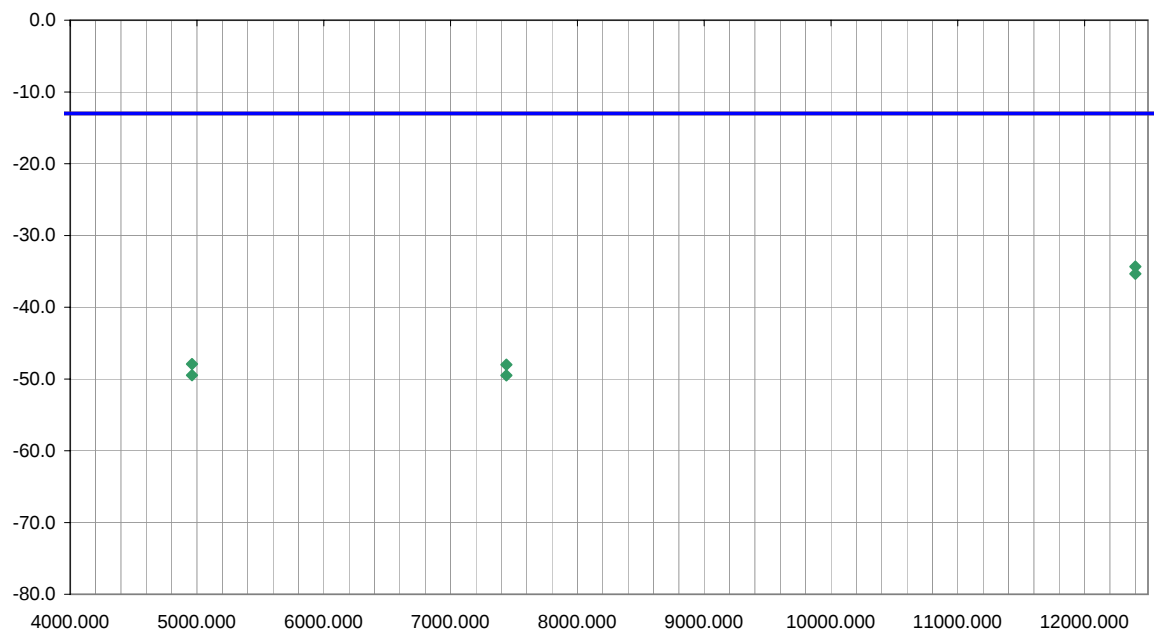
DEVIATIONS FROM TEST STANDARD			
No deviations.			

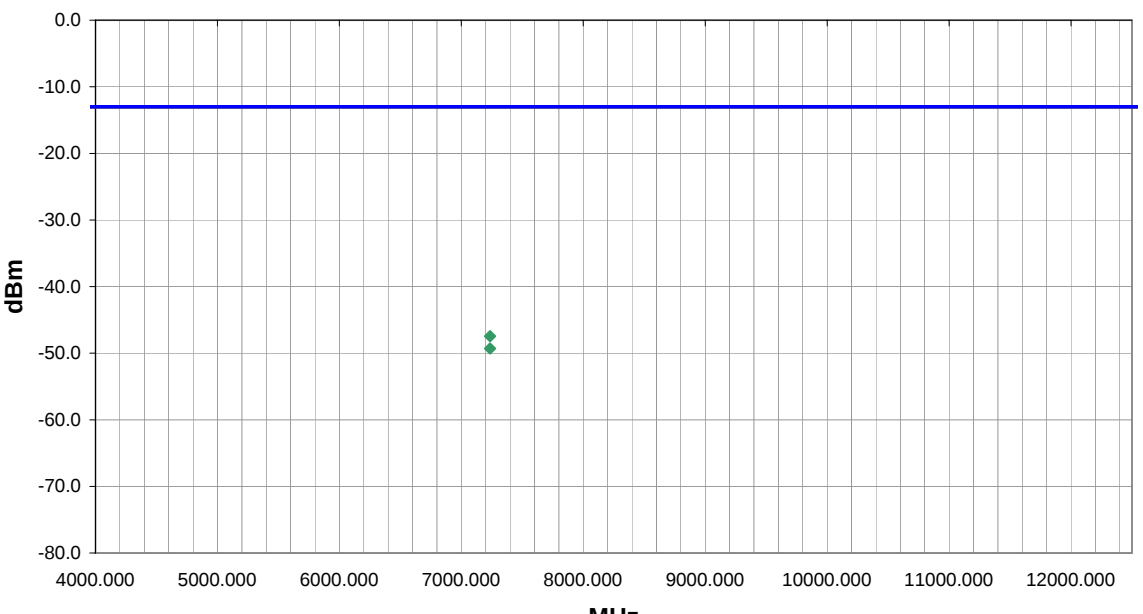
RESULTS			Run #
Pass			39

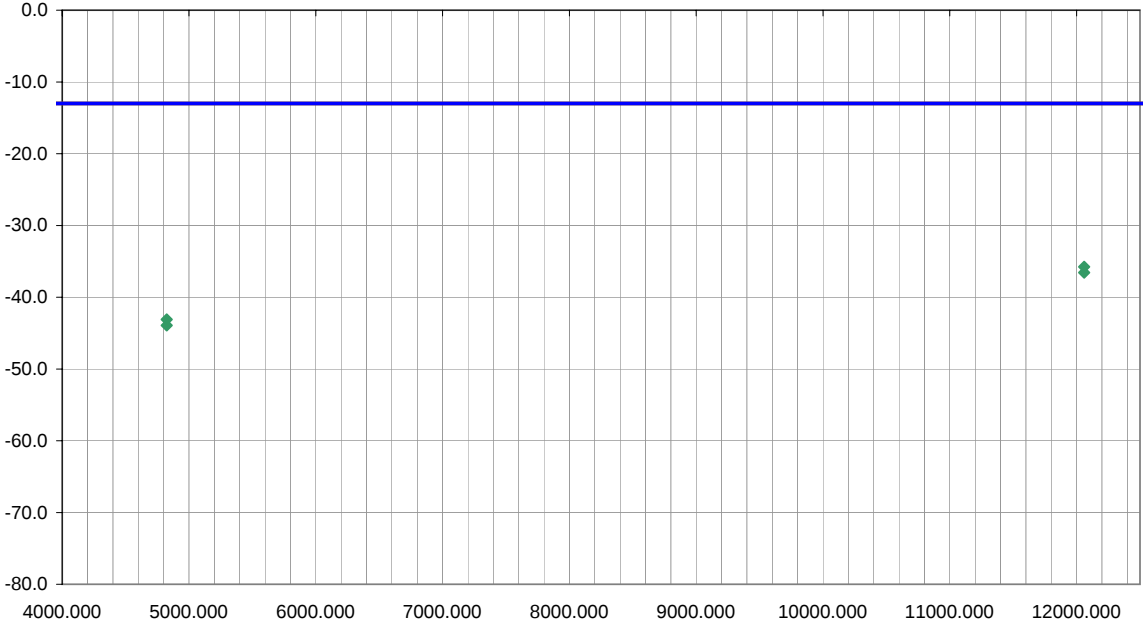
Other	
	Tested By:

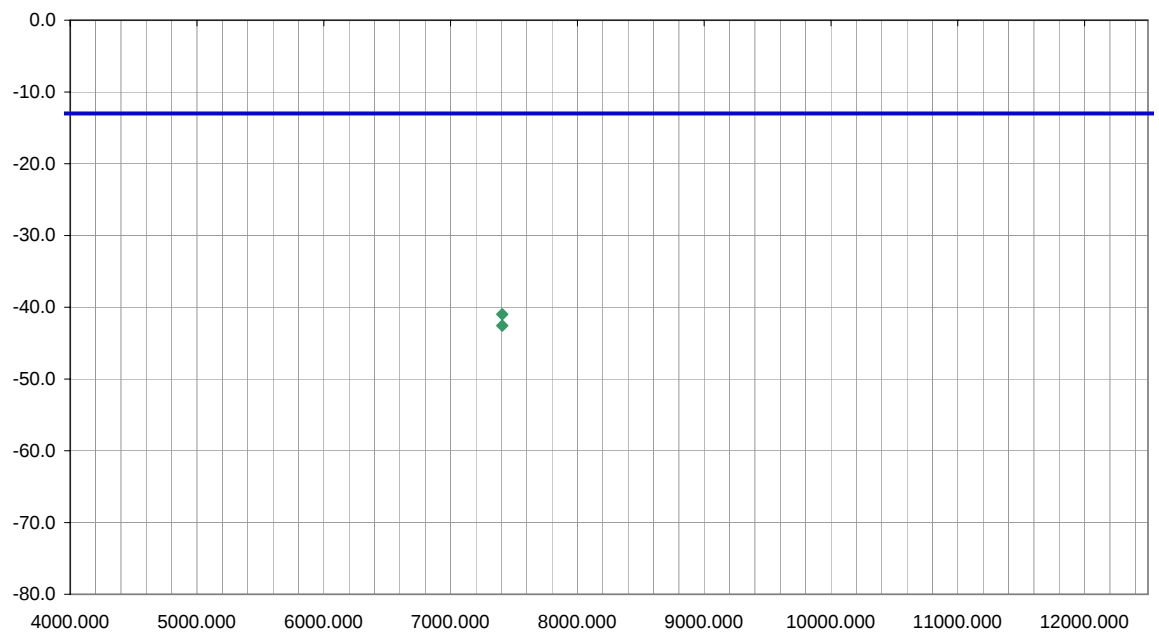


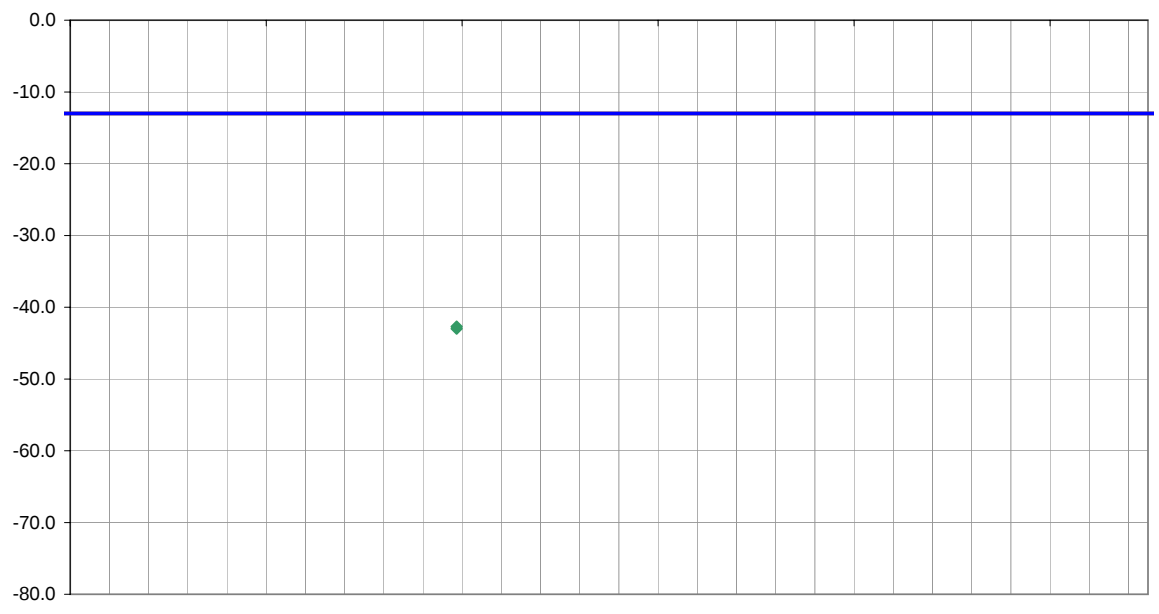
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
12060.000			256.0	1.0			H-Horn	PK		-35.7	-13.0	-22.7
12060.000			8.0	1.2			V-Horn	PK		-36.8	-13.0	-23.8
4824.000			251.0	1.0			V-Horn	PK		-41.6	-13.0	-28.6
4824.000			274.0	1.0			H-Horn	PK		-42.7	-13.0	-29.7
7236.000			19.0	1.0			H-Horn	PK		-48.3	-13.0	-35.3
7236.000			277.0	1.3			V-Horn	PK		-48.5	-13.0	-35.5

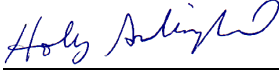
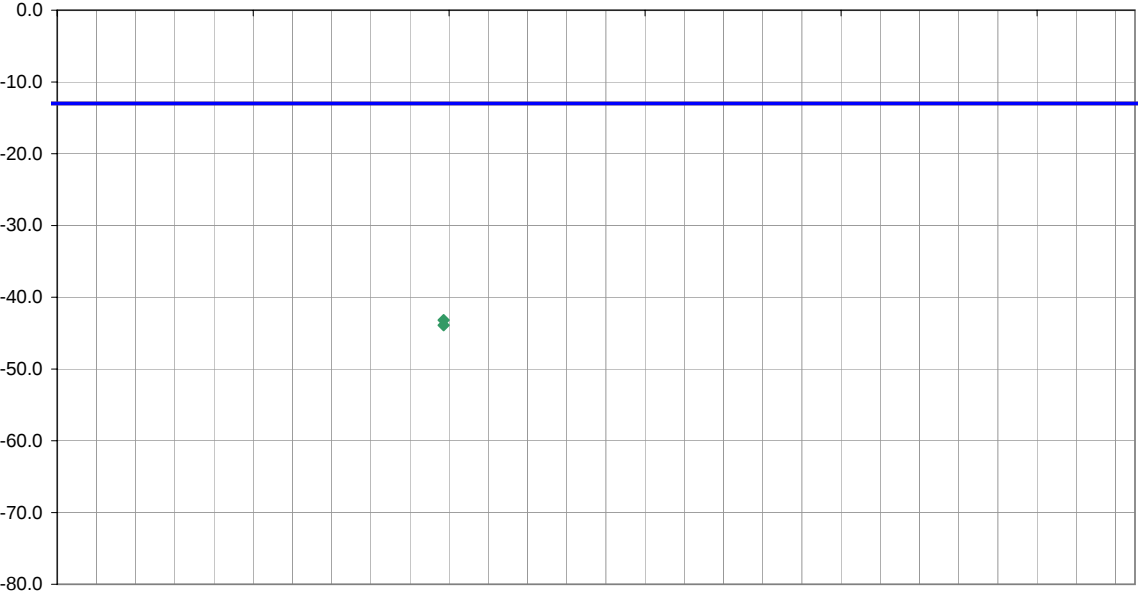
NORTHWEST EMC		Apparent Power Data Sheet				REV d14.13 05/06/2004					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 700C (CDMA(cellular)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 55 CDMA cellular, 802.11b channel 11, Bluetooth channel 79											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						40					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
12400.000			133.0	3.4		H-Horn	PK		-34.3	-13.0	-21.3
12400.000			114.0	2.4		V-Horn	PK		-35.3	-13.0	-22.3
4960.000			241.0	1.2		V-Horn	PK		-47.9	-13.0	-34.9
7440.000			313.0	1.3		H-Horn	PK		-48.0	-13.0	-35.0
4960.000			263.0	1.3		H-Horn	PK		-49.5	-13.0	-36.5
7440.000			307.0	1.2		V-Horn	PK		-49.5	-13.0	-36.5

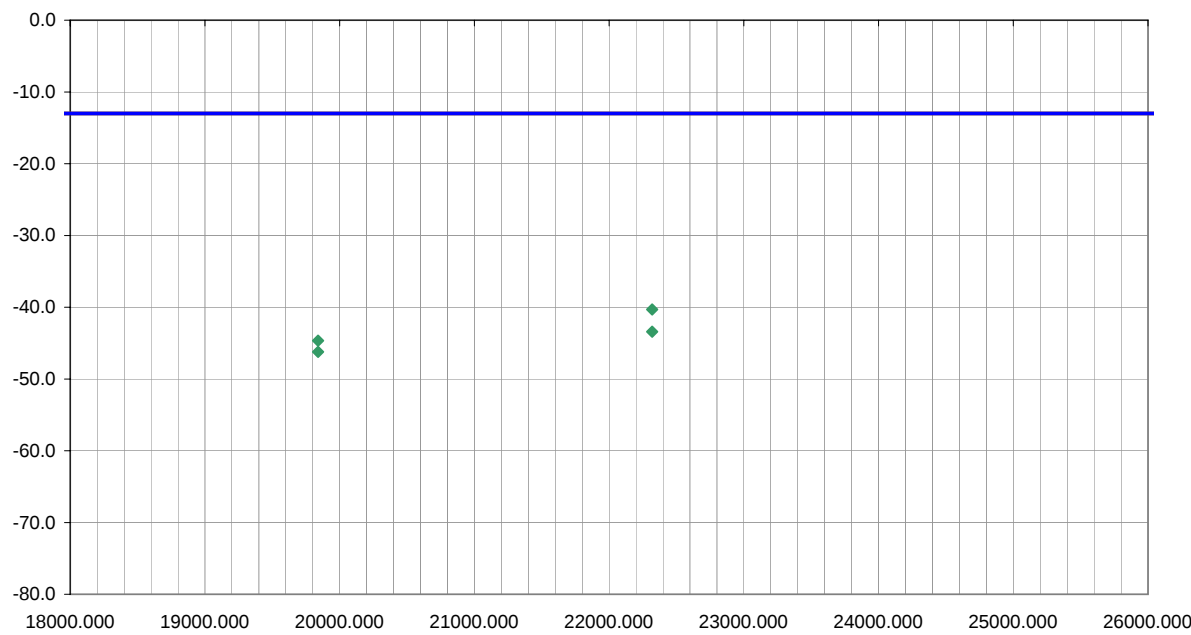
NORTHWEST EMC		Apparent Power Data Sheet				REV d4.13 05/06/2004					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 1 CDMA PCS, 802.11b channel 1, Bluetooth channel 11											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						41					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
7236.000			299.0	1.8		H-Horn	PK		-47.4	-13.0	-34.4
7236.000			24.0	1.2		V-Horn	PK		-49.3	-13.0	-36.3

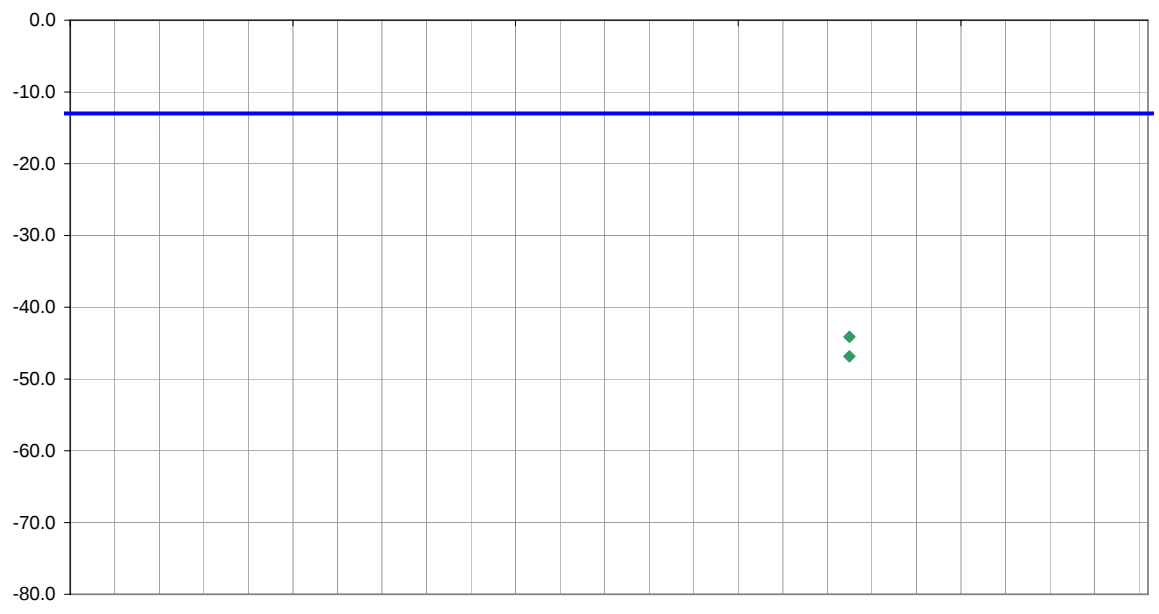
NORTHWEST EMC		Apparent Power Data Sheet				REV d14.13 05/06/2004					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 1153 CDMA PCS, 802.11b channel 1, Bluetooth channel 11											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						42					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
12060.000			241.0	1.3		H-Horn	PK		-35.8	-13.0	-22.8
12060.000			190.0	2.4		V-Horn	PK		-36.6	-13.0	-23.6
4824.000			313.0	1.3		H-Horn	PK		-43.1	-13.0	-30.1
4824.000			250.0	1.3		V-Horn	PK		-43.9	-13.0	-30.9

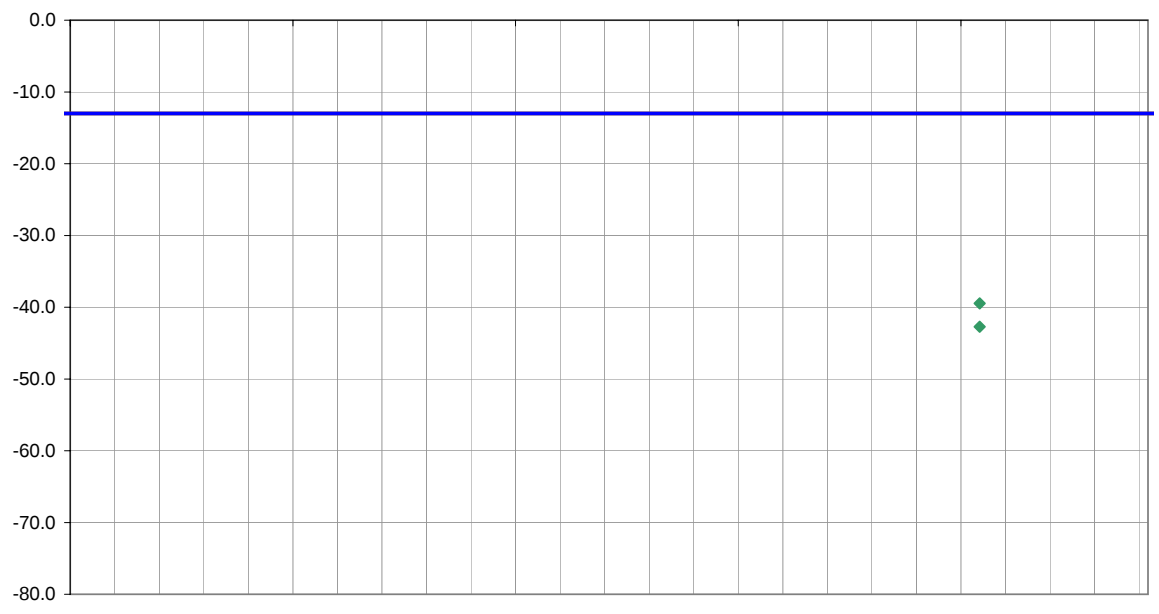
NORTHWEST										REV		
EMC										d4.13		
Apparent Power Data Sheet										05/06/2004		
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C					Work Order: ITRM0030							
Serial Number:					Date: 06/29/04							
Customer: Intermec Technologies Corporation					Temperature: 75							
Attendees: none					Humidity: 45%							
Cust. Ref. No.:					Barometric Pressure: 30.16							
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz			Job Site: EV01				
TEST SPECIFICATIONS												
Specification: FCC 24.238(a)					Year: 2003							
Method: TIA/EIA-603					Year: 2001							
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												
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)												
EUT OPERATING MODES												
Transmitting channel 35 CDMA PCS, 802.11b channel 11, Bluetooth channel 68												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS										Run #		
Pass										43		
Other												
										 Tested By:		
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
7407.000			29.0	1.3			H-Horn	PK		-41.0	-13.0	-28.0
7407.000			48.0	1.2			V-Horn	PK		-42.6	-13.0	-29.6

NORTHWEST		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 1 CDMA PCS, 802.11b channel 1, Bluetooth channel 11											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				44							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
14472.000			84.0	2.6		V-Horn	PK		-42.7	-13.0	-29.7
14472.000			138.0	2.8		H-Horn	PK		-43.0	-13.0	-30.0

NORTHWEST EMC		Apparent Power Data Sheet				REV dtd.13 05/06/2004					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 700C (CDMA(cellular)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 467 CDMA cellular, 802.11b channel 1, Bluetooth channel 11											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						45					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
14472.000			84.0	1.3		H-Horn	PK		-43.2	-13.0	-30.2
14472.000			47.0	1.2		V-Horn	PK		-43.9	-13.0	-30.9

NORTHWEST EMC										REV d14.13 05/06/2004									
Apparent Power Data Sheet																			
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030									
Serial Number:										Date: 06/29/04									
Customer: Intermec Technologies Corporation										Temperature: 75									
Attendees: none										Humidity: 45%									
Cust. Ref. No.:										Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01									
TEST SPECIFICATIONS																			
Specification: FCC 22.917(e)										Year: 2003									
Method: TIA/EIA-603										Year: 2001									
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																			
Simultaneous transmission of 700C (CDMA(cellular)/802.11b/Bluetooth)																			
EUT OPERATING MODES																			
Transmitting channel 55 CDMA cellular, 802.11b channel 11, Bluetooth channel 79																			
DEVIATIONS FROM TEST STANDARD																			
No deviations.																			
RESULTS																			
Pass										Run # 49									
Other																			
										 Tested By:									
																			
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)							
22320.000			-1.0	1.0			V-High Horr	PK		-40.3	-13.0	-27.3							
22320.000			360.0	1.0			H-High Horr	PK		-43.4	-13.0	-30.4							
19840.000			-1.0	1.0			V-High Horr	PK		-44.7	-13.0	-31.7							
19840.000			360.0	1.0			H-High Horr	PK		-46.2	-13.0	-33.2							

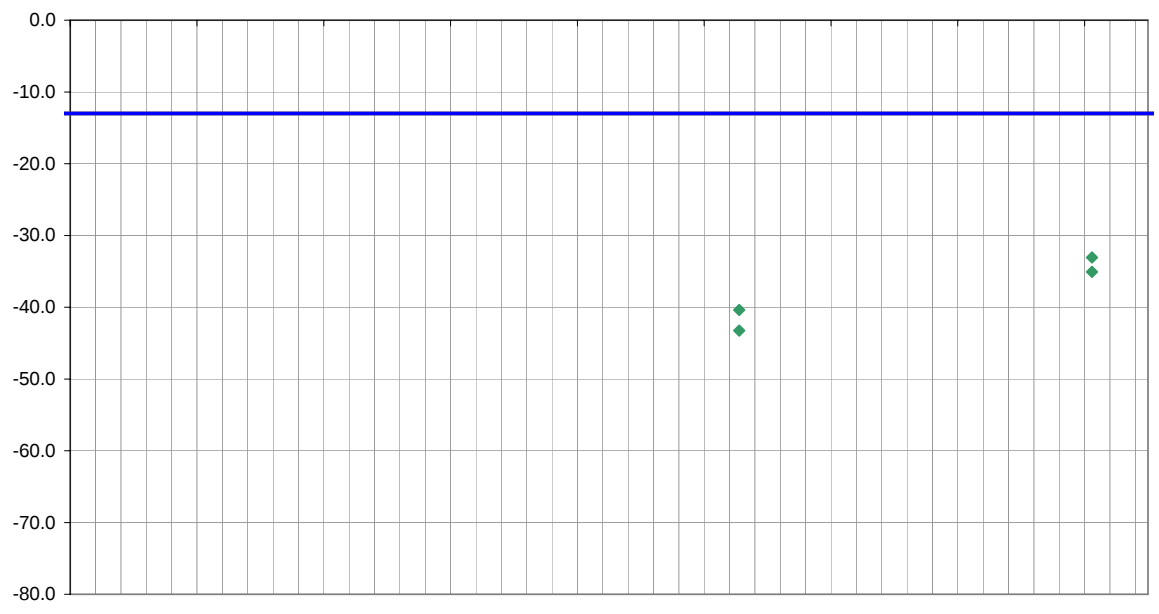
NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030											
Serial Number:										Date: 06/29/04											
Customer: Intermec Technologies Corporation										Temperature: 75											
Attendees: none										Humidity: 45%											
Cust. Ref. No.:										Barometric Pressure: 30.16											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 1153 CDMA PCS, 802.11b channel 1, Bluetooth channel 11																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															50						
Other																					
															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
19296.000				-1.0		1.0				V-High Horr		PK				-44.1		-13.0		-31.1	
19296.000				360.0		1.0				H-High Horr		PK				-46.8		-13.0		-33.8	

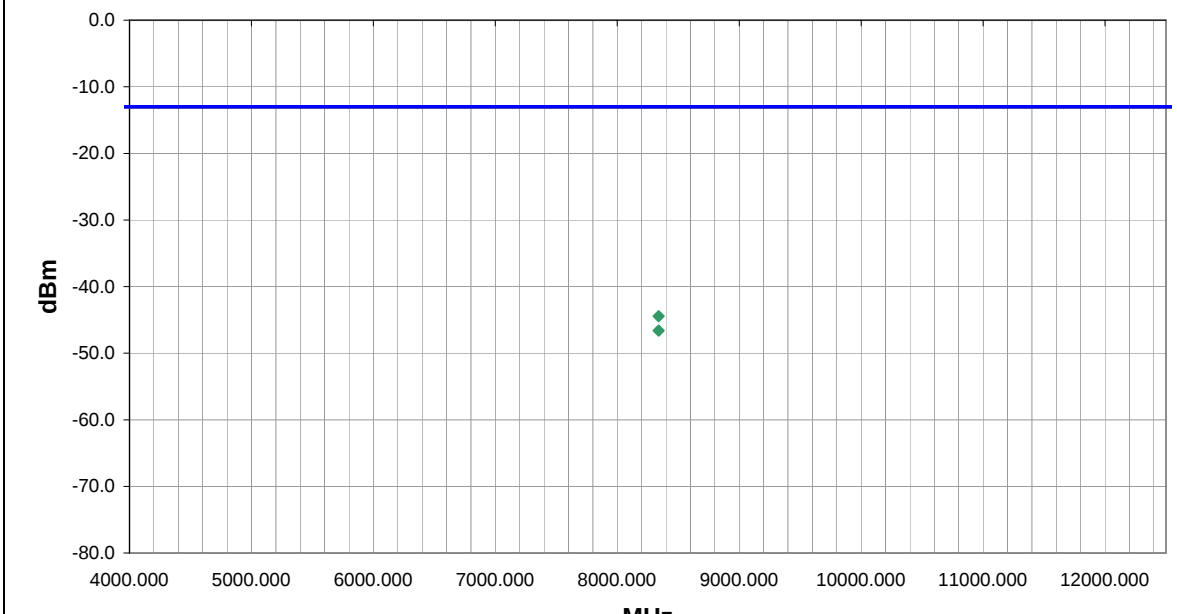
NORTHWEST EMC										Apparent Power Data Sheet										REV d14.13 05/06/2004	
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030											
Serial Number:										Date: 06/29/04											
Customer: Intermec Technologies Corporation										Temperature: 75											
Attendees: none										Humidity: 45%											
Cust. Ref. No.:										Barometric Pressure: 30.16											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 35 CDMA PCS, 802.11b channel 11, Bluetooth channel 35																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															51						
Other																					
															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
22221.000				-1.0		1.0				V-High Horr		PK				-39.5		-13.0		-26.5	
22221.000				360.0		1.0				H-High Horr		PK				-42.7		-13.0		-29.7	

NORTHWEST		REV								
EMC		df4.13								
		05/06/2004								
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030								
Serial Number:		Date: 06/29/04								
Customer: Intermec Technologies Corporation		Temperature: 75								
Attendees: none		Humidity: 45%								
Cust. Ref. No.:		Barometric Pressure: 30.16								
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz								
		Job Site: EV01								
TEST SPECIFICATIONS										
Specification: FCC 24.238(a)		Year: 2003								
Method: TIA/EIA-603		Year: 2001								
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										
Simultaneous transmission of 700C (CDMA(PCS)/802.11b/Bluetooth)										
EUT OPERATING MODES										
Transmitting channel 1153 CDMA PCS, 802.11b channel 11, Bluetooth channel 62										
DEVIATIONS FROM TEST STANDARD										
No deviations.										
RESULTS		Run #								
Pass		52								
Other										
		Holly Ashkannejhad Tested By:								
Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2483.500		206.0	1.5		H-Horn	PK		-47.6	-13.0	-34.6
2483.500		147.0	1.0		V-Horn	PK		-48.7	-13.0	-35.7

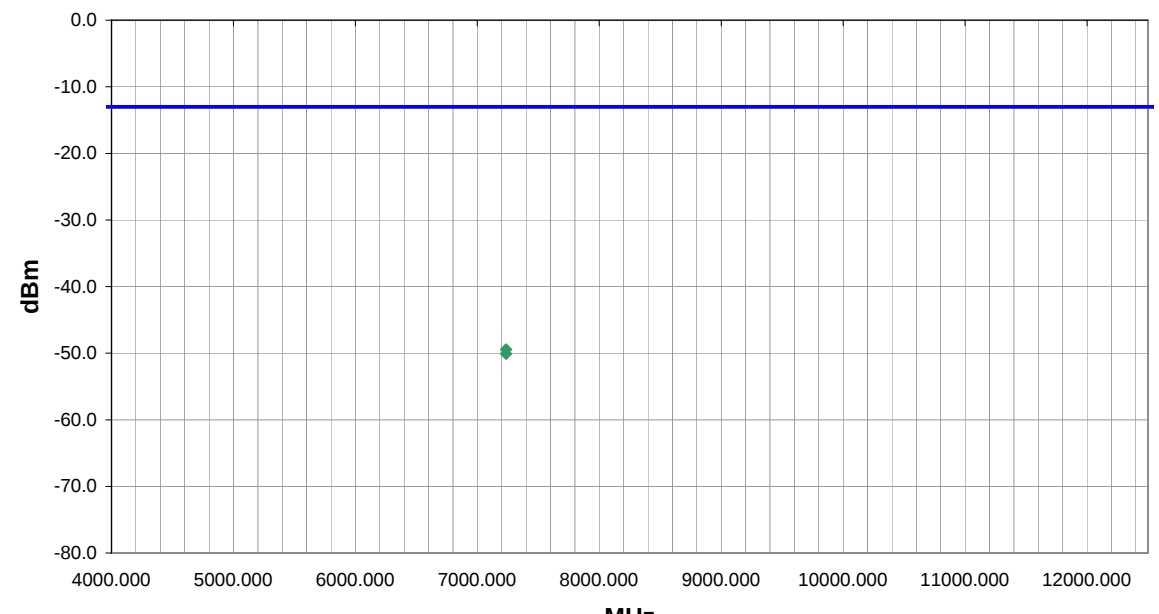
NORTHWEST		REV							
EMC		df4.13							
		05/06/2004							
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030							
Serial Number:		Date: 06/30/04							
Customer: Intermec Technologies Corporation		Temperature: 75							
Attendees: none		Humidity: 45%							
Cust. Ref. No.:		Barometric Pressure: 30.16							
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz							
		Job Site: EV01							
TEST SPECIFICATIONS									
Specification: FCC 22.917(e)		Year: 2003							
Method: TIA/EIA-603		Year: 2001							
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									
Simultaneous transmission of 700C (CDMA(cellular)/802.11b/Bluetooth)									
EUT OPERATING MODES									
Transmitting channel 54 CDMA cellular, 802.11b channel 11, Bluetooth channel 79									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
RESULTS		Run #							
Pass		53							
Other									
		Holly Ashkannejhad Tested By:							
Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2483.500		316.0	1.0		V-Horn	PK	-49.1	-13.0	-36.1
2483.500		281.0	1.4		H-Horn	PK	-49.6	-13.0	-36.6

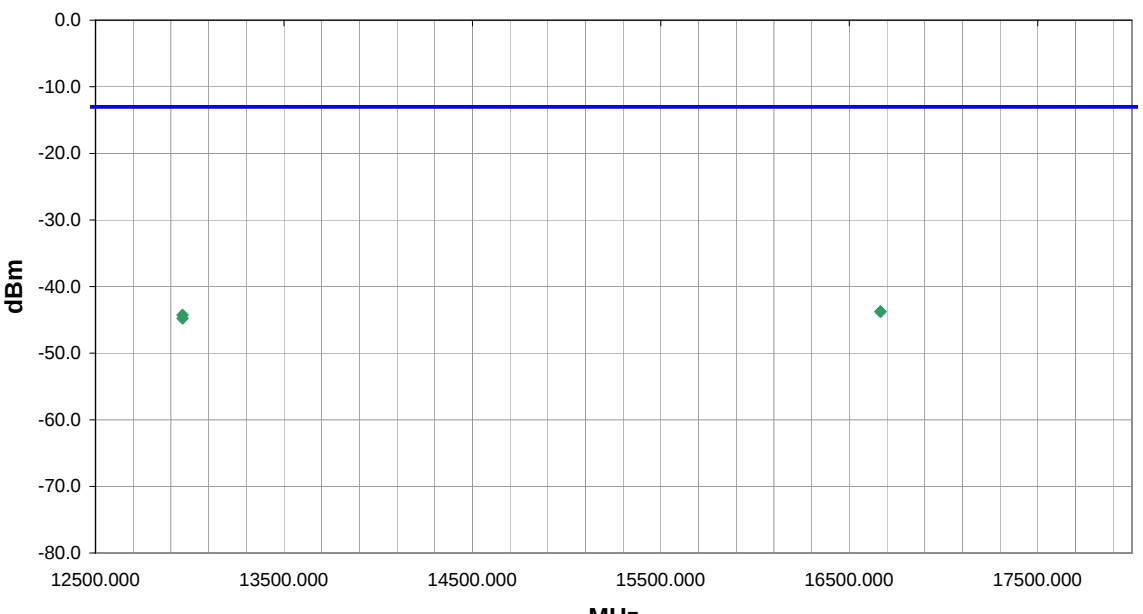
NORTHWEST		REV							
EMC		df4.13							
05/06/2004									
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030							
Serial Number:		Date: 07/01/04							
Customer: Intermec Technologies Corporation		Temperature: 79							
Attendees: none		Humidity: 43%							
Cust. Ref. No.:		Barometric Pressure: 29.93							
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz							
		Job Site: EV01							
TEST SPECIFICATIONS									
Specification: FCC 22.917(e)		Year: 2003							
Method: TIA/EIA-603		Year: 2001							
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									
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.									
EUT OPERATING MODES									
Transmitting CDMA (cellular) 477 and 802.11b 1 in 700C, and RFID 12 in IP3									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
RESULTS		Run #							
Pass		54							
Other									
		Holly Ashkannejhad Tested By:							
Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
7236.000		354.0	1.5		H-Horn	PK	-48.3	-13.0	-35.3
7236.000		9.0	1.2		V-Horn	PK	-49.7	-13.0	-36.7

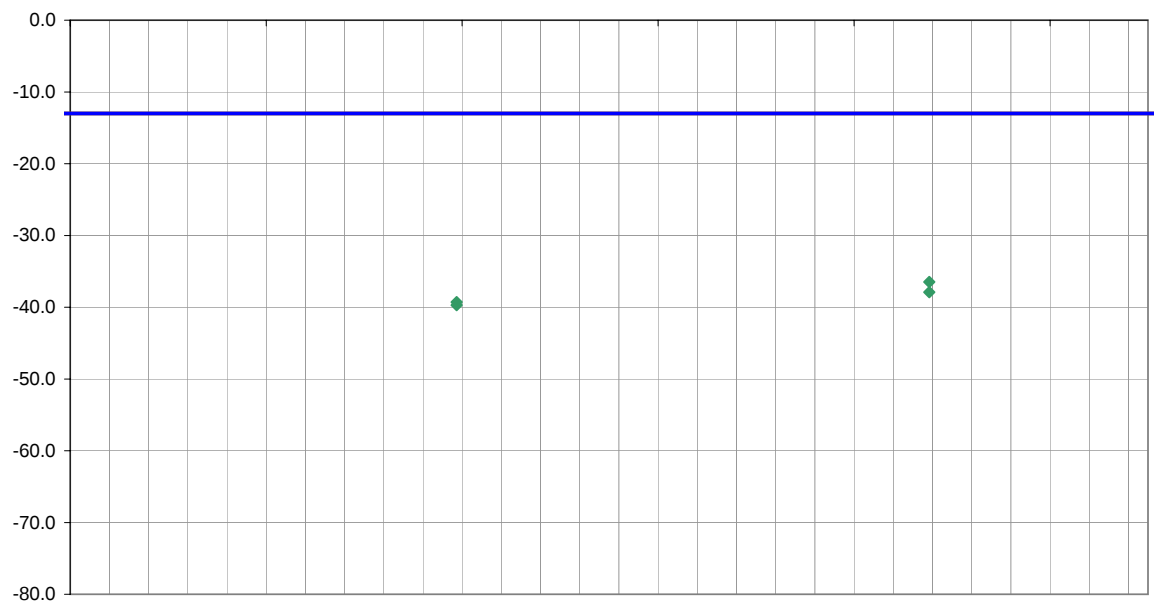
NORTHWEST EMC										Apparent Power Data Sheet										REV d14.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/01/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 22.917(e)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (cellular) 602 and 802.11b 1 in 700C, and RFID 73 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS												Run #									
Pass												55									
Other																					
														Tested By:							
																					
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)									
12057.940			349.0	1.0			H-Horn	PK		-33.1	-13.0	-20.1									
12057.940			21.0	1.0			V-Horn	PK		-35.1	-13.0	-22.1									
9275.500			73.0	1.1			H-Horn	PK		-40.4	-13.0	-27.4									
9275.500			340.0	1.1			V-Horn	PK		-43.3	-13.0	-30.3									

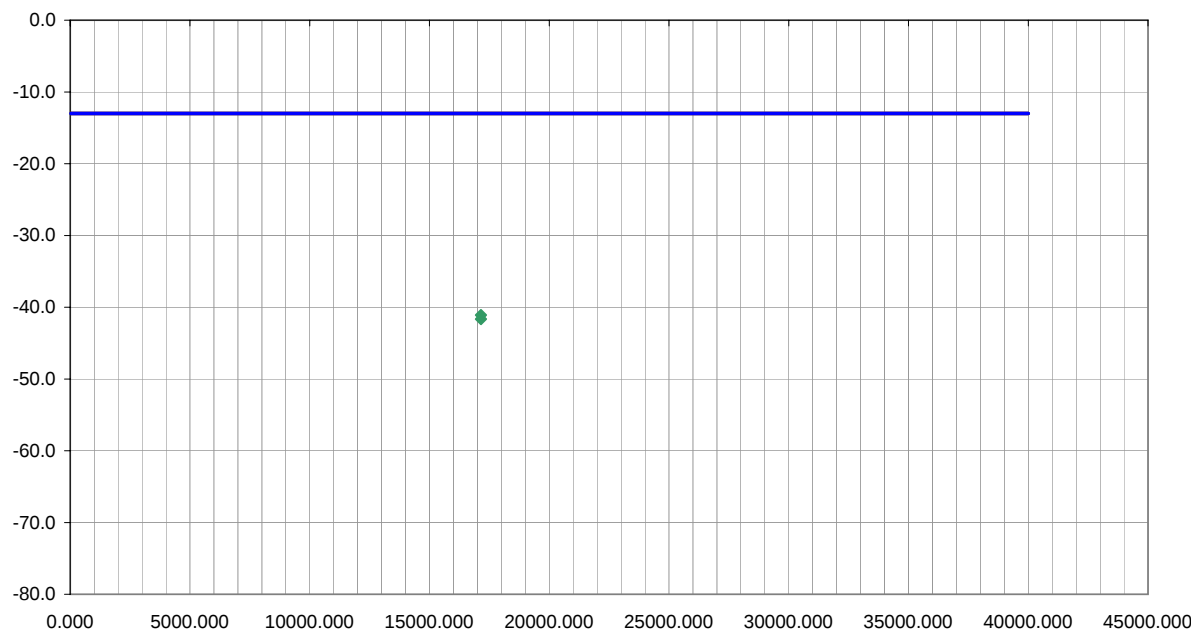
NORTHWEST		REV											
EMC		df4.13											
		05/06/2004											
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030											
Serial Number:		Date: 07/01/04											
Customer: Intermec Technologies Corporation		Temperature: 79											
Attendees: none		Humidity: 43%											
Cust. Ref. No.:		Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz											
		Job Site: EV01											
TEST SPECIFICATIONS													
Specification: FCC 22.917(e)		Year: 2003											
Method: TIA/EIA-603		Year: 2001											
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													
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.													
EUT OPERATING MODES													
Transmitting CDMA (cellular) 310 and 802.11b 5 in 700C, and RFID 71 in IP3													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
RESULTS			Run #										
Pass			56										
Other													
			 Tested By:										
													
Freq (MHz)				Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
8339.813				345.0	1.1			H-Horn	PK		-44.5	-13.0	-31.5
8339.813				21.0	1.0			V-Horn	PK		-46.6	-13.0	-33.6

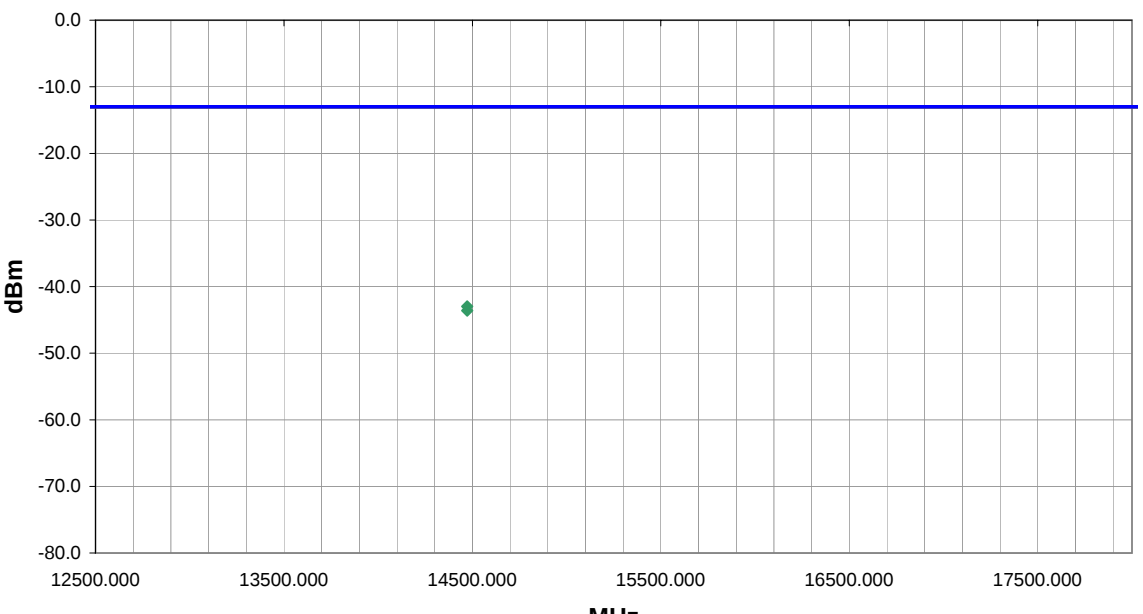
NORTHWEST		REV							
EMC		df4.13							
05/06/2004									
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030							
Serial Number:		Date: 07/01/04							
Customer: Intermec Technologies Corporation		Temperature: 79							
Attendees: none		Humidity: 43%							
Cust. Ref. No.:		Barometric Pressure: 29.93							
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz							
		Job Site: EV01							
TEST SPECIFICATIONS									
Specification: FCC 24.238(a)		Year: 2003							
Method: TIA/EIA-603		Year: 2001							
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									
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.									
EUT OPERATING MODES									
Transmitting CDMA (PCS) 41 and 802.11b 11 in 700C, and RFID 69 in IP3									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
RESULTS		Run #							
Pass		57							
Other									
		Holly Ashkannejhad Tested By:							
Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
11110.500		47.0	2.5		H-Horn	PK	-36.7	-13.0	-23.7
11110.500		108.0	3.8		V-Horn	PK	-39.6	-13.0	-26.6
9258.750		28.0	1.8		H-Horn	PK	-40.9	-13.0	-27.9
9258.750		33.0	1.2		V-Horn	PK	-44.2	-13.0	-31.2
7407.000		154.0	1.3		H-Horn	PK	-48.2	-13.0	-35.2
7407.000		247.0	1.8		V-Horn	PK	-49.4	-13.0	-36.4
5555.250		48.0	1.6		V-Horn	PK	-52.8	-13.0	-39.8
5555.250		46.0	1.3		H-Horn	PK	-54.6	-13.0	-41.6
3703.500		17.0	1.2		V-Horn	PK	-55.1	-13.0	-42.1
3703.500		48.0	1.3		H-Horn	PK	-57.5	-13.0	-44.5

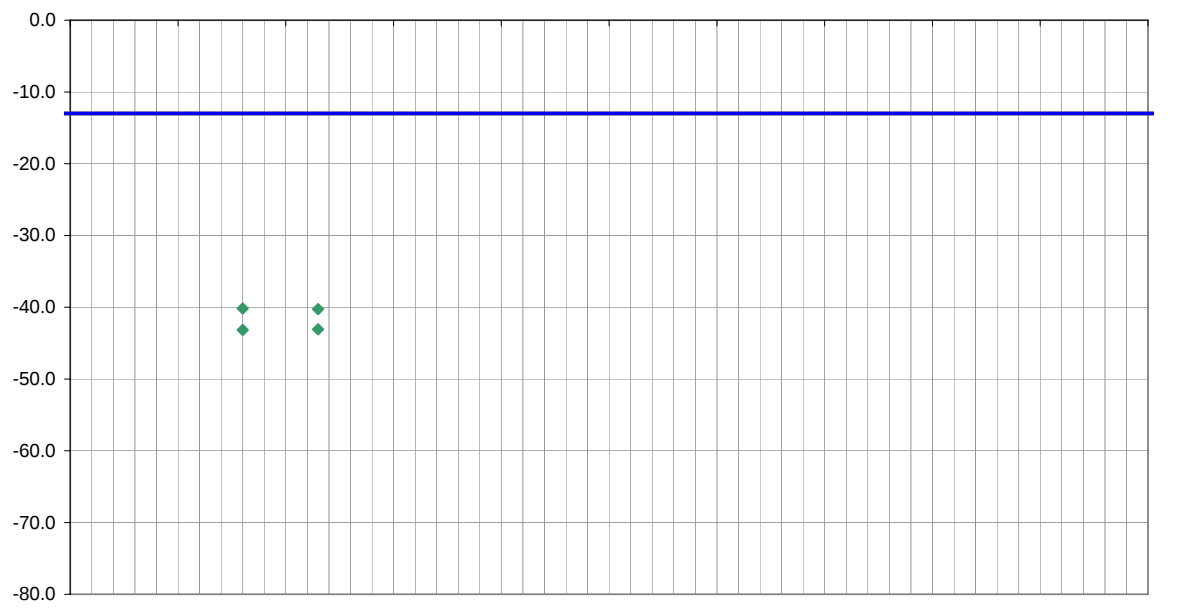
NORTHWEST EMC		Apparent Power Data Sheet				REV d4.13 05/06/2004					
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030									
Serial Number:		Date: 07/02/04									
Customer: Intermec Technologies Corporation		Temperature: 79									
Attendees: none		Humidity: 43%									
Cust. Ref. No.:		Barometric Pressure: 29.93									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.											
EUT OPERATING MODES											
Transmitting CDMA (PCS) 1182 and 802.11b 1 in 700C, and RFID 12 in IP3											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						58					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
7236.000			159.0	1.3		H-Horn	PK		-49.4	-13.0	-36.4
7236.000			305.0	1.2		V-Horn	PK		-50.1	-13.0	-37.1

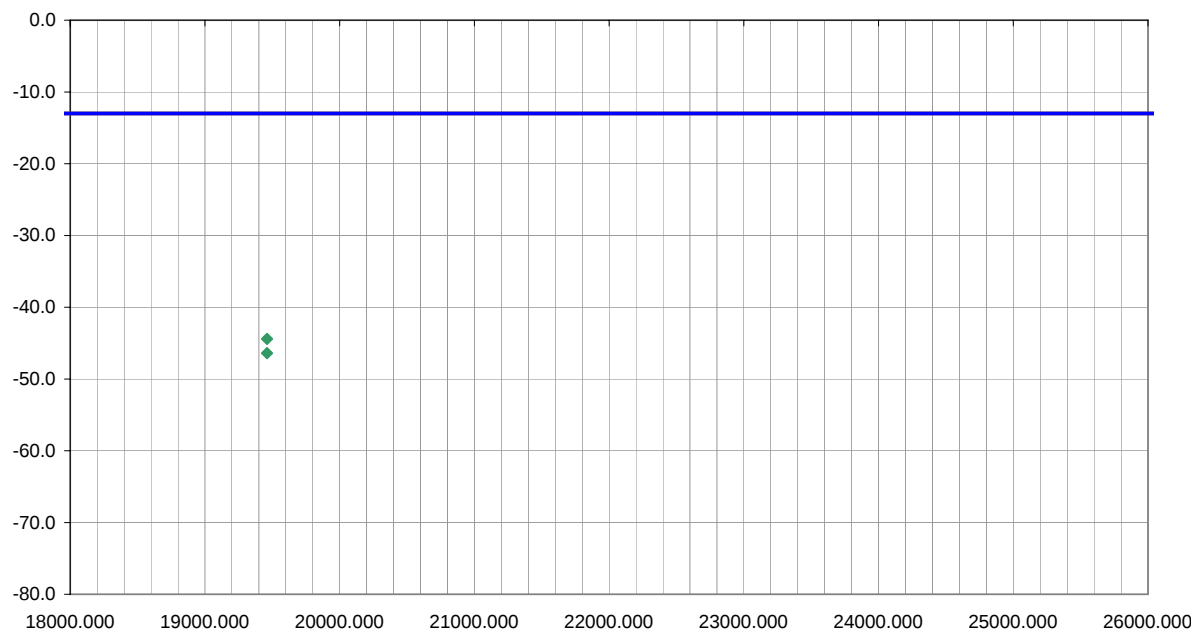
NORTHWEST EMC										Apparent Power Data Sheet										REV d4.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/02/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (PCS) 41 and 802.11b 11 in 700C, and RFID 69 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															59						
Other																					
															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
16665.750				54.0		1.2				V-Horn		PK				-43.7		-13.0		-30.7	
16665.750				347.0		1.3				H-Horn		PK				-43.8		-13.0		-30.8	
12962.250				48.0		1.5				H-Horn		PK				-44.3		-13.0		-31.3	
12962.250				116.0		1.2				V-Horn		PK				-44.8		-13.0		-31.8	

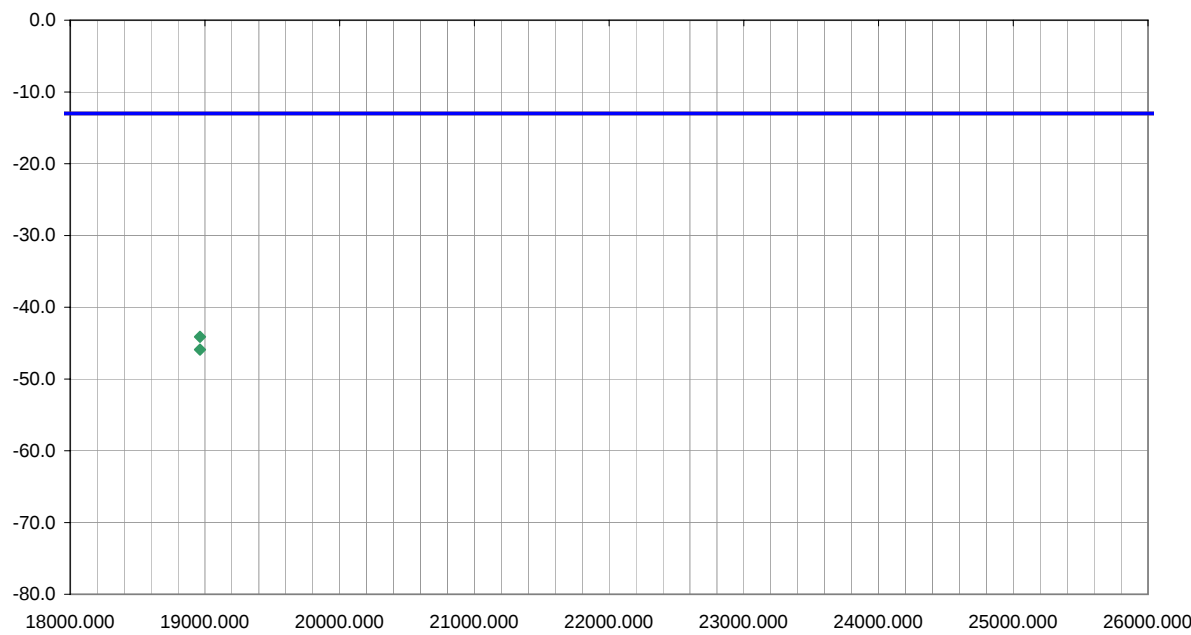
NORTHWEST EMC										REV d14.13 05/06/2004		
Apparent Power Data Sheet												
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3					Work Order: ITRM0030							
Serial Number:					Date: 07/02/04							
Customer: Intermec Technologies Corporation					Temperature: 79							
Attendees: none					Humidity: 43%							
Cust. Ref. No.:					Barometric Pressure: 29.93							
Tested by: Holly Ashkannejhad			Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS												
Specification: FCC 24.238(a)					Year: 2003							
Method: TIA/EIA-603					Year: 2001							
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												
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.												
EUT OPERATING MODES												
Transmitting CDMA (PCS) 1175 and 802.11b 1 in 700C, and RFID 12 in IP3												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS								Run #				
Pass								60				
Other												
										Tested By:		
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
16884.000			20.0	1.2			V-Horn	PK		-36.5	-13.0	-23.5
16884.000			141.0	1.3			H-Horn	PK		-37.9	-13.0	-24.9
14472.000			89.0	1.3			H-Horn	PK		-39.3	-13.0	-26.3
14472.000			117.0	2.2			V-Horn	PK		-39.7	-13.0	-26.7

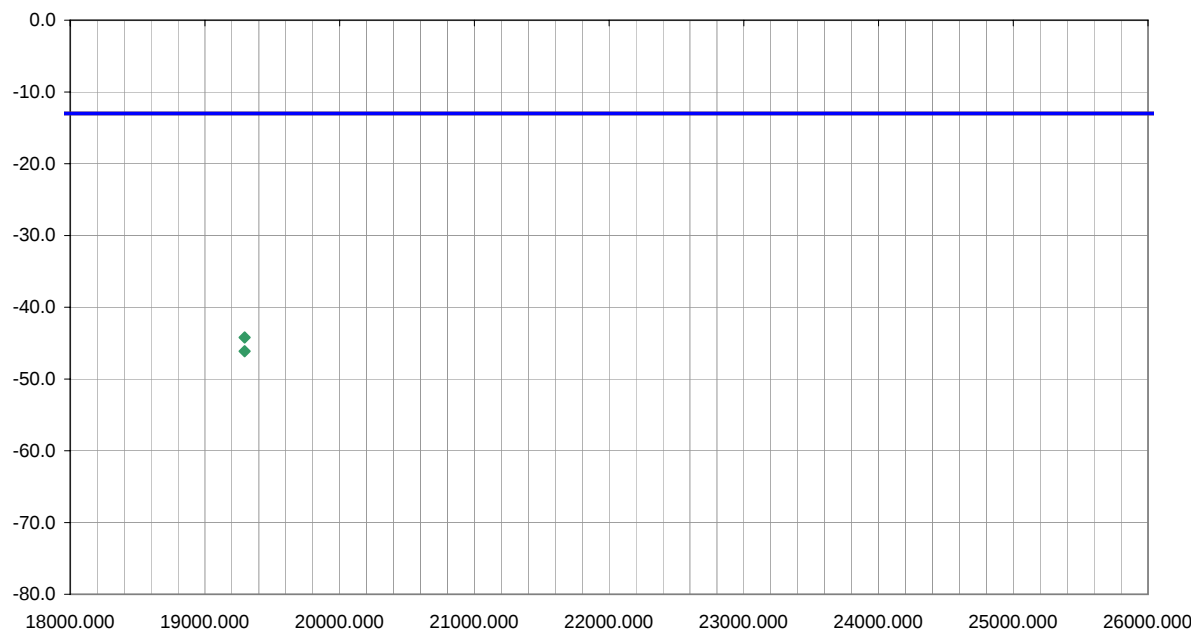
NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/02/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (PCS) 1117 and 802.11b 11 in 700C, and RFID 7 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															61						
Other																					
															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
17149.910				121.0		1.2				V-Horn		PK				-41.1		-13.0		-28.1	
17149.910				2.0		3.5				H-Horn		PK				-41.6		-13.0		-28.6	

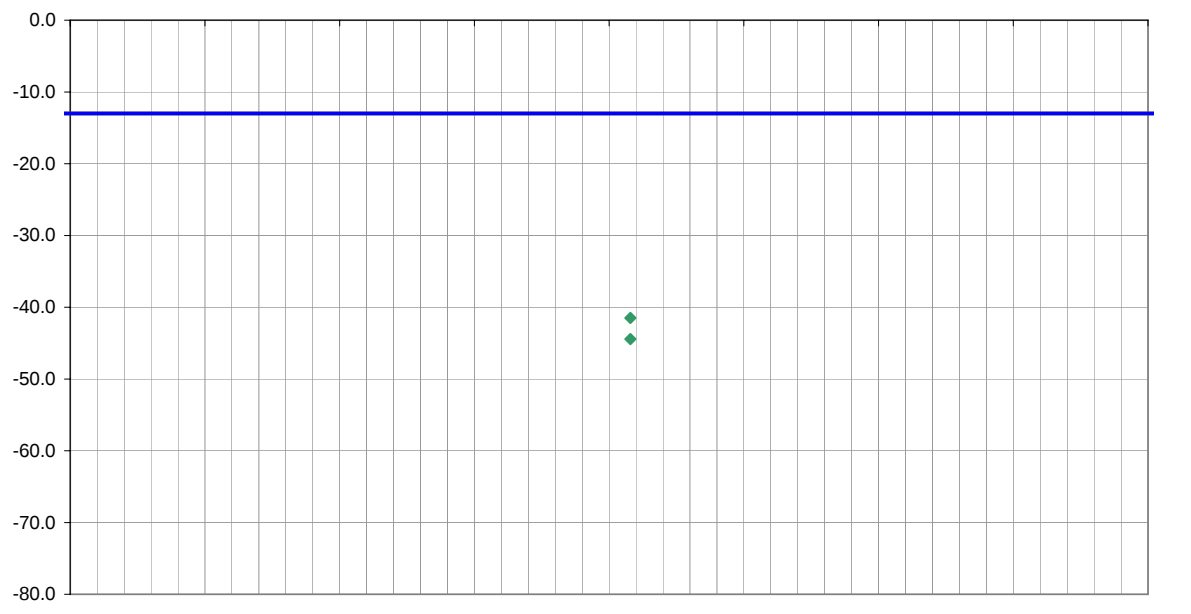
NORTHWEST		Apparent Power Data Sheet		REV d4.13 05/06/2004							
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030									
Serial Number:		Date: 07/02/04									
Customer: Intermec Technologies Corporation		Temperature: 79									
Attendees: none		Humidity: 43%									
Cust. Ref. No.:		Barometric Pressure: 29.93									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.											
EUT OPERATING MODES											
Transmitting CDMA (cellular) 477 and 802.11b 1 in 700C, and RFID 12 in IP3											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				62							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
14472.000			144.0	1.3		H-Horn	PK		-43.0	-13.0	-30.0
14472.000			228.0	1.6		V-Horn	PK		-43.6	-13.0	-30.6

NORTHWEST										REV		
EMC										d4.13		
Apparent Power Data Sheet										05/06/2004		
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030		
Serial Number:										Date: 07/02/04		
Customer: Intermec Technologies Corporation										Temperature: 79		
Attendees: none										Humidity: 43%		
Cust. Ref. No.:										Barometric Pressure: 29.93		
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz		
										Job Site: EV01		
TEST SPECIFICATIONS												
Specification: FCC 22.917(e)										Year: 2003		
Method: TIA/EIA-603										Year: 2001		
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												
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.												
EUT OPERATING MODES												
Transmitting CDMA (cellular) 727 and 802.11b 8 in 700C, and RFID 47 in IP3												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS										Run #		
Pass										64		
Other												
										 Tested By:		
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
22016.000			-2.0	1.0			V-High Horr	PK		-40.2	-13.0	-27.2
22023.000			362.0	1.0			V-High Horr	PK		-40.3	-13.0	-27.3
22023.000			361.0	1.0			H-High Horr	PK		-43.1	-13.0	-30.1
22016.000			-2.0	1.0			H-High Horr	PK		-43.2	-13.0	-30.2

NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/02/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 22.917(e)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (cellular) 310 and 802.11b 5 in 700C, and RFID 71 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															65						
Other															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
19460.690				-2.0		1.0				V-High Horr		PK				-44.4		-13.0		-31.4	
19460.690				361.0		1.0				H-High Horr		PK				-46.4		-13.0		-33.4	

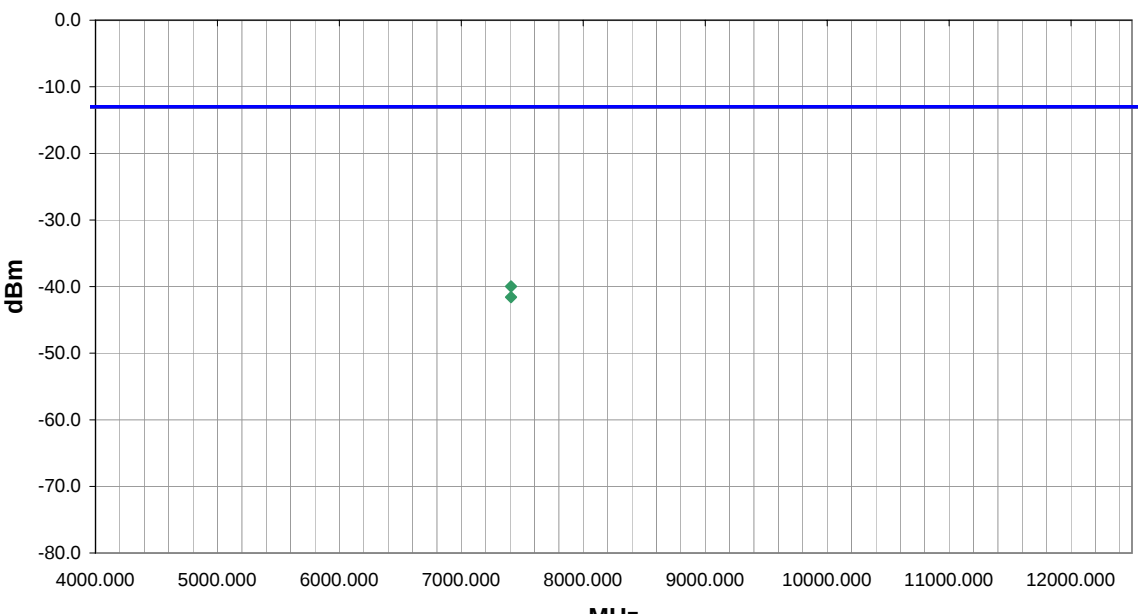
NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/02/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (PCS) 932 and 802.11b 11 in 700C, and RFID 8 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS																					
Pass														Run #		67					
Other																					
										 Tested By:											
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
18963.000				248.0		1.0				V-High Horr		PK				-44.1		-13.0		-31.1	
18963.000				117.0		1.1				H-High Horr		PK				-45.9		-13.0		-32.9	

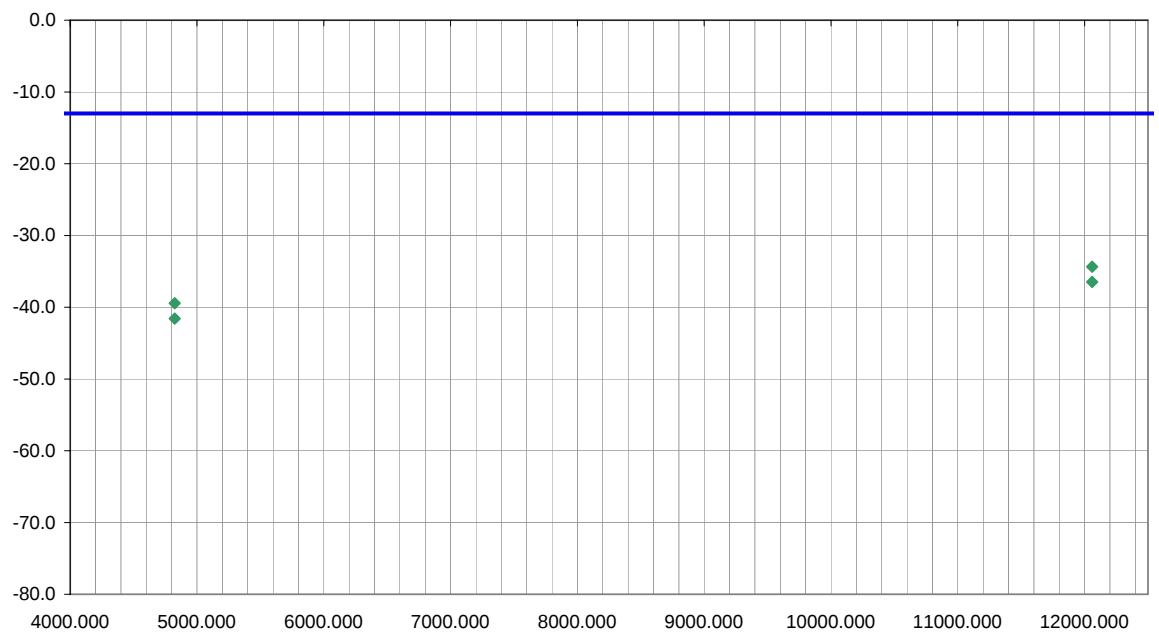
NORTHWEST EMC										Apparent Power Data Sheet										REV d14.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/02/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (PCS) 1117 and 802.11b 1 in 700C, and RFID 50 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS										Run #											
Pass										68											
Other																					
												 Tested By:									
																					
Freq (MHz)		Azimuth (degrees)		Height (meters)		Polarity		Detector		EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)							
19294.880		118.0		1.1		V-High Horr		PK		-44.2		-13.0		-31.2							
19294.880		309.0		1.0		H-High Horr		PK		-46.1		-13.0		-33.1							

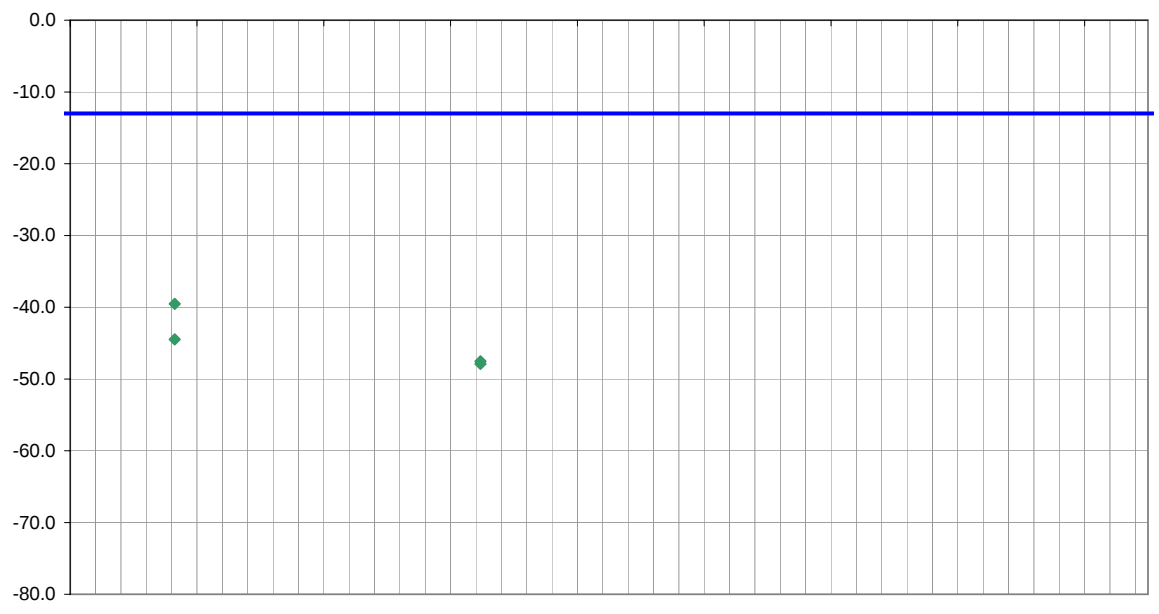
NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/03/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (PCS) 1117 and 802.11b 1 in 700C, and RFID 62 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS																					
Pass														Run #		69					
Other																					
										 Tested By:											
																					
Freq (MHz)		Azimuth (degrees)		Height (meters)		Polarity		Detector		EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)							
22158.000		361.0		1.0		V-High Horr		PK		-41.5		-13.0		-28.5							
22158.000		-1.0		1.0		H-High Horr		PK		-44.4		-13.0		-31.4							

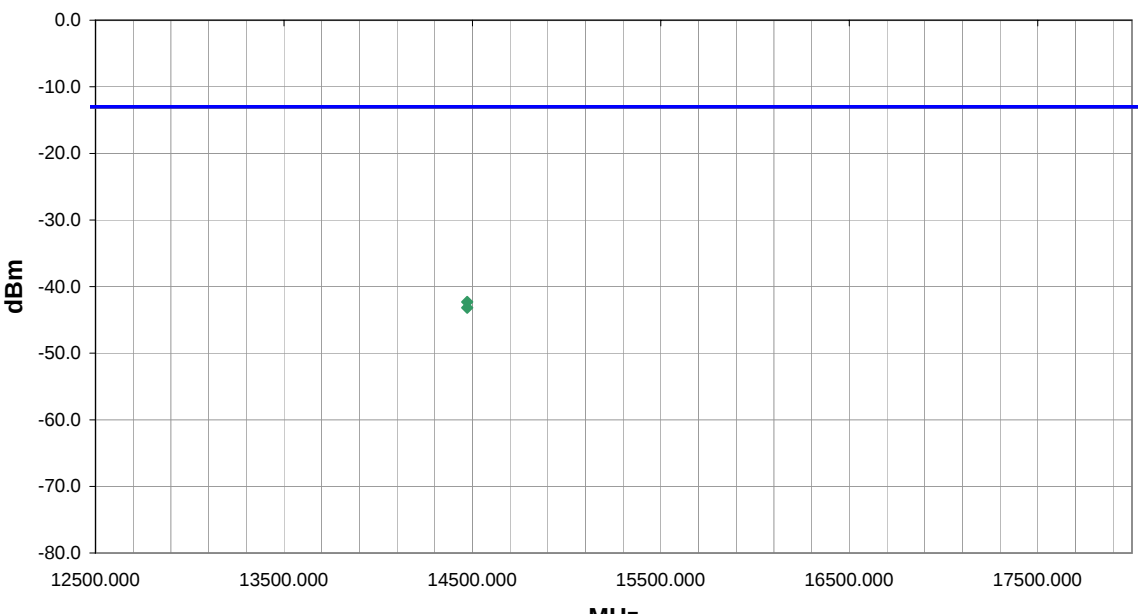
NORTHWEST		REV								
EMC		df4.13								
		05/06/2004								
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3		Work Order: ITRM0030								
Serial Number:		Date: 07/03/04								
Customer: Intermec Technologies Corporation		Temperature: 79								
Attendees: none		Humidity: 43%								
Cust. Ref. No.:		Barometric Pressure: 29.93								
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz								
		Job Site: EV01								
TEST SPECIFICATIONS										
Specification: FCC 24.238(a)		Year: 2003								
Method: TIA/EIA-603		Year: 2001								
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										
CDMA(PCS) and 802.11(b) in 700C. RFID in IP3.										
EUT OPERATING MODES										
Transmitting CDMA (PCS) 1175 and 802.11b 11 in 700C, and RFID 7 in IP3										
DEVIATIONS FROM TEST STANDARD										
No deviations.										
RESULTS		Run #								
Pass		70								
Other										
		Holly Ashkannejhad Tested By:								
Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2483.500		285.0	1.0		V-Horn	PK		-48.1	-13.0	-35.1
2483.500		331.0	1.1		H-Horn	PK		-49.9	-13.0	-36.9

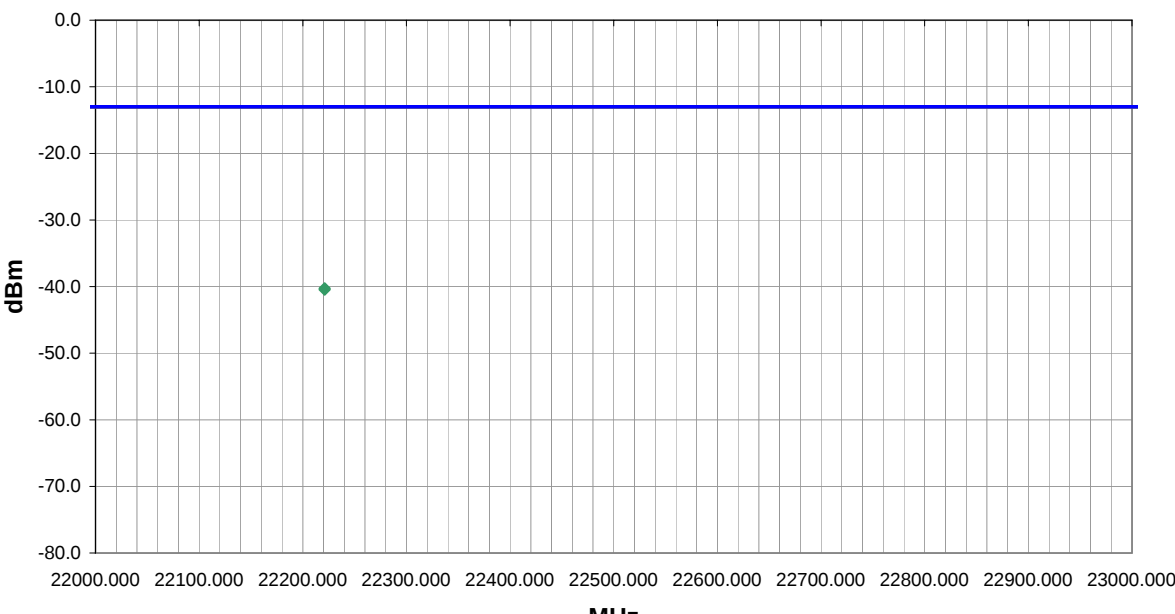
NORTHWEST										REV											
EMC										Apparent Power Data Sheet											
EUT: CDMA in 700C with 802.11b in 700C and RFID in IP3										Work Order: ITRM0030											
Serial Number:										Date: 07/03/04											
Customer: Intermec Technologies Corporation										Temperature: 79											
Attendees: none										Humidity: 43%											
Cust. Ref. No.:										Barometric Pressure: 29.93											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 22.917(e)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
CDMA(cellular) and 802.11(b) in 700C. RFID in IP3.																					
EUT OPERATING MODES																					
Transmitting CDMA (cellular) 310 and 802.11b 11 in 700C, and RFID 71 in IP3																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															71						
Other																					
										Holly Ashkannejhad Tested By:											
0.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 -80.0 2483.000 2483.100 2483.200 2483.300 2483.400 2483.500 2483.600 2483.700 2483.800 2483.900 2484.000 dBm MHz																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
2483.500				118.0		1.0				V-Horn		PK				-49.4		-13.0		-36.4	
2483.500				337.0		1.0				H-Horn		PK				-49.7		-13.0		-36.7	

NORTHWEST EMC										Apparent Power Data Sheet										REV d4.13 05/06/2004	
EUT: Bluetooth in 6820 with CDMA, Bluetooth, and 802.11										Work Order: ITRM0030											
Serial Number:										Date: 07/07/04											
Customer: Intermec Technologies Corporation										Temperature: 73											
Attendees: none										Humidity: 41%											
Cust. Ref. No.:										Barometric Pressure: 30.09											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 35 CDMA PCS, 802.11b channel 11, Bluetooth channel 68																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS																		Run #			
Pass																		24			
Other																					
																		 Tested By:			
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
7407.031				309.0		1.6				V-Horn		PK				-40.0		-13.0		-27.0	
7407.031				297.0		1.3				H-Horn		PK				-41.6		-13.0		-28.6	

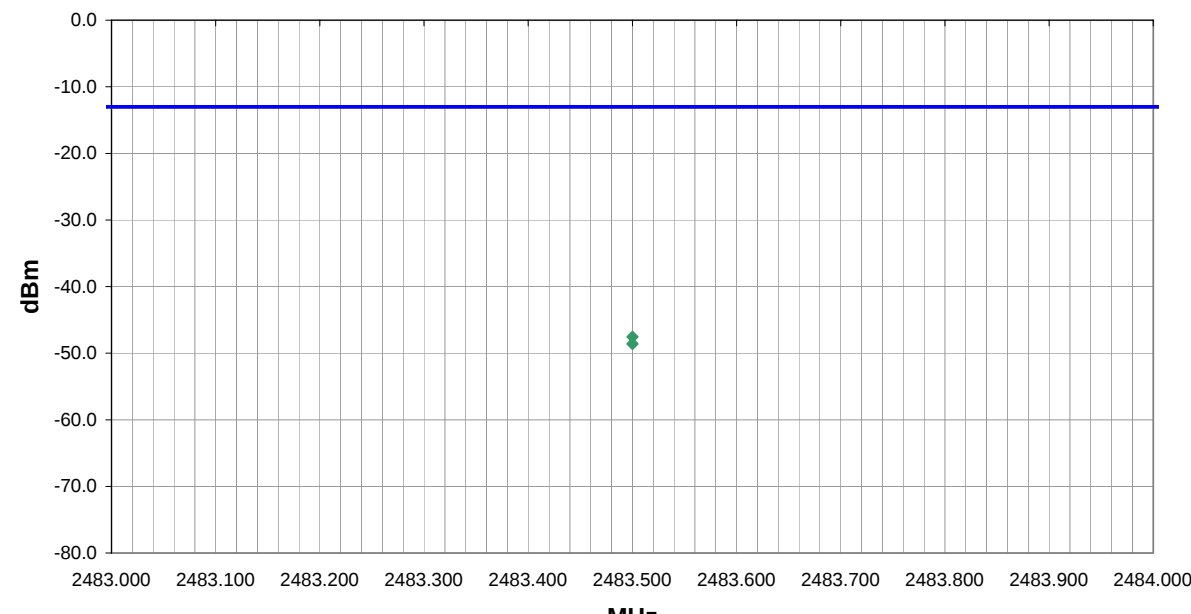
NORTHWEST EMC										Apparent Power Data Sheet										REV d14.13 05/06/2004	
EUT: Bluetooth in 6820 with CDMA, Bluetooth, and 802.11										Work Order: ITRM0030											
Serial Number:										Date: 07/07/04											
Customer: Intermec Technologies Corporation										Temperature: 73											
Attendees: none										Humidity: 41%											
Cust. Ref. No.:										Barometric Pressure: 30.09											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 1153 CDMA PCS, Channel 1 802.11b, Bluetooth channel 11																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS												Run #									
Pass												25									
Other																					
														Tested By:							
																					
Freq (MHz)		Azimuth (degrees)		Height (meters)		Polarity		Detector		EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)							
12060.000		-1.0		1.0		H-Horn		PK		-34.4		-13.0		-21.4							
12060.000		360.0		1.0		V-Horn		PK		-36.5		-13.0		-23.5							
4823.956		261.0		1.5		V-Horn		PK		-39.4		-13.0		-26.4							
4823.956		80.0		1.3		H-Horn		PK		-41.6		-13.0		-28.6							

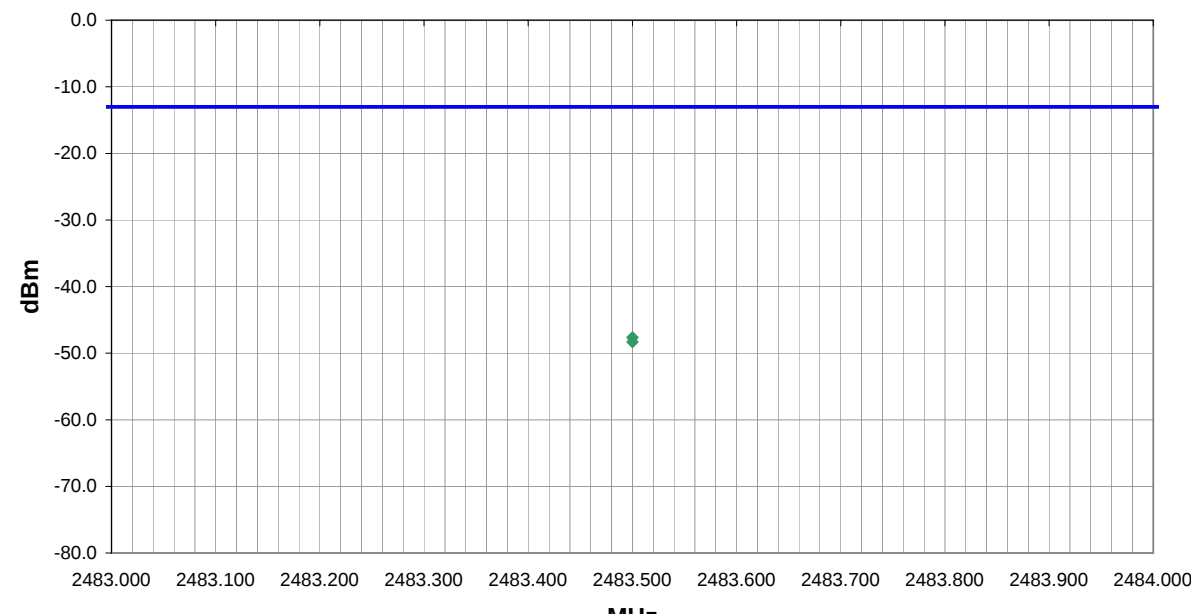
NORTHWEST										REV		
EMC										d4.13		
Apparent Power Data Sheet										05/06/2004		
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C					Work Order: ITRM0030							
Serial Number:					Date: 07/07/04							
Customer: Intermec Technologies Corporation					Temperature: 73							
Attendees: none					Humidity: 41%							
Cust. Ref. No.:					Barometric Pressure: 30.09							
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz		Job Site: EV01					
TEST SPECIFICATIONS												
Specification: FCC 24.238(a)					Year: 2003							
Method: TIA/EIA-603					Year: 2001							
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												
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)												
EUT OPERATING MODES												
Transmitting Channel 1 CDMA PCS, Channel 1 802.11b, Bluetooth channel 11												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS										Run #		
Pass										26		
Other												
										 Tested By:		
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
4824.010			18.0	1.0			V-Horn	PK		-39.5	-13.0	-26.5
4824.010			325.0	1.0			H-Horn	PK		-44.5	-13.0	-31.5
7236.000			338.0	1.3			H-Horn	PK		-47.5	-13.0	-34.5
7236.000			82.0	1.3			V-Horn	PK		-47.9	-13.0	-34.9

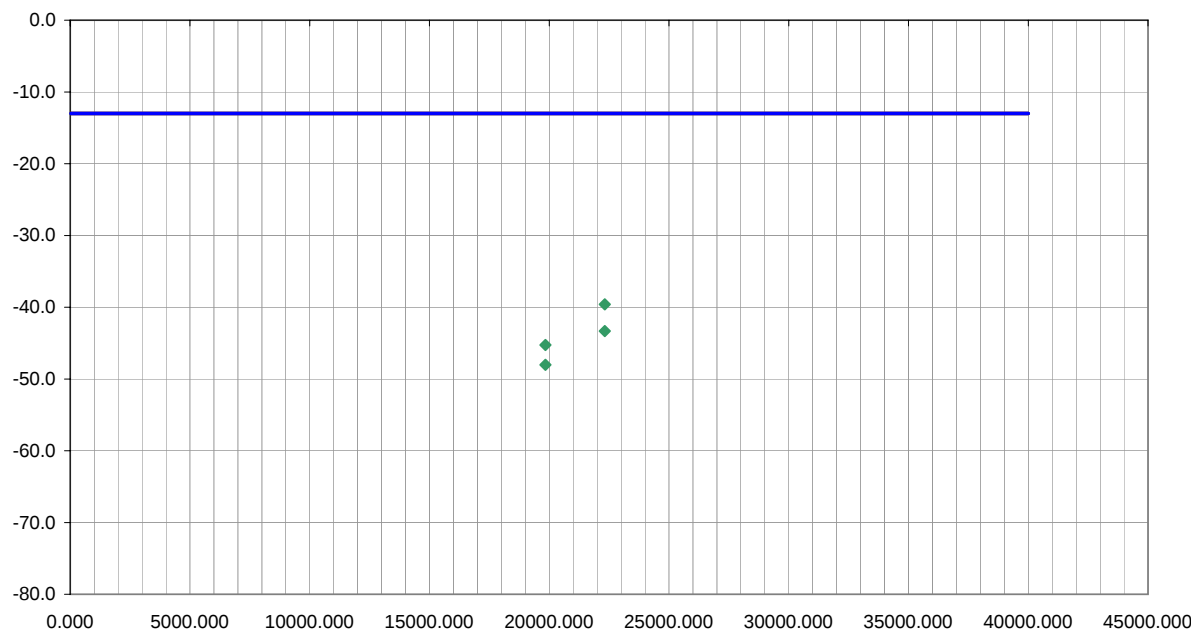
NORTHWEST EMC										Apparent Power Data Sheet										REV d4.13 05/06/2004	
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030											
Serial Number:										Date: 07/07/04											
Customer: Intermec Technologies Corporation										Temperature: 73											
Attendees: none										Humidity: 41%											
Cust. Ref. No.:										Barometric Pressure: 30.09											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01											
TEST SPECIFICATIONS																					
Specification: FCC 24.238(a)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting Channel 1 CDMA PCS, Channel 1 802.11b, Bluetooth channel 11																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS															Run #						
Pass															27						
Other																					
															 Tested By:						
																					
Freq (MHz)				Azimuth (degrees)		Height (meters)				Polarity		Detector				EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)	
14472.000				-1.0		1.2				V-Horn		PK				-42.3		-13.0		-29.3	
14472.000				323.0		1.0				H-Horn		PK				-43.2		-13.0		-30.2	

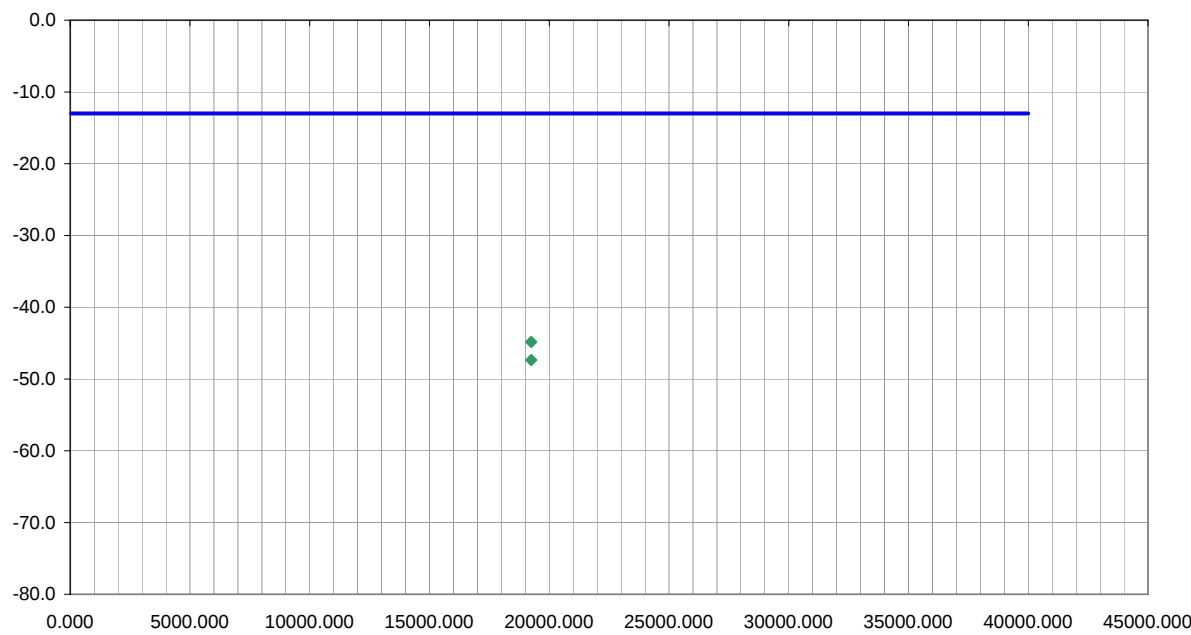
NORTHWEST EMC		Apparent Power Data Sheet				REV d14.13 05/06/2004					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/28/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 35 CDMA PCS, 802.11b channel 11, Bluetooth channel 68											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						28					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
22221.000			362.0	1.0		V-High Horr	PK		-40.3	-13.0	-27.3
22221.000			-3.0	1.0		V-High Horr	PK		-40.5	-13.0	-27.5

NORTHWEST		REV						
EMC		df4.13						
05/06/2004								
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030						
Serial Number:		Date: 06/28/04						
Customer: Intermec Technologies Corporation		Temperature: 75						
Attendees: none		Humidity: 45%						
Cust. Ref. No.:		Barometric Pressure: 30.16						
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz						
		Job Site: EV01						
TEST SPECIFICATIONS								
Specification: FCC 24.238(a)		Year: 2003						
Method: TIA/EIA-603		Year: 2001						
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								
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)								
EUT OPERATING MODES								
Transmitting channel 1153 CDMA PCS, 802.11b channel 1, Bluetooth channel 11								
DEVIATIONS FROM TEST STANDARD								
No deviations.								
RESULTS		Run #						
Pass		29						
Other								
		Holly Ashkannejhad Tested By:						
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
19296.000		-2.0	1.0	V-High Horr	PK	-43.5	-13.0	-30.5
19296.000		361.0	1.0	H-High Horr	PK	-45.8	-13.0	-32.8

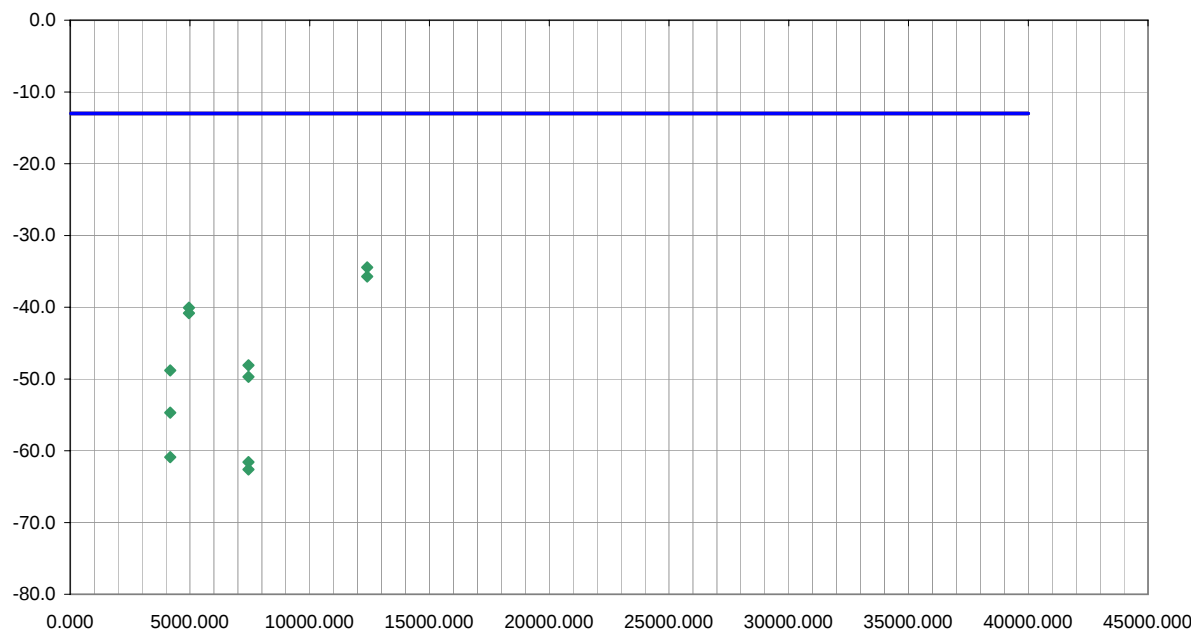
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EMC										df4.13		
Apparent Power Data Sheet										05/06/2004		
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C					Work Order: ITRM0030							
Serial Number:					Date: 06/28/04							
Customer: Intermec Technologies Corporation					Temperature: 75							
Attendees: none					Humidity: 45%							
Cust. Ref. No.:					Barometric Pressure: 30.16							
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz			Job Site: EV01				
TEST SPECIFICATIONS												
Specification: FCC 24.238(a)					Year: 2003							
Method: TIA/EIA-603					Year: 2001							
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												
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(PCS)/802.11b/Bluetooth)												
EUT OPERATING MODES												
Transmitting channel 1153 CDMA PCS, 802.11b channel 11, Bluetooth channel 62												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS										Run #		
Pass										30		
Other												
										 Tested By:		
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2483.500			61.0	1.3			H-Horn	PK		-47.5	-13.0	-34.5
2483.500			49.0	1.1			V-Horn	PK		-48.6	-13.0	-35.6

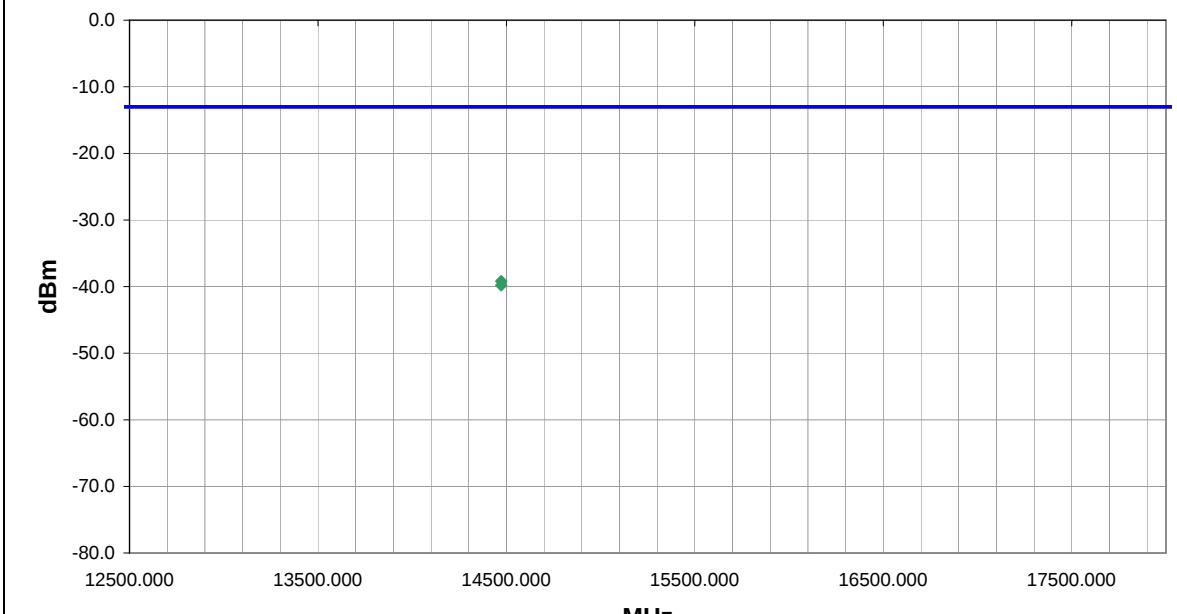
NORTHWEST EMC										REV d4.13 05/06/2004																																											
Apparent Power Data Sheet																																																					
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030																																											
Serial Number:										Date: 06/28/04																																											
Customer: Intermec Technologies Corporation										Temperature: 75																																											
Attendees: none										Humidity: 45%																																											
Cust. Ref. No.:										Barometric Pressure: 30.16																																											
Tested by: Holly Ashkannejhad					Power: 120VAC, 60Hz					Job Site: EV01																																											
TEST SPECIFICATIONS																																																					
Specification: FCC 22.917(e)										Year: 2003																																											
Method: TIA/EIA-603										Year: 2001																																											
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																																																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)																																																					
EUT OPERATING MODES																																																					
Transmitting channel 54 CDMA cellular, 802.11b channel 11, Bluetooth channel 79																																																					
DEVIATIONS FROM TEST STANDARD																																																					
No deviations.																																																					
RESULTS																																																					
Pass										Run # 31																																											
Other																																																					
										 Tested By:																																											
																																																					
<table border="1"> <thead> <tr> <th>Freq (MHz)</th> <th></th> <th></th> <th>Azimuth (degrees)</th> <th>Height (meters)</th> <th></th> <th></th> <th>Polarity</th> <th>Detector</th> <th></th> <th>EIRP (dBm)</th> <th>Spec. Limit (dBm)</th> <th>Compared to Spec. (dB)</th> </tr> </thead> <tbody> <tr> <td>2483.500</td> <td></td> <td></td> <td>61.0</td> <td>1.3</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td></td> <td>-47.6</td> <td>-13.0</td> <td>-34.6</td> </tr> <tr> <td>2483.500</td> <td></td> <td></td> <td>55.0</td> <td>1.1</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td></td> <td>-48.3</td> <td>-13.0</td> <td>-35.3</td> </tr> </tbody> </table>															Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	2483.500			61.0	1.3			H-Horn	PK		-47.6	-13.0	-34.6	2483.500			55.0	1.1			V-Horn	PK		-48.3	-13.0	-35.3
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)																																									
2483.500			61.0	1.3			H-Horn	PK		-47.6	-13.0	-34.6																																									
2483.500			55.0	1.1			V-Horn	PK		-48.3	-13.0	-35.3																																									

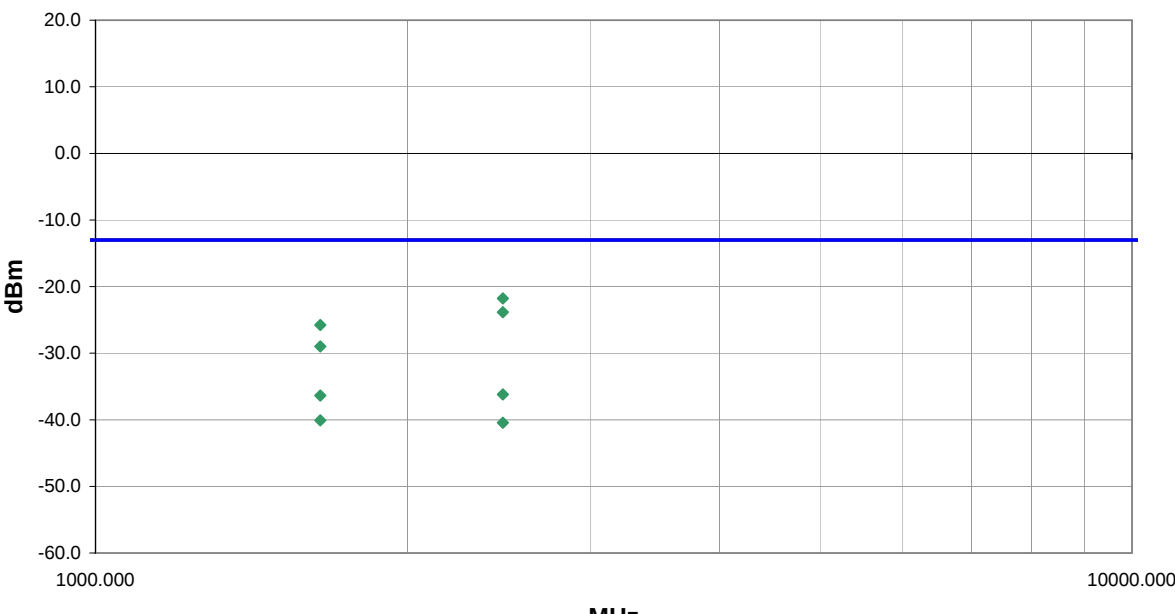
NORTHWEST EMC										Apparent Power Data Sheet										REV dtd.13 05/06/2004	
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030											
Serial Number:										Date: 06/28/04											
Customer: Intermec Technologies Corporation										Temperature: 75											
Attendees: none										Humidity: 45%											
Cust. Ref. No.:										Barometric Pressure: 30.16											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 22.917(e)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 55 CDMA cellular, 802.11b channel 11, Bluetooth channel 79																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS																		Run #			
Pass																		33			
Other																					
																		 Tested By:			
																					
Freq (MHz)		Azimuth (degrees)		Height (meters)		Polarity		Detector		EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)							
22320.000		361.0		1.0		V-High Horr		PK		-39.6		-13.0		-26.6							
22320.000		-3.0		1.0		H-High Horr		PK		-43.3		-13.0		-30.3							
19840.000		361.0		1.0		V-High Horr		PK		-45.3		-13.0		-32.3							
19840.000		-3.0		1.0		H-High Horr		PK		-48.0		-13.0		-35.0							

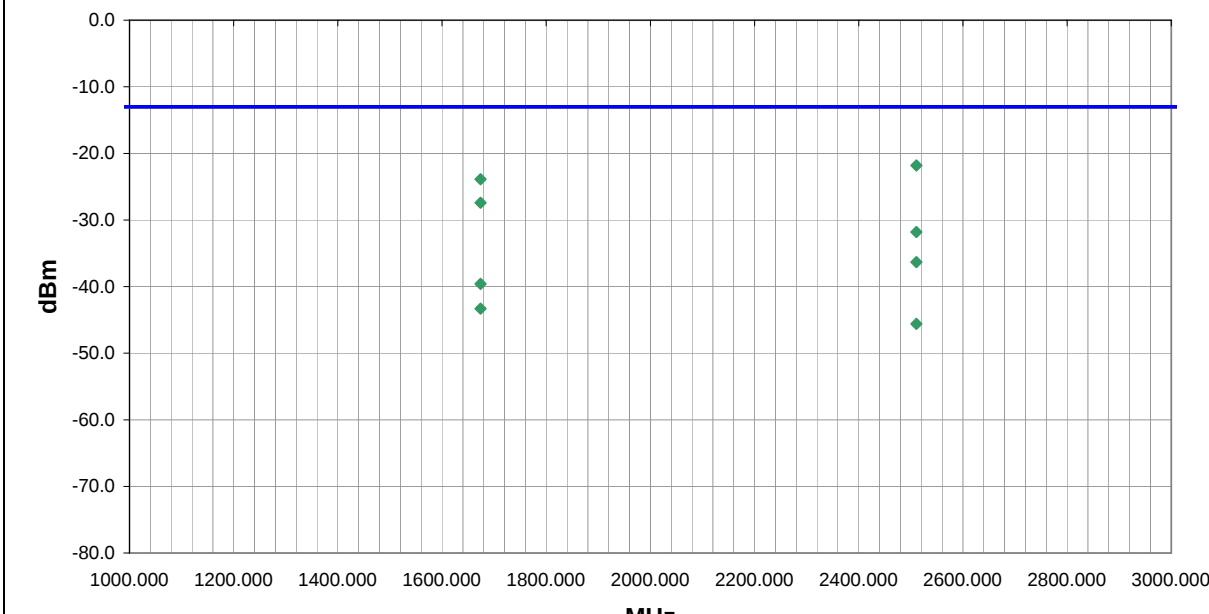
NORTHWEST EMC										Apparent Power Data Sheet										REV d14.13 05/06/2004	
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C										Work Order: ITRM0030											
Serial Number:										Date: 06/28/04											
Customer: Intermec Technologies Corporation										Temperature: 75											
Attendees: none										Humidity: 45%											
Cust. Ref. No.:										Barometric Pressure: 30.16											
Tested by: Holly Ashkannejhad										Power: 120VAC, 60Hz										Job Site: EV01	
TEST SPECIFICATIONS																					
Specification: FCC 22.917(e)										Year: 2003											
Method: TIA/EIA-603										Year: 2001											
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																					
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)																					
EUT OPERATING MODES																					
Transmitting channel 395 CDMA cellular, 802.11b channel 1, Bluetooth channel 5																					
DEVIATIONS FROM TEST STANDARD																					
No deviations.																					
RESULTS																		Run #			
Pass																		34			
Other																					
																		 Tested By:			
																					
Freq (MHz)		Azimuth (degrees)		Height (meters)		Polarity		Detector		EIRP (dBm)		Spec. Limit (dBm)		Compared to Spec. (dB)							
19248.000		361.0		1.0		V-High Horr		PK		-44.8		-13.0		-31.8							
19248.000		-2.0		1.0		H-High Horr		PK		-47.3		-13.0		-34.3							

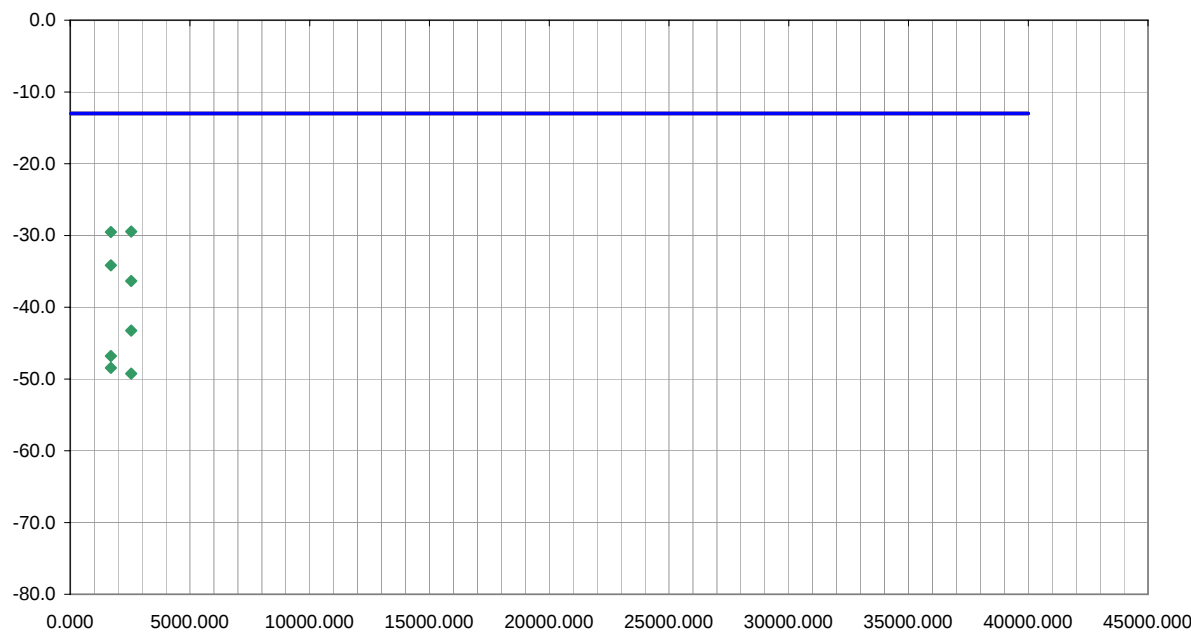
NORTHWEST		REV						
EMC		d14.13						
05/06/2004								
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030						
Serial Number:		Date: 06/28/04						
Customer: Intermec Technologies Corporation		Temperature: 75						
Attendees: none		Humidity: 45%						
Cust. Ref. No.:		Barometric Pressure: 30.16						
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz						
		Job Site: EV01						
TEST SPECIFICATIONS								
Specification: FCC 22.917(e)		Year: 2003						
Method: TIA/EIA-603		Year: 2001						
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								
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)								
EUT OPERATING MODES								
Transmitting channel 395 CDMA cellular, 802.11b channel 1, Bluetooth channel 5								
DEVIATIONS FROM TEST STANDARD								
No deviations.								
RESULTS		Run #						
Pass		35						
Other								
		Holly Ashkannejhad Tested By:						
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
4075.971		172.0	1.2	V-Horn	PK	-44.8	-13.0	-31.8
4075.971		262.0	1.3	H-Horn	PK	-53.1	-13.0	-40.1

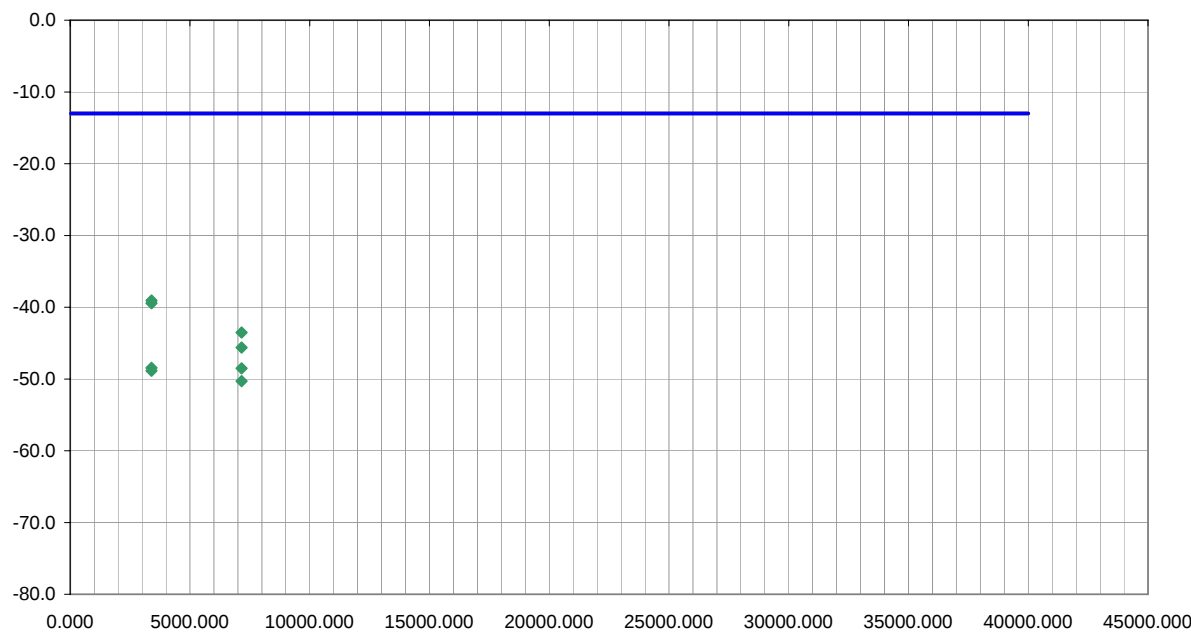
NORTHWEST EMC		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/28/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 55 CDMA cellular, 802.11b channel 11, Bluetooth channel 79											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				37							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
12400.000			217.0	1.3		H-Horn	PK		-34.4	-13.0	-21.4
12400.000			202.0	1.2		V-Horn	PK		-35.7	-13.0	-22.7
4960.016			140.0	1.2		H-Horn	PK		-40.1	-13.0	-27.1
4960.016			179.0	1.2		V-Horn	PK		-40.8	-13.0	-27.8
7440.000			51.0	1.3		H-Horn	PK		-48.1	-13.0	-35.1
4176.016			178.0	1.1		V-Horn	PK		-48.8	-13.0	-35.8
7440.000			212.0	1.2		V-Horn	PK		-49.7	-13.0	-36.7
4176.016			149.0	1.3		H-Horn	PK		-54.7	-13.0	-41.7
4176.016			149.0	1.3		H-Horn	AV		-60.9	-13.0	-47.9
7440.000			51.0	1.3		H-Horn	AV		-61.6	-13.0	-48.6
7440.000			212.0	1.2		V-Horn	AV		-62.6	-13.0	-49.6

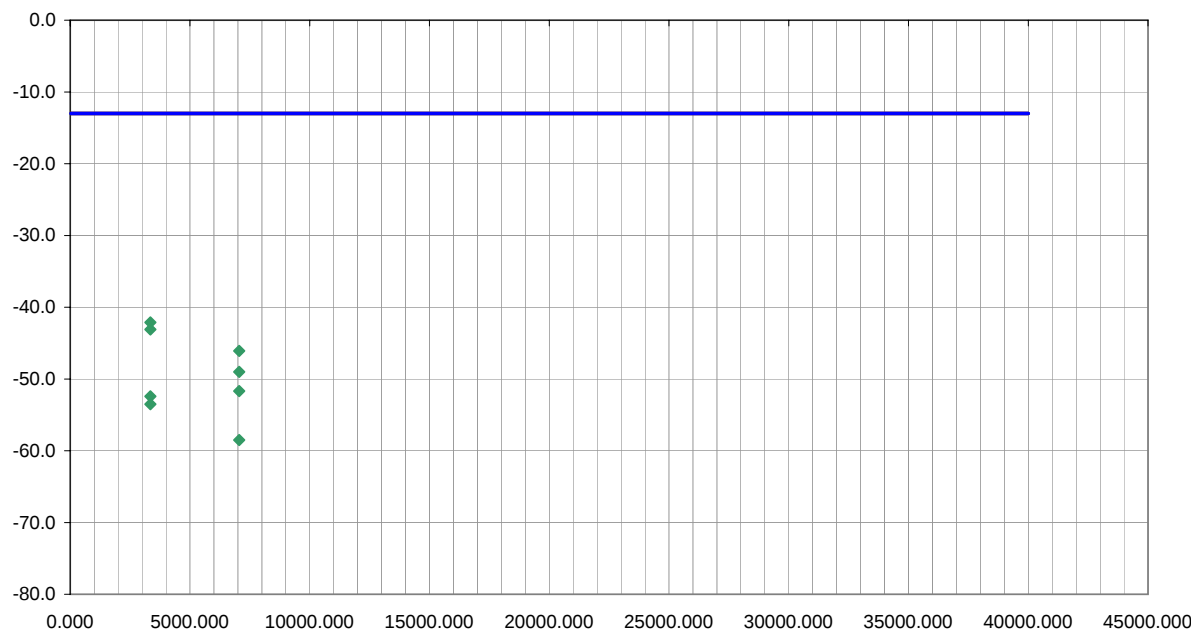
NORTHWEST		Apparent Power Data Sheet		REV d4.13 05/06/2004							
EUT: CDMA in 700C with 802.11(b), Bluetooth in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/29/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
Simultaneous transmission of 6820 printer (Bluetooth) with 700C (CDMA(cellular)/802.11b/Bluetooth)											
EUT OPERATING MODES											
Transmitting channel 467 CDMA cellular, 802.11b channel 1, Bluetooth channel 11											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				38							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
14472.000			17.0	3.2		H-Horn	PK		-39.2	-13.0	-26.2
14472.000			155.0	3.3		V-Horn	PK		-39.8	-13.0	-26.8

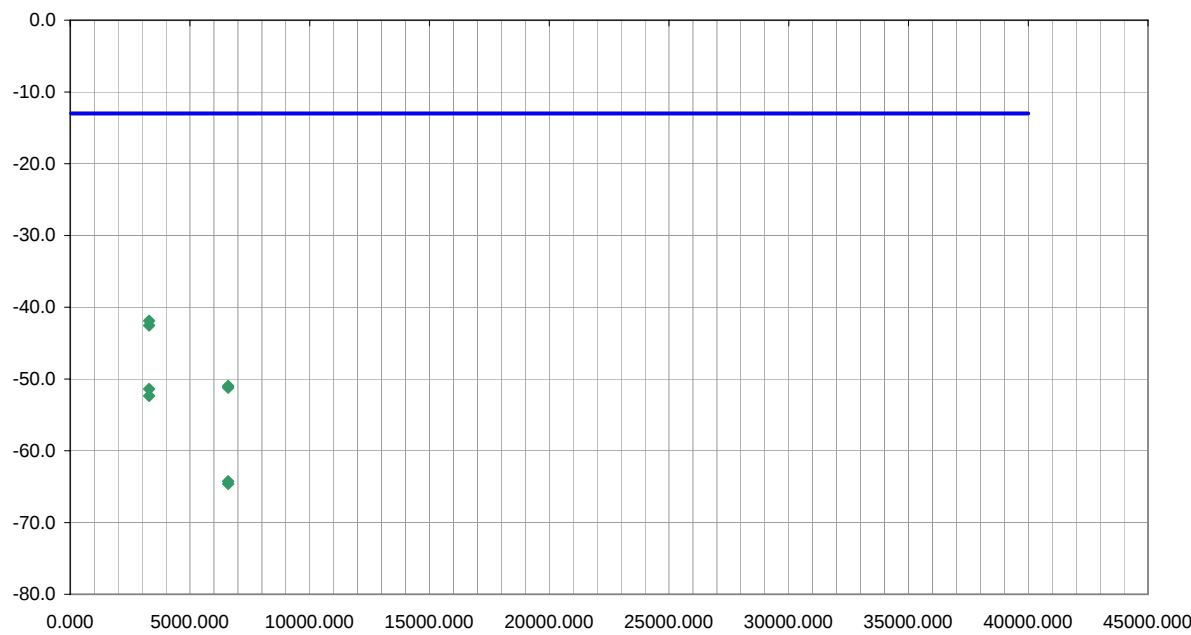
NORTHWEST		Apparent Power Data Sheet		REV dtd.13 05/06/2004								
EUT: CDMA in 700C		Work Order: ITRM0030										
Serial Number:		Date: 06/22/04										
Customer: Intermec Technologies Corporation		Temperature: 75										
Attendees: none		Humidity: 44%										
Cust. Ref. No.:		Barometric Pressure: 29.92										
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01								
TEST SPECIFICATIONS												
Specification: FCC 22.917(e)		Year: 2003										
Method: TIA/EIA-603		Year: 2001										
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												
CDMA radio installed in 700C Handheld Computer												
EUT OPERATING MODES												
Transmitting Low channel; CDMA Cellular Band, Stand-alone												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS				Run #								
Pass				9								
Other				 Tested By:								
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2471.999			199.0	1.3			H-Horn	PK		-21.8	-13.0	-8.8
2471.999			138.0	1.3			V-Horn	PK		-23.8	-13.0	-10.8
1647.890			197.0	1.3			H-Horn	PK		-25.8	-13.0	-12.8
1647.890			316.0	1.8			V-Horn	PK		-29.0	-13.0	-16.0
2471.999			199.0	1.3			H-Horn	AV		-36.2	-13.0	-23.2
1647.890			197.0	1.3			H-Horn	AV		-36.4	-13.0	-23.4
1647.890			316.0	1.8			V-Horn	AV		-40.1	-13.0	-27.1
2471.999			138.0	1.3			V-Horn	AV		-40.4	-13.0	-27.4

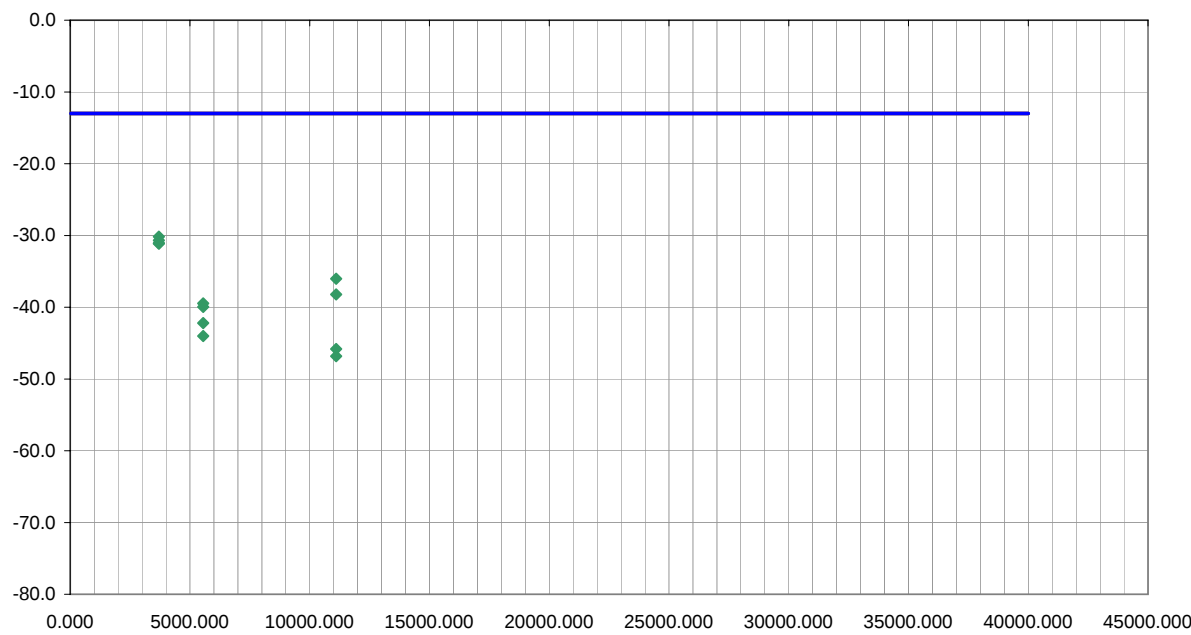
NORTHWEST EMC		Apparent Power Data Sheet		REV d4.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 77									
Attendees: none		Humidity: 44%									
Cust. Ref. No.:		Barometric Pressure: 29.92									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer											
EUT OPERATING MODES											
Transmitting Mid channel; CDMA Cellular Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				10							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2510.700			57.0	1.3		H-Horn	PK		-21.8	-13.0	-8.8
1673.883			60.0	1.4		H-Horn	PK		-23.9	-13.0	-10.9
1673.883			321.0	1.2		V-Horn	PK		-27.4	-13.0	-14.4
2510.700			265.0	1.2		V-Horn	PK		-31.8	-13.0	-18.8
2510.700			57.0	1.3		H-Horn	AV		-36.3	-13.0	-23.3
1673.883			60.0	1.4		H-Horn	AV		-39.6	-13.0	-26.6
1673.883			321.0	1.2		V-Horn	AV		-43.3	-13.0	-30.3
2510.700			265.0	1.2		V-Horn	AV		-45.6	-13.0	-32.6

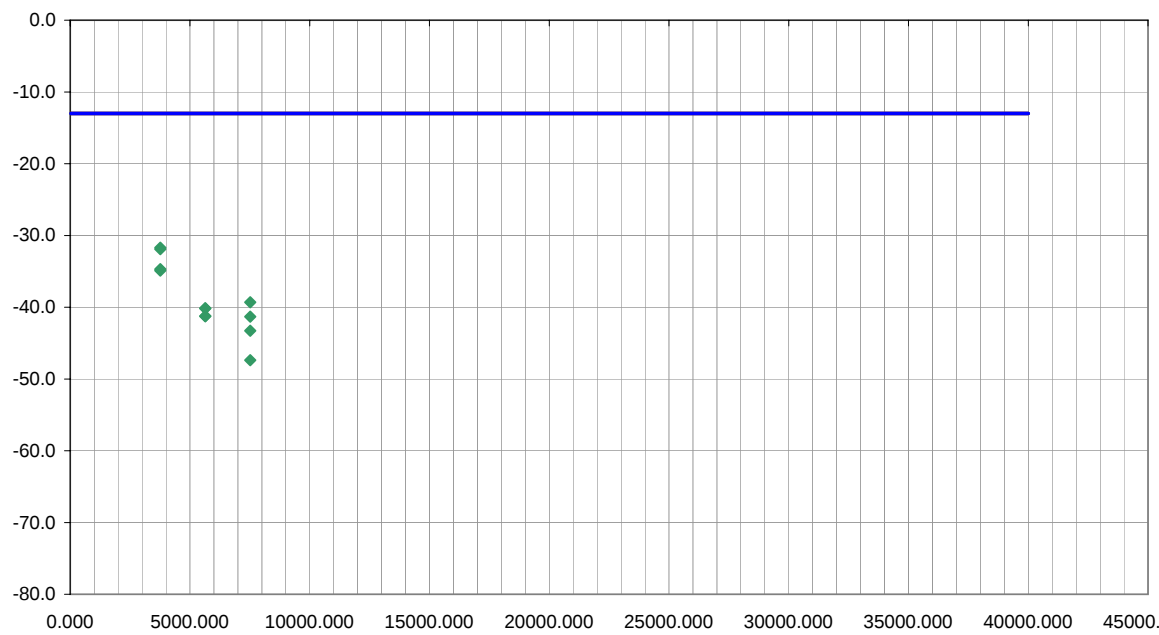
NORTHWEST EMC		Apparent Power Data Sheet		REV d4.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 77									
Attendees: none		Humidity: 44%									
Cust. Ref. No.:		Barometric Pressure: 29.92									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer											
EUT OPERATING MODES											
Transmitting High channel; CDMA Cellular Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				11							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2546.840			18.0	1.4		H-Horn	PK		-29.5	-13.0	-16.5
1697.960			18.0	1.4		H-Horn	PK		-29.5	-13.0	-16.5
1697.960			323.0	1.3		V-Horn	PK		-34.2	-13.0	-21.2
2546.840			171.0	1.2		V-Horn	PK		-36.4	-13.0	-23.4
2546.840			18.0	1.4		H-Horn	AV		-43.3	-13.0	-30.3
1697.960			18.0	1.4		H-Horn	AV		-46.8	-13.0	-33.8
1697.960			323.0	1.3		V-Horn	AV		-48.5	-13.0	-35.5
2546.840			171.0	1.2		V-Horn	AV		-49.3	-13.0	-36.3

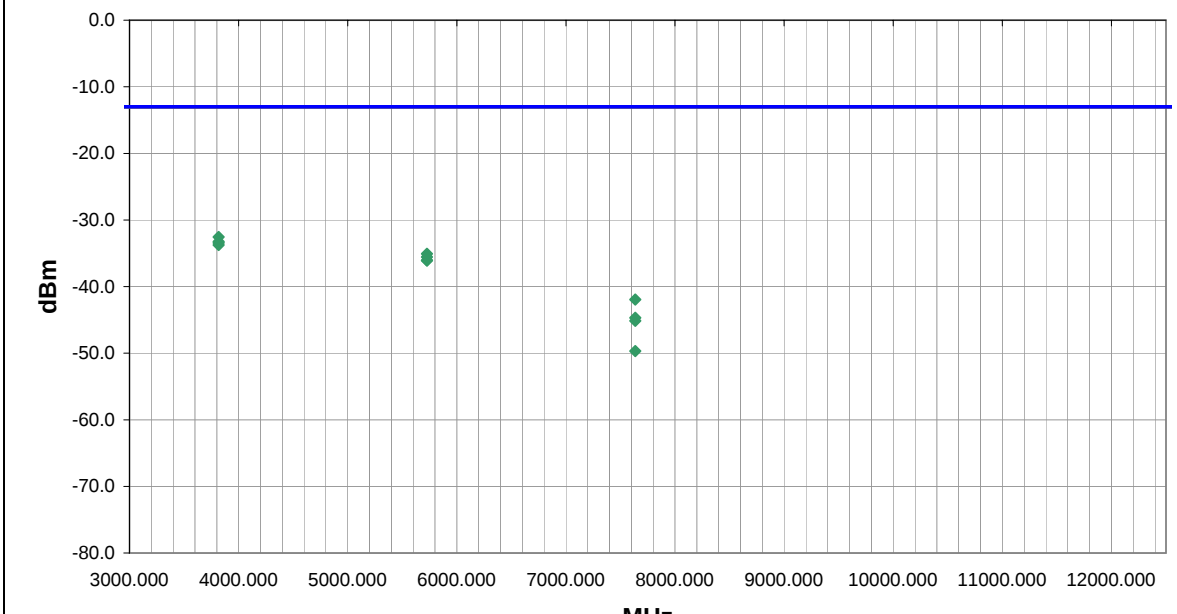
NORTHWEST EMC		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting High channel; CDMA Cellular Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				12							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3395.879			118.0	1.3		H-Horn	PK		-39.1	-13.0	-26.1
3395.879			79.0	1.4		V-Horn	PK		-39.5	-13.0	-26.5
7151.742			214.0	1.2		H-Horn	PK		-43.5	-13.0	-30.5
7151.742			264.0	1.4		V-Horn	PK		-45.6	-13.0	-32.6
3395.879			79.0	1.4		V-Horn	AV		-48.5	-13.0	-35.5
7151.742			214.0	1.2		H-Horn	AV		-48.5	-13.0	-35.5
3395.879			118.0	1.3		V-Horn	AV		-48.9	-13.0	-35.9
7151.742			264.0	1.4		V-Horn	AV		-50.3	-13.0	-37.3

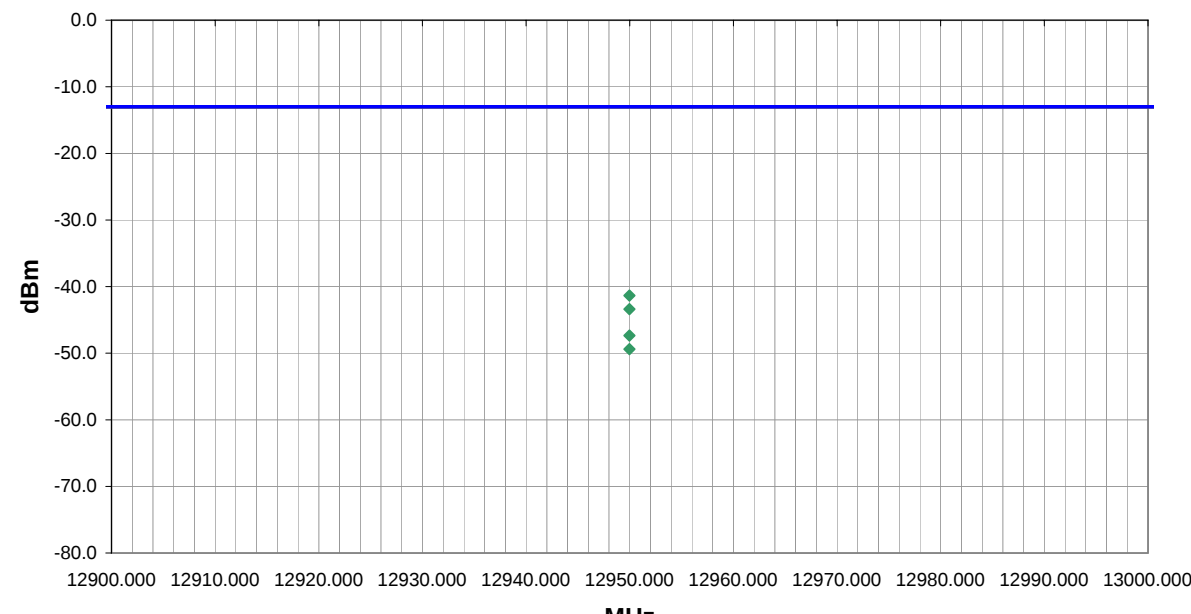
NORTHWEST EMC		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting Mid channel; CDMA Cellular Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				13							
Other				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3347.760			153.0	1.3		H-Horn	PK		-42.1	-13.0	-29.1
3347.760			77.0	1.2		V-Horn	PK		-43.1	-13.0	-30.1
7055.510			195.0	1.3		H-Horn	PK		-46.1	-13.0	-33.1
7055.510			17.0	1.2		V-Horn	PK		-49.0	-13.0	-36.0
7055.510			195.0	1.3		H-Horn	AV		-51.7	-13.0	-38.7
3347.760			153.0	1.3		H-Horn	AV		-52.4	-13.0	-39.4
3347.760			77.0	1.2		V-Horn	AV		-53.5	-13.0	-40.5
7055.510			17.0	1.2		V-Horn	AV		-58.5	-13.0	-45.5

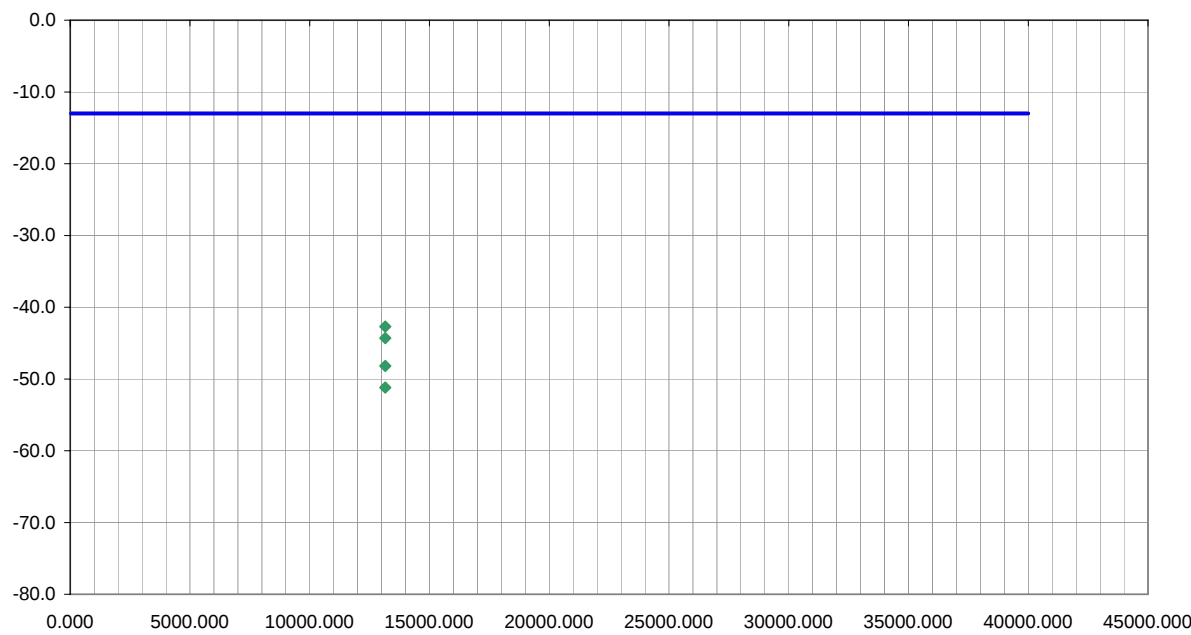
NORTHWEST EMC		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 22.917(e)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting Low channel; CDMA Cellular Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Evaluation				14							
Other				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3296.220			149.0	1.3		H-Horn	PK		-41.9	-13.0	-28.9
3296.220			84.0	1.2		V-Horn	PK		-42.5	-13.0	-29.5
6592.344			186.0	1.3		H-Horn	PK		-51.0	-13.0	-38.0
6592.344			235.0	1.2		V-Horn	PK		-51.2	-13.0	-38.2
3296.220			149.0	1.3		H-Horn	AV		-51.4	-13.0	-38.4
3296.220			84.0	1.2		V-Horn	AV		-52.3	-13.0	-39.3
6592.344			186.0	1.3		H-Horn	AV		-64.3	-13.0	-51.3
6592.344			235.0	1.2		V-Horn	AV		-64.6	-13.0	-51.6

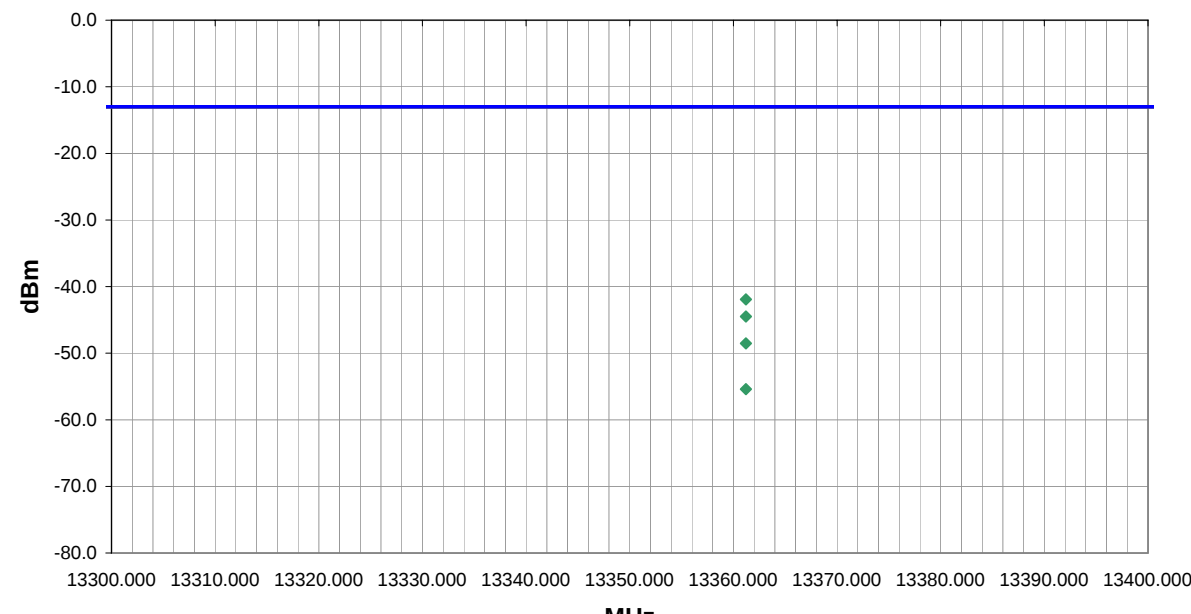
NORTHWEST EMC		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting Low channel; CDMA PCS Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				15							
Other				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3699.960			102.0	1.1		H-Horn	PK		-30.2	-13.0	-17.2
3699.960			102.0	1.1		H-Horn	AV		-30.7	-13.0	-17.7
3699.960			174.0	1.1		V-Horn	PK		-31.0	-13.0	-18.0
3699.960			174.0	1.1		V-Horn	AV		-31.1	-13.0	-18.1
11099.990			299.0	1.3		H-Horn	PK		-36.0	-13.0	-23.0
11099.990			287.0	1.2		V-Horn	PK		-38.2	-13.0	-25.2
5549.988			80.0	1.2		V-Horn	PK		-39.5	-13.0	-26.5
5549.988			80.0	1.2		V-Horn	AV		-40.0	-13.0	-27.0
5549.988			358.0	1.3		H-Horn	PK		-42.2	-13.0	-29.2
5549.988			358.0	1.3		H-Horn	AV		-44.0	-13.0	-31.0
11099.990			287.0	1.2		V-Horn	AV		-45.8	-13.0	-32.8
11099.990			299.0	1.3		H-Horn	AV		-46.8	-13.0	-33.8

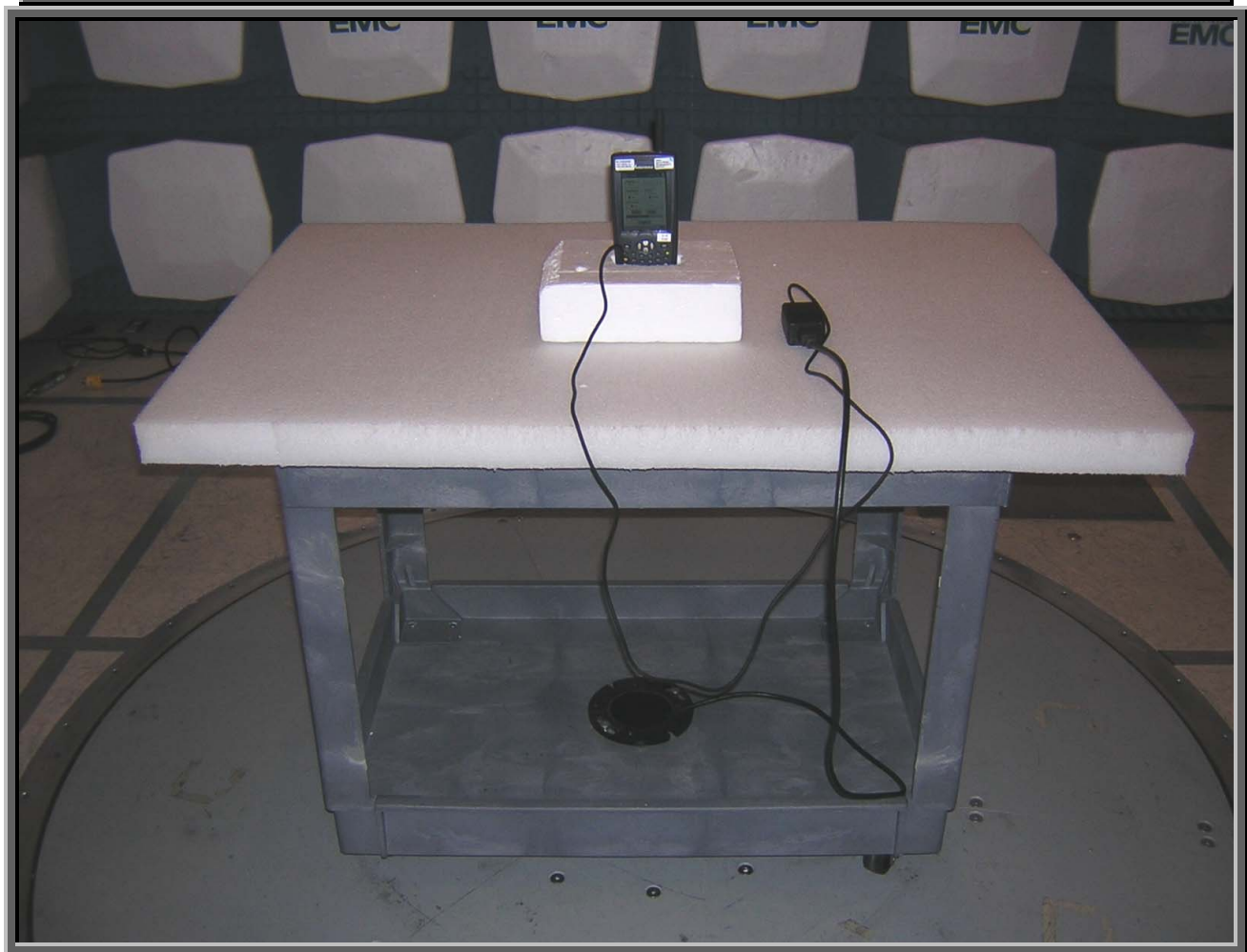
NORTHWEST		Apparent Power Data Sheet		REV dtd.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/23/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting Mid channel; CDMA PCS Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				16							
Other				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3758.294			81.0	1.1		H-Horn	PK		-31.7	-13.0	-18.7
3758.294			81.0	1.1		H-Horn	AV		-31.9	-13.0	-18.9
3758.294			48.0	1.2		V-Horn	PK		-34.7	-13.0	-21.7
3758.294			48.0	1.2		V-Horn	AV		-34.9	-13.0	-21.9
7516.591			213.0	1.2		H-Horn	PK		-39.3	-13.0	-26.3
5637.441			229.0	1.2		H-Horn	PK		-40.1	-13.0	-27.1
5637.441			69.0	1.3		V-Horn	PK		-40.2	-13.0	-27.2
5637.441			229.0	1.2		H-Horn	AV		-41.2	-13.0	-28.2
5637.441			69.0	1.3		V-Horn	AV		-41.3	-13.0	-28.3
7516.591			213.0	1.2		H-Horn	AV		-41.3	-13.0	-28.3
7516.591			270.0	1.2		V-Horn	PK		-43.3	-13.0	-30.3
7516.591			270.0	1.2		V-Horn	AV		-47.4	-13.0	-34.4

NORTHWEST		Apparent Power Data Sheet		REV d4.13 05/06/2004							
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/24/04									
Customer: Intermec Technologies Corporation		Temperature: 76									
Attendees: none		Humidity: 37%									
Cust. Ref. No.:		Barometric Pressure: 29.81									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting High channel; CDMA PCS Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS				Run #							
Pass				17							
Other											
				 Tested By:							
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3817.496			189.0	1.2		H-Horn	PK		-32.5	-13.0	-19.5
3817.496			73.0	1.4		V-Horn	PK		-33.3	-13.0	-20.3
3817.496			189.0	1.2		H-Horn	AV		-33.4	-13.0	-20.4
3817.496			73.0	1.4		V-Horn	AV		-33.8	-13.0	-20.8
5726.300			189.0	1.3		H-Horn	PK		-35.1	-13.0	-22.1
5726.300			269.0	1.2		V-Horn	PK		-35.6	-13.0	-22.6
5726.300			269.0	1.2		V-Horn	AV		-36.1	-13.0	-23.1
5726.300			189.0	1.3		H-Horn	AV		-36.1	-13.0	-23.1
7634.996			219.0	1.3		H-Horn	PK		-41.9	-13.0	-28.9
7634.996			261.0	1.3		V-Horn	PK		-44.7	-13.0	-31.7
7634.996			219.0	1.3		H-Horn	AV		-45.1	-13.0	-32.1
7634.996			261.0	1.3		V-Horn	AV		-49.7	-13.0	-36.7

NORTHWEST EMC		Apparent Power Data Sheet				REV d4.13 05/06/2004					
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/25/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting Low channel; CDMA PCS Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						18					
Other											
						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
12949.970			97.0	2.0		H-Horn	PK		-41.4	-13.0	-28.4
12949.970			275.0	1.2		V-Horn	PK		-43.4	-13.0	-30.4
12949.970			97.0	2.0		H-Horn	AV		-47.4	-13.0	-34.4
12949.970			275.0	1.2		V-Horn	AV		-49.4	-13.0	-36.4

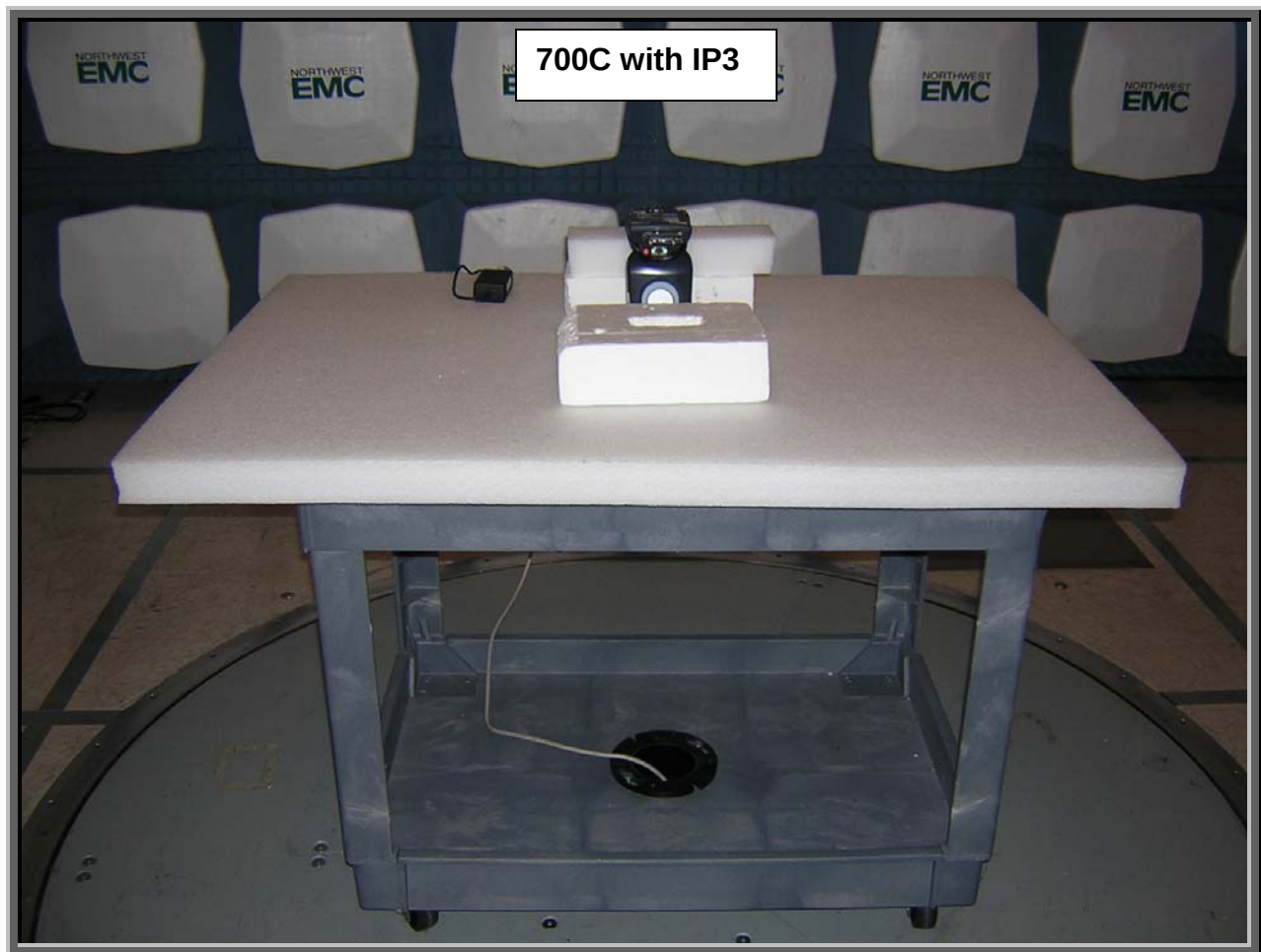
NORTHWEST EMC										REV d14.13 05/06/2004		
Apparent Power Data Sheet												
EUT: CDMA in 700C					Work Order: ITRM0030							
Serial Number:					Date: 06/25/04							
Customer: Intermec Technologies Corporation					Temperature: 75							
Attendees: none					Humidity: 45%							
Cust. Ref. No.:					Barometric Pressure: 30.16							
Tested by: Holly Ashkannejhad				Power: 120VAC, 60Hz		Job Site: EV01						
TEST SPECIFICATIONS												
Specification: FCC 24.238(a)					Year: 2003							
Method: TIA/EIA-603					Year: 2001							
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												
CDMA radio installed in 700C Handheld Computer.												
EUT OPERATING MODES												
Transmitting Mid channel; CDMA PCS Band, Stand-alone												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
RESULTS												
Pass								Run #				
								19				
Other												
 Tested By:												
												
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	
13154.010			129.0	1.3			H-Horn	PK	-42.7	-13.0	-29.7	
13154.010			102.0	1.2			V-Horn	PK	-44.3	-13.0	-31.3	
13154.010			129.0	1.3			H-Horn	AV	-48.2	-13.0	-35.2	
13154.010			102.0	1.2			V-Horn	AV	-51.2	-13.0	-38.2	

NORTHWEST EMC		Apparent Power Data Sheet				REV d4.13 05/06/2004					
EUT: CDMA in 700C		Work Order: ITRM0030									
Serial Number:		Date: 06/25/04									
Customer: Intermec Technologies Corporation		Temperature: 75									
Attendees: none		Humidity: 45%									
Cust. Ref. No.:		Barometric Pressure: 30.16									
Tested by: Holly Ashkannejhad		Power: 120VAC, 60Hz		Job Site: EV01							
TEST SPECIFICATIONS											
Specification: FCC 24.238(a)		Year: 2003									
Method: TIA/EIA-603		Year: 2001									
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											
CDMA radio installed in 700C Handheld Computer.											
EUT OPERATING MODES											
Transmitting High channel; CDMA PCS Band, Stand-alone											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
RESULTS						Run #					
Pass						20					
Other						 Tested By:					
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
13361.210			133.0	1.2		H-Horn	PK		-41.9	-13.0	-28.9
13361.210			103.0	1.2		V-Horn	PK		-44.5	-13.0	-31.5
13361.210			133.0	1.2		H-Horn	AV		-48.5	-13.0	-35.5
13361.210			103.0	1.2		V-Horn	AV		-55.4	-13.0	-42.4

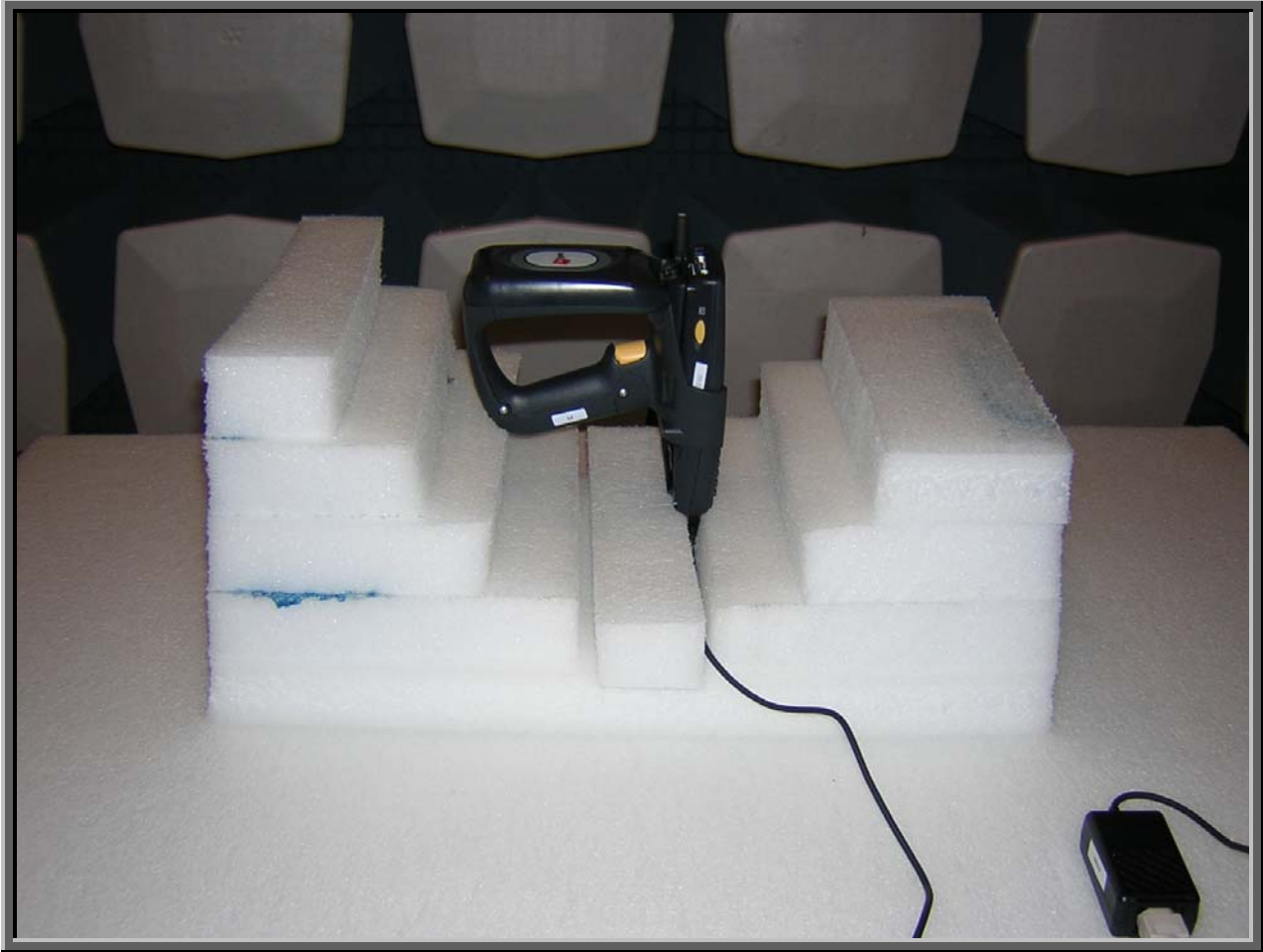














Intermec 6820 Printer with 700C



Intermec 6820 with 730 Photos



