

Datalogic Scanning, Inc.

PowerScan RF – Base Station 915Mhz

June 28, 2007

Report No. PSCI0210.1 Rev. 1

Report Prepared By



www.nwemc.com
1-888-EMI-CERT

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Issue Date: June 28, 2007

Datalogic Scanning, Inc.

Model: PowerScan RF - Base Station 915 Mhz

Emissions				
Test Description	Specification	Test Method	Pass	Fail
AC Powerline Conducted Emissions	FCC 15.207:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AC Powerline Conducted Emissions	FCC 15.107:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Field Strength of Fundamental	FCC 15.249:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Field Strength of Harmonics & Spurious Emissions	FCC 15.249:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Receiver Spurious Emissions	FCC 15.109:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Modifications made to the product

See the Modifications section of this report

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada.

Approved By:

Don Facteau, IS Manager

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested, the specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision Number	Description	Date	Page Number
01	Changed the approver of the report to Don	8-2-07	2

FCC: Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



NVLAP: Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 89/336/EEC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0
NVLAP LAB CODE 200761-0

Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



CAB: Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



TÜV Product Service: Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0604C.



TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.



NEMKO: Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



Australia/New Zealand: The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294*).



BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.



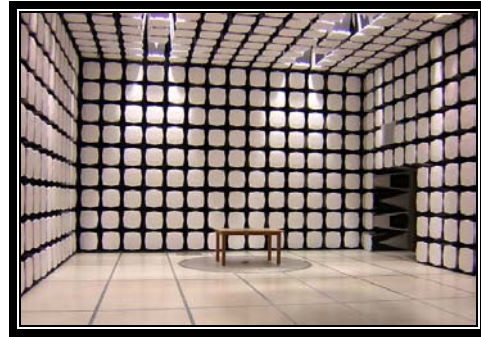
GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



SCOPE

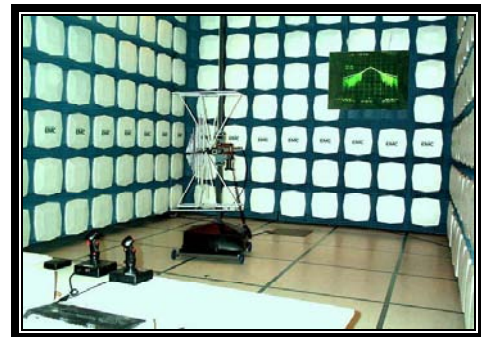
For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/scope.asp>



**California – Orange County Facility
Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility
Labs EV01 – EV11**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826



**Washington – Sultan Facility
Labs SU01 – SU07**

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

Company Name:	Datalogic Scanning, Inc.
Address:	959 Terry Street
City, State, Zip:	Eugene, OR 97402-9120
Test Requested By:	Ken Wyman
Model:	PowerScan RF - Base Station 915Mhz
First Date of Test:	June 7, 2007
Last Date of Test:	June 13, 2007
Receipt Date of Samples:	June 7, 2007
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):

The PowerScan RF handheld/base station laser scanner reads bar codes in rugged industrial applications. The handheld scanner reads barcode labels and transmits to the base station. The base station acknowledges and transmits back to the handheld scanner. It operates using FSK modulation in a half duplex configuration.

Testing Objective:

These tests were selected to demonstrate compliance of the PowerScan RF base station to FCC 15.249 requirements. The EUT had been previously tested to FCC regulations (FCC ID: 09NPWRSCAN-BS, 09NPWRSCAN-HH). However, the transceiver became obsolete, so testing is required using a new transceiver.

EUT Photo



CONFIGURATION 1 PSCI0210

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Base station	DLS.	PowerScan RF - Base station 915 Mhz	BS085314

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	Ault Inc.	4004-0705	Unknown

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC	No	1.7m	No	AC Adapter	EUT - Base station
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 PSCI0210

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Base station	DLS	PowerScan RF - Base station 915 Mhz	BS085314

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	DLS.	4004-0800	Unknown

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC	No	1.7m	No	AC Adapter	EUT - Base station
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 6 PSCI0210

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Base station	DLS.	PowerScan RF - Base station 915 Mhz	BS085314

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
California AC Adaptor	DLS.	4004-0839 (SA06-15S08R-V)	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power	No	1.7m	Yes	California AC Adaptor	EUT - Base station
AC Power	No	1.7m	No	California AC Adaptor	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	6/7/2007	Field Strength of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	6/10/2007	Field Strength of Harmonics and Spurious Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	6/11/2007	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	6/12/2007	Spurious Radiated Emissions-Receive Mode	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Base Station Receive mode, Low channel.
 Base Station Receive mode, Mid channel.
 Base Station Receive mode, High channel.
 Base Station transmitting, High channel, 19.2kHz Modulation.
 Base Station transmitting, Mid channel, 19.2kHz Modulation.
 Base Station transmitting, Low channel, 19.2kHz Modulation.

POWER SETTINGS INVESTIGATED

120VAC/60Hz

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwartz	ESCI	ARG	12/7/2006	13
High Pass Filter	TTE	H97-100K-50-720B	HFX	8/22/2006	13
Attenuator	Tektronix	011-0059-02	ATC	12/27/2006	13
EV07 cable d			EVG	4/17/2007	13
LISN	Solar	9252-50-R-24-BNC	LIQ	12/20/2006	13

MEASUREMENT BANDWIDTHS

Frequency Range	Peak Data	Quasi-Peak Data	Average Data
(MHz)	(kHz)	(kHz)	(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


Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

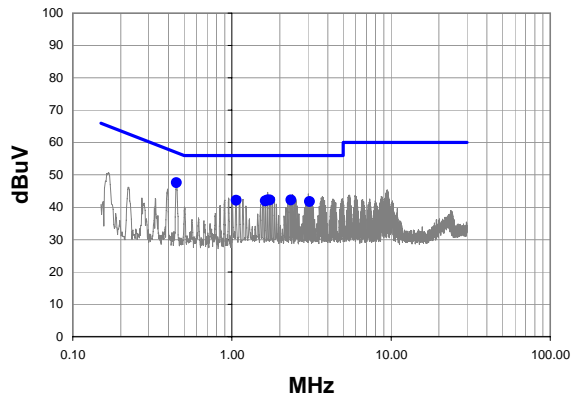
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

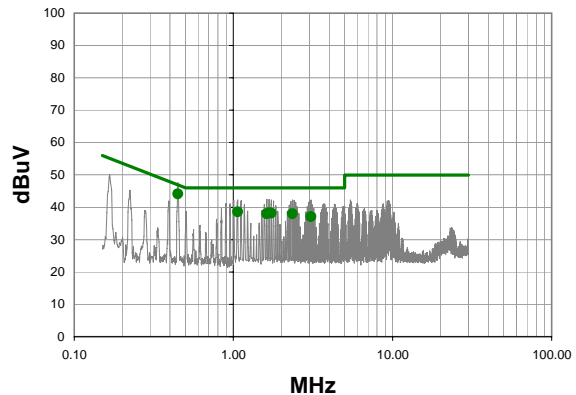
Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, Low channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	12	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

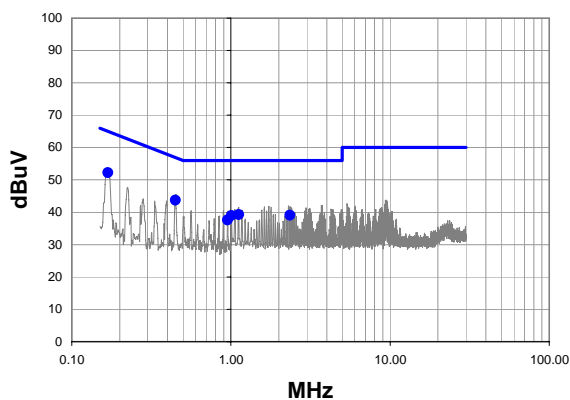
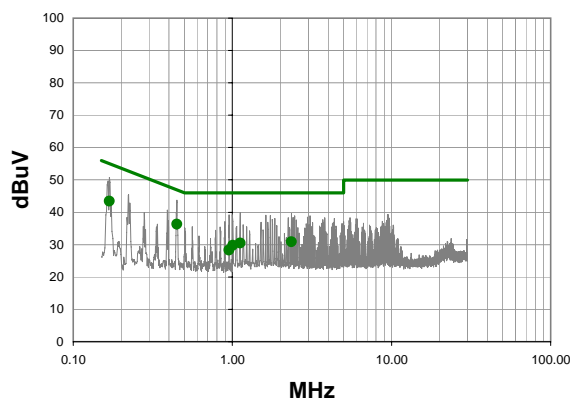
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	26.7	0.8	47.5	56.9	-9.4
1.680	21.7	0.5	42.2	56.0	-13.8
1.736	21.7	0.5	42.2	56.0	-13.8
2.352	21.7	0.5	42.2	56.0	-13.8
1.064	21.6	0.5	42.1	56.0	-13.9
1.624	21.4	0.5	41.9	56.0	-14.1
3.080	21.2	0.5	41.7	56.0	-14.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	23.3	0.8	44.1	46.9	-2.8
1.064	18.1	0.5	38.6	46.0	-7.4
1.680	17.8	0.5	38.3	46.0	-7.7
1.736	17.7	0.5	38.2	46.0	-7.8
1.624	17.5	0.5	38.0	46.0	-8.0
2.352	17.5	0.5	38.0	46.0	-8.0
3.080	16.6	0.5	37.1	46.0	-8.9

EMC**AC POWERLINE CONDUCTED EMISSIONS**


Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, Low channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	13	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit**Average Data - vs - Average Limit****Quasi Peak Data - vs - Quasi Peak Limit**

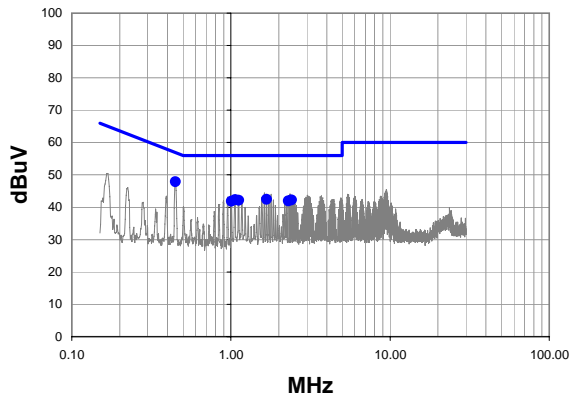
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.169	30.6	1.6	52.2	65.0	-12.8
0.448	22.9	0.8	43.7	56.9	-13.2
1.120	18.8	0.5	39.3	56.0	-16.7
2.352	18.6	0.5	39.1	56.0	-16.9
1.008	18.5	0.5	39.0	56.0	-17.0
0.954	17.1	0.5	37.6	56.0	-18.4

Average Data - vs - Average Limit

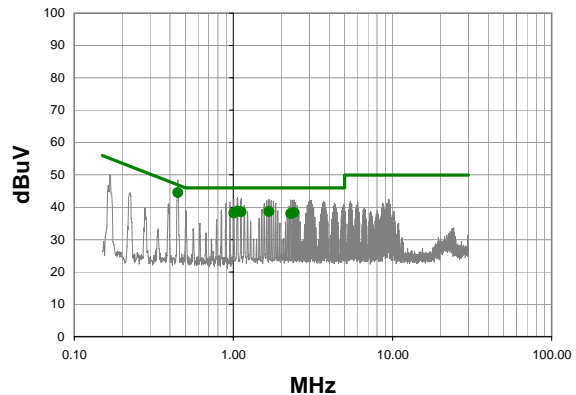
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	15.5	0.8	36.3	46.9	-10.6
0.169	21.8	1.6	43.4	55.0	-11.6
2.352	10.4	0.5	30.9	46.0	-15.1
1.120	10.0	0.5	30.5	46.0	-15.5
1.008	9.3	0.5	29.8	46.0	-16.2
0.954	7.8	0.5	28.3	46.0	-17.7

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, Mid channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	14	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

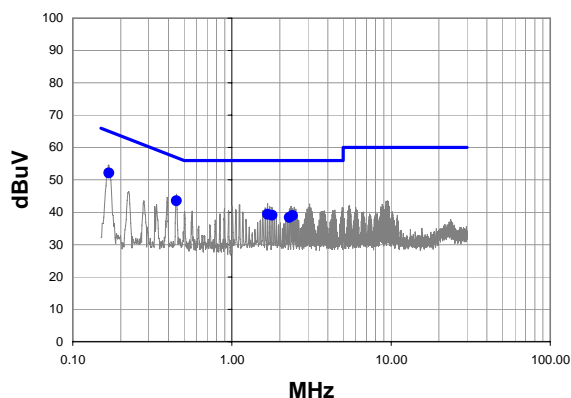
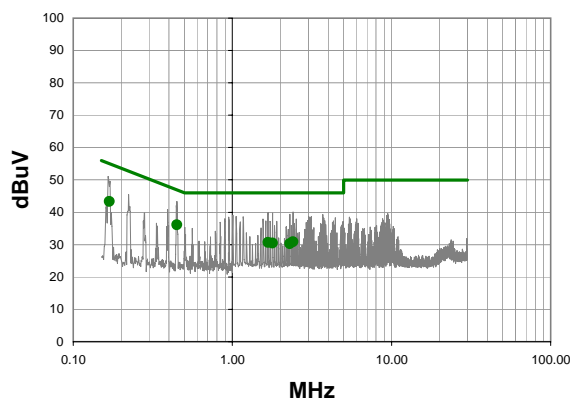
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	27.0	0.8	47.8	56.9	-9.1
1.680	21.9	0.5	42.4	56.0	-13.6
1.064	21.8	0.5	42.3	56.0	-13.7
2.408	21.7	0.5	42.2	56.0	-13.8
1.120	21.6	0.5	42.1	56.0	-13.9
2.296	21.4	0.5	41.9	56.0	-14.1
1.008	21.3	0.5	41.8	56.0	-14.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	23.7	0.8	44.5	46.9	-2.4
1.064	18.3	0.5	38.8	46.0	-7.2
1.680	18.2	0.5	38.7	46.0	-7.3
1.120	18.1	0.5	38.6	46.0	-7.4
2.408	17.9	0.5	38.4	46.0	-7.6
1.008	17.7	0.5	38.2	46.0	-7.8
2.296	17.5	0.5	38.0	46.0	-8.0

EMC**AC POWERLINE CONDUCTED EMISSIONS**


Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, Mid channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	15	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit**Average Data - vs - Average Limit****Quasi Peak Data - vs - Quasi Peak Limit**

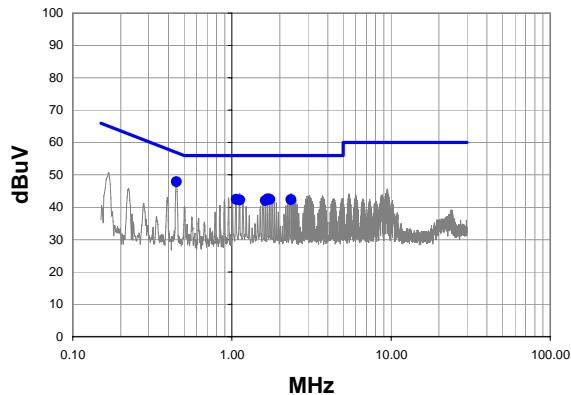
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.169	30.5	1.6	52.1	65.0	-12.9
0.449	22.7	0.8	43.5	56.9	-13.3
1.680	18.9	0.5	39.4	56.0	-16.6
1.792	18.6	0.5	39.1	56.0	-16.9
2.408	18.5	0.5	39.0	56.0	-17.0
2.296	17.9	0.5	38.4	56.0	-17.6

Average Data - vs - Average Limit

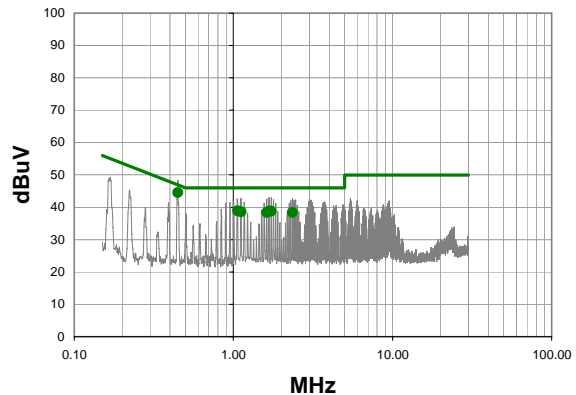
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.449	15.3	0.8	36.1	46.9	-10.7
0.169	21.7	1.6	43.3	55.0	-11.7
2.408	10.4	0.5	30.9	46.0	-15.1
1.680	10.2	0.5	30.7	46.0	-15.3
1.792	10.0	0.5	30.5	46.0	-15.5
2.296	9.8	0.5	30.3	46.0	-15.7

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, High channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	16	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

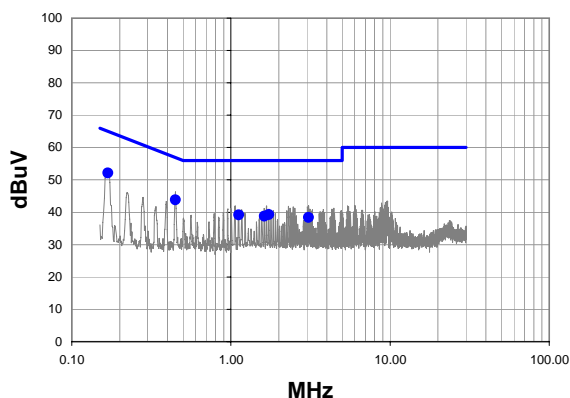
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	27.0	0.8	47.8	56.9	-9.1
1.680	22.0	0.5	42.5	56.0	-13.5
1.064	21.9	0.5	42.4	56.0	-13.6
1.736	21.9	0.5	42.4	56.0	-13.6
2.352	21.8	0.5	42.3	56.0	-13.7
1.120	21.7	0.5	42.2	56.0	-13.8
1.624	21.5	0.5	42.0	56.0	-14.0

Average Data - vs - Average Limit

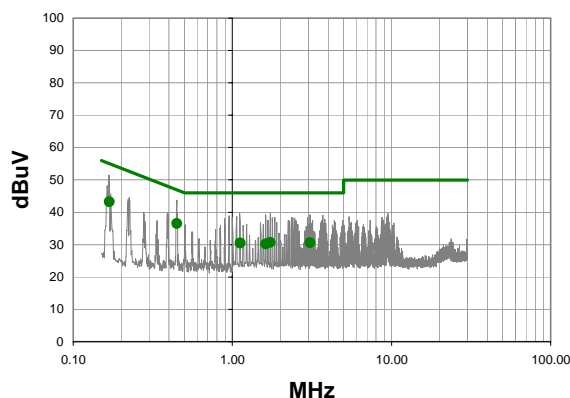
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	23.7	0.8	44.5	46.9	-2.4
1.064	18.4	0.5	38.9	46.0	-7.1
1.680	18.3	0.5	38.8	46.0	-7.2
1.736	18.3	0.5	38.8	46.0	-7.2
1.120	18.1	0.5	38.6	46.0	-7.4
1.624	17.9	0.5	38.4	46.0	-7.6
2.352	17.9	0.5	38.4	46.0	-7.6

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station transmitting, High channel, 19.2kHz Modulation.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.207:2006			Test Method ANSI C63.4:2003				
Run #	17	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

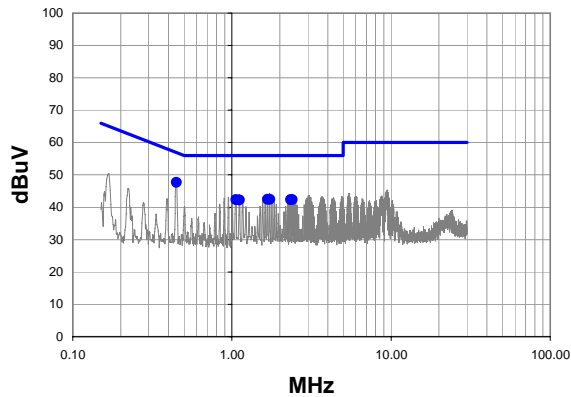
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.169	30.5	1.6	52.1	65.0	-12.9
0.448	23.0	0.8	43.8	56.9	-13.1
1.736	18.8	0.5	39.3	56.0	-16.7
1.120	18.7	0.5	39.2	56.0	-16.8
1.624	18.3	0.5	38.8	56.0	-17.2
3.080	17.9	0.5	38.4	56.0	-17.6

Average Data - vs - Average Limit

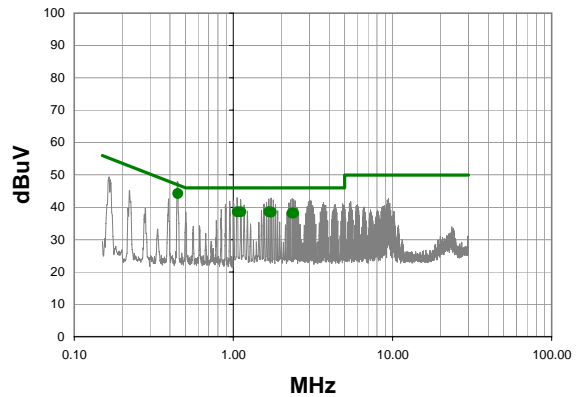
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	15.7	0.8	36.5	46.9	-10.4
0.169	21.6	1.6	43.2	55.0	-11.8
1.736	10.2	0.5	30.7	46.0	-15.3
3.080	10.1	0.5	30.6	46.0	-15.4
1.120	10.0	0.5	30.5	46.0	-15.5
1.624	9.7	0.5	30.2	46.0	-15.8

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station Receive mode, High channel.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003			
Run #	18	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

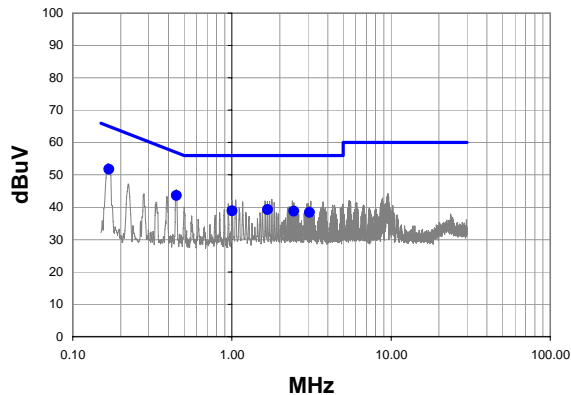
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	26.8	0.8	47.6	56.9	-9.3
1.676	21.9	0.5	42.4	56.0	-13.6
1.732	21.9	0.5	42.4	56.0	-13.6
1.060	21.8	0.5	42.3	56.0	-13.7
2.344	21.8	0.5	42.3	56.0	-13.7
2.400	21.8	0.5	42.3	56.0	-13.7
1.116	21.7	0.5	42.2	56.0	-13.8

Average Data - vs - Average Limit

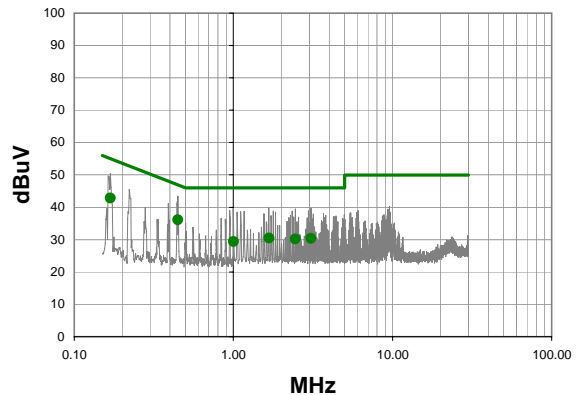
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	23.4	0.8	44.2	46.9	-2.7
1.060	18.1	0.5	38.6	46.0	-7.4
1.116	18.1	0.5	38.6	46.0	-7.4
1.676	18.1	0.5	38.6	46.0	-7.4
1.732	18.0	0.5	38.5	46.0	-7.5
2.344	17.7	0.5	38.2	46.0	-7.8
2.400	17.7	0.5	38.2	46.0	-7.8

Work Order:	PSCI0210	Date:	06/11/07		
Project:	None	Temperature:	22° C		
Job Site:	EV07	Humidity:	36		
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas	
EUT:	PowerScan RF - Base Station 915 Mhz				
Configuration:	6 - AC Conducted 4004-0839				
Customer:	Datalogic Scanning, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Base Station Receive mode, High channel.				
Deviations:	No deviations.				
Comments:	4004-0839 California power supply.				
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003	
Run #	19	Line:	Neutral	Ext. Attenuation: 20	Results Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

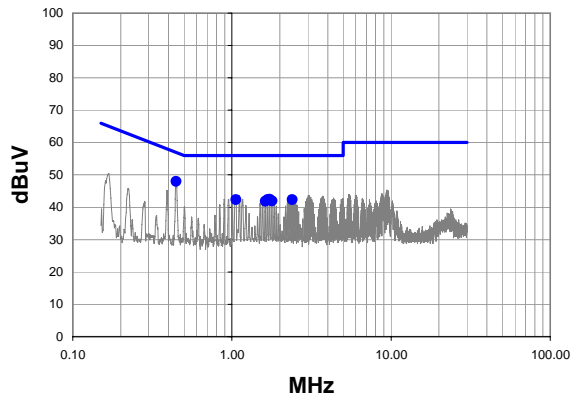
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	22.8	0.8	43.6	56.9	-13.3
0.169	30.1	1.6	51.7	65.0	-13.3
1.676	18.8	0.5	39.3	56.0	-16.7
1.004	18.4	0.5	38.9	56.0	-17.1
2.456	18.3	0.5	38.8	56.0	-17.2
3.072	17.9	0.5	38.4	56.0	-17.6

Average Data - vs - Average Limit

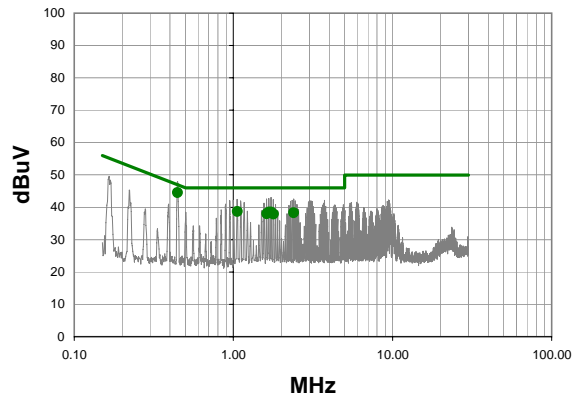
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.448	15.3	0.8	36.1	46.9	-10.8
0.169	21.2	1.6	42.8	55.0	-12.2
1.676	10.0	0.5	30.5	46.0	-15.5
3.072	9.9	0.5	30.4	46.0	-15.6
2.456	9.7	0.5	30.2	46.0	-15.8
1.004	8.9	0.5	29.4	46.0	-16.6

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station Receive mode, Mid channel.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003			
Run #	20	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

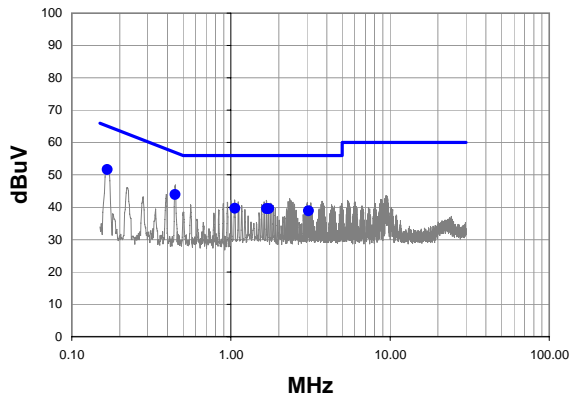
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	27.1	0.8	47.9	56.9	-9.0
1.732	21.9	0.5	42.4	56.0	-13.6
1.060	21.8	0.5	42.3	56.0	-13.7
1.676	21.8	0.5	42.3	56.0	-13.7
2.400	21.8	0.5	42.3	56.0	-13.7
1.788	21.4	0.5	41.9	56.0	-14.1
1.620	21.3	0.5	41.8	56.0	-14.2

Average Data - vs - Average Limit

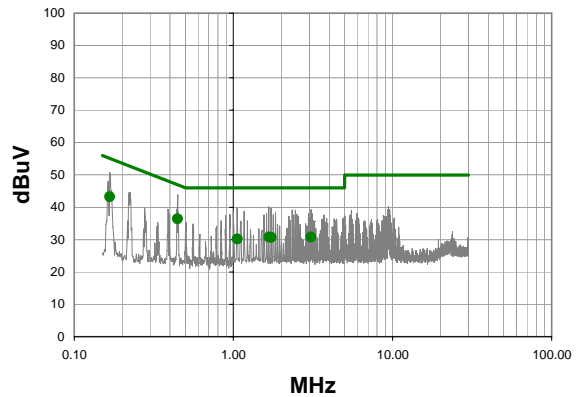
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	23.7	0.8	44.5	46.9	-2.4
1.060	18.2	0.5	38.7	46.0	-7.3
1.676	18.0	0.5	38.5	46.0	-7.5
1.732	18.0	0.5	38.5	46.0	-7.5
2.400	17.8	0.5	38.3	46.0	-7.7
1.620	17.5	0.5	38.0	46.0	-8.0
1.788	17.4	0.5	37.9	46.0	-8.1

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station Receive mode, Mid channel.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003			
Run #	21	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

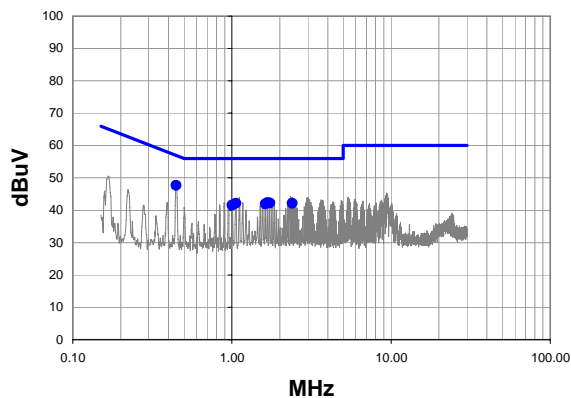
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	23.1	0.8	43.9	56.9	-13.0
0.167	30.0	1.7	51.7	65.1	-13.4
1.060	19.2	0.5	39.7	56.0	-16.3
1.676	19.1	0.5	39.6	56.0	-16.4
1.732	19.1	0.5	39.6	56.0	-16.4
3.072	18.4	0.5	38.9	56.0	-17.1

Average Data - vs - Average Limit

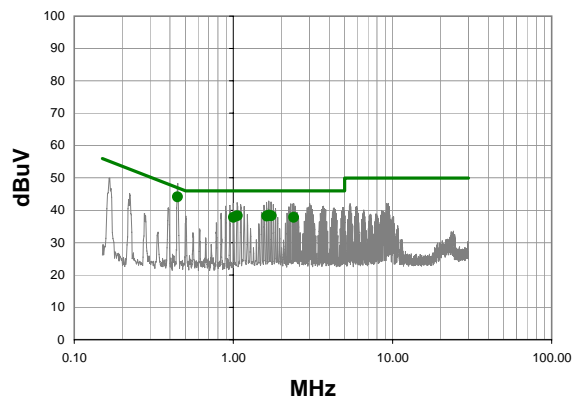
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	15.6	0.8	36.4	46.9	-10.5
0.167	21.6	1.7	43.3	55.1	-11.8
1.060	10.3	0.5	30.8	46.0	-15.2
1.676	10.3	0.5	30.8	46.0	-15.2
1.732	10.2	0.5	30.7	46.0	-15.3
3.072	9.7	0.5	30.2	46.0	-15.8

Work Order:	PSCI0210	Date:	06/11/07				
Project:	None	Temperature:	22° C				
Job Site:	EV07	Humidity:	36				
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas			
EUT:	PowerScan RF - Base Station 915 Mhz						
Configuration:	6 - AC Conducted 4004-0839						
Customer:	Datalogic Scanning, Inc.						
Attendees:	None						
EUT Power:	120VAC/60Hz						
Operating Mode:	Base Station Receive mode, Low channel.						
Deviations:	No deviations.						
Comments:	4004-0839 California power supply.						
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003			
Run #	22	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit




Quasi Peak Data - vs - Quasi Peak Limit

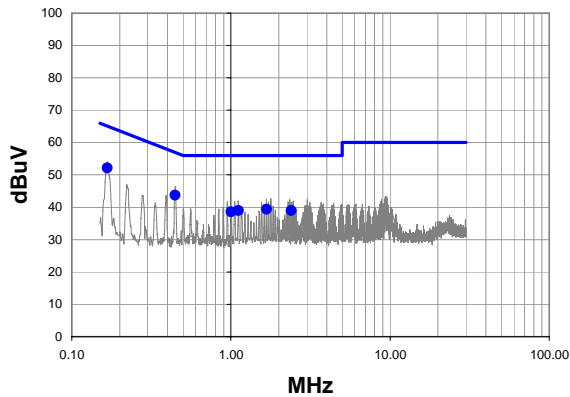
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	26.8	0.8	47.6	56.9	-9.3
1.676	21.8	0.5	42.3	56.0	-13.7
1.732	21.7	0.5	42.2	56.0	-13.8
1.060	21.6	0.5	42.1	56.0	-13.9
2.400	21.6	0.5	42.1	56.0	-13.9
1.620	21.4	0.5	41.9	56.0	-14.1
1.004	21.0	0.5	41.5	56.0	-14.5

Average Data - vs - Average Limit

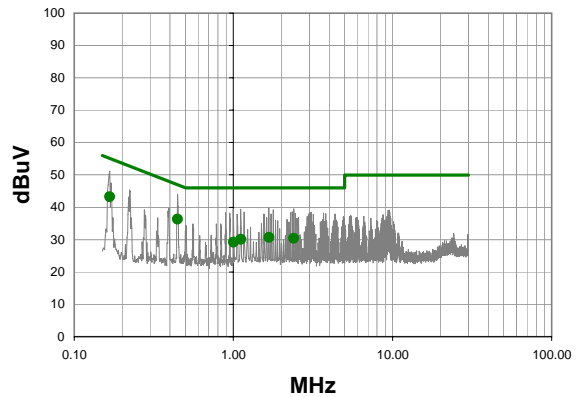
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	23.3	0.8	44.1	46.9	-2.8
1.676	18.0	0.5	38.5	46.0	-7.5
1.060	17.8	0.5	38.3	46.0	-7.7
1.732	17.8	0.5	38.3	46.0	-7.7
1.620	17.7	0.5	38.2	46.0	-7.8
1.004	17.3	0.5	37.8	46.0	-8.2
2.400	17.3	0.5	37.8	46.0	-8.2

Work Order:	PSCI0210	Date:	06/11/07		
Project:	None	Temperature:	22° C		
Job Site:	EV07	Humidity:	36		
Serial Number:	BS085314	Barometric Pres.:	30.11	Tested by: Dan Haas	
EUT:	PowerScan RF - Base Station 915 Mhz				
Configuration:	6 - AC Conducted 4004-0839				
Customer:	Datalogic Scanning, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Base Station Receive mode, Low channel.				
Deviations:	No deviations.				
Comments:	4004-0839 California power supply.				
Test Specifications FCC 15.107:2006		Class B		Test Method ANSI C63.4:2003	
Run #	23	Line:	Neutral	Ext. Attenuation: 20	Results Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.167	30.5	1.7	52.2	65.1	-12.9
0.446	22.9	0.8	43.7	56.9	-13.2
1.676	18.9	0.5	39.4	56.0	-16.6
1.116	18.5	0.5	39.0	56.0	-17.0
2.400	18.5	0.5	39.0	56.0	-17.0
1.004	18.1	0.5	38.6	56.0	-17.4

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.446	15.5	0.8	36.3	46.9	-10.6
0.167	21.6	1.7	43.3	55.1	-11.8
1.676	10.2	0.5	30.7	46.0	-15.3
2.400	9.9	0.5	30.4	46.0	-15.6
1.116	9.6	0.5	30.1	46.0	-15.9
1.004	8.7	0.5	29.2	46.0	-16.8



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Base station, Transmitting low channel, Ch. 0, 904.3MHz

Base station, Transmitting mid channel, Ch. 5, 916.13MHz

Base station, Transmitting high channel, Ch. 9, 924.86MHz

DATA RATES

9.6 kHz

19.2 kHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	902 MHz	Stop Frequency	928 MHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV01 cables c,g, h			EVA	12/29/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13

MEASUREMENT BANDWIDTHS

Frequency Range	Peak Data	Quasi-Peak Data	Average Data
(MHz)	(kHz)	(kHz)	(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

Measurements were made using the bandwidths and detectors specified. No video filter was used.

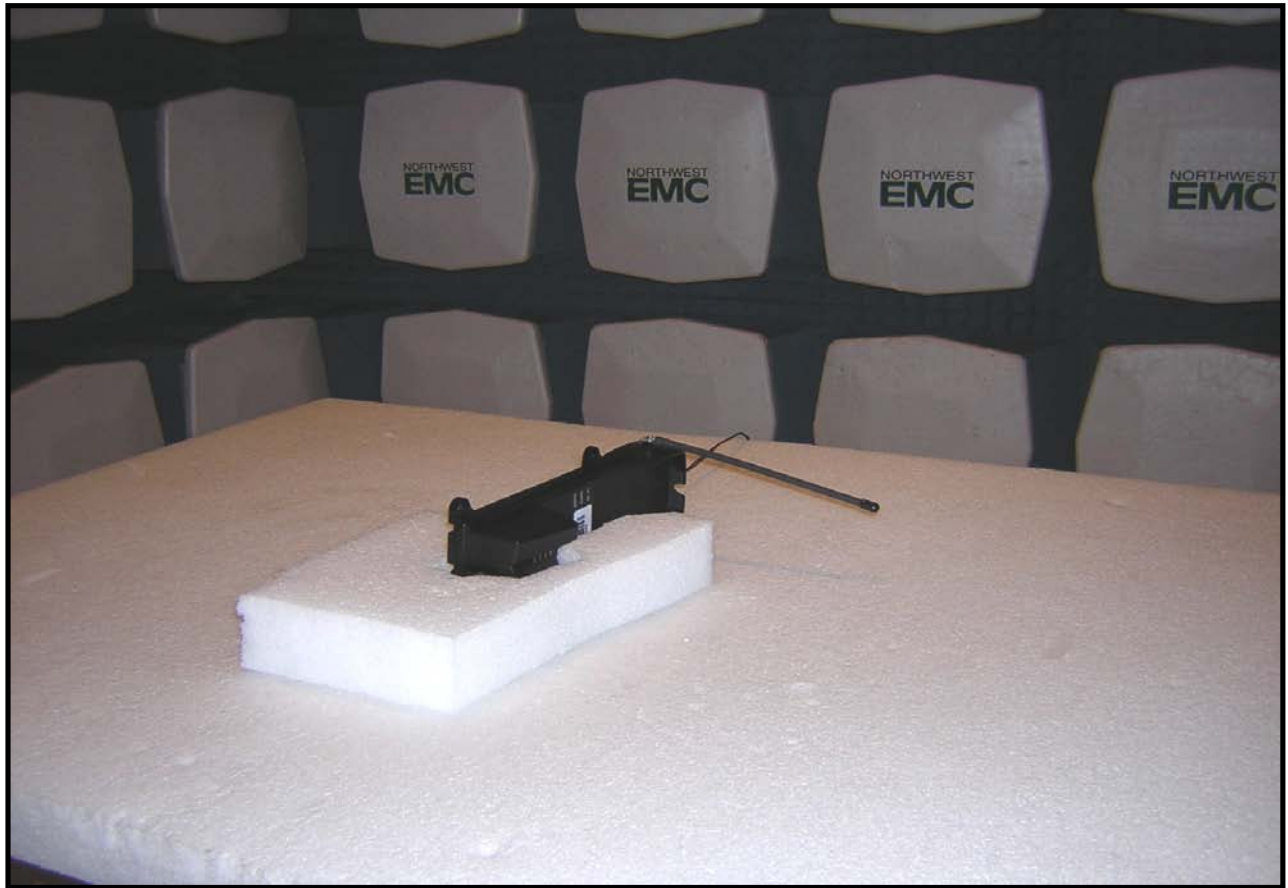
MEASUREMENT UNCERTAINTY

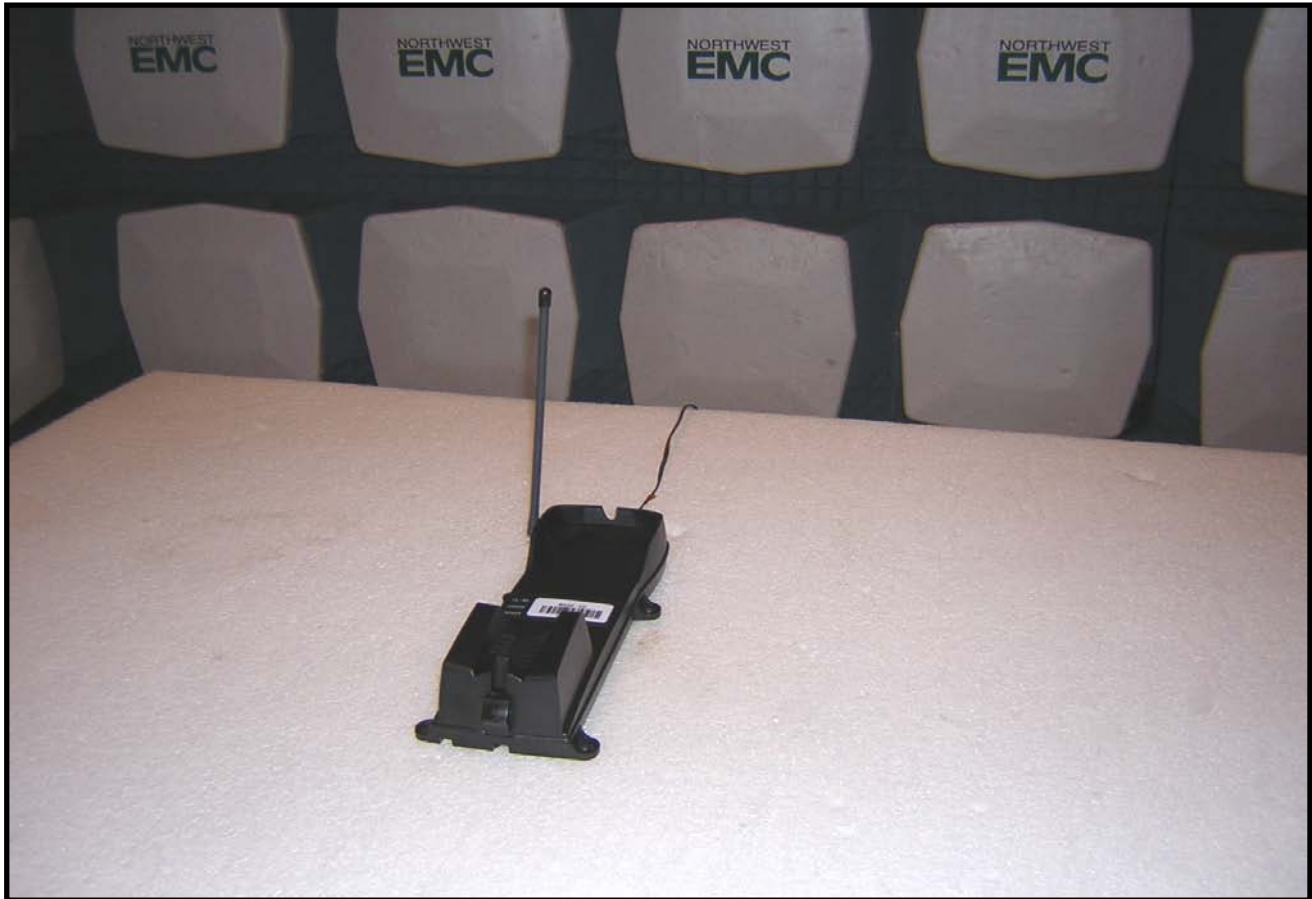
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was transmitting and/or receiving while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2003).

NORTHWEST		Field Strength of the Fundamental		PSA 2007.05.07 EMI 2006.12.20																																																																																																																																																																																																																																																																																																							
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EUT: PowerScan RF - Base station 915 Mhz		Work Order: PSCI0210																																																																																																																																																																																																																																																																																																									
Serial Number: BS085314		Date: 06/07/07																																																																																																																																																																																																																																																																																																									
Customer: Datalogic Scanning, Inc.		Temperature: 22																																																																																																																																																																																																																																																																																																									
Attendees: None		Humidity: 33%																																																																																																																																																																																																																																																																																																									
Project: None		Barometric Pres.: 30.11																																																																																																																																																																																																																																																																																																									
Tested by: David Divergigelis		Power: 120VAC/60Hz		Job Site: EV01																																																																																																																																																																																																																																																																																																							
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TEST PARAMETERS																																																																																																																																																																																																																																																																																																											
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3																																																																																																																																																																																																																																																																																																							
COMMENTS																																																																																																																																																																																																																																																																																																											
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(dB)	Comments	916.102	58.1	34.2	60.0	1.0	3.0	0.0	H-Bilog	PK	0.0	92.3	94.0	-1.7	TX mid, 19.2kHz, EUT on side.	916.186	57.8	34.2	55.0	1.0	3.0	0.0	H-Bilog	PK	0.0	92.0	94.0	-2.0	TX mid, 9.6kHz, EUT on side.	916.180	57.8	34.2	60.0	1.0	3.0	0.0	H-Bilog	QP	0.0	92.0	94.0	-2.0	TX mid, 19.2kHz, EUT on side.	916.088	57.5	34.2	339.0	1.0	3.0	0.0	H-Bilog	PK	0.0	91.7	94.0	-2.3	TX mid, 9.6kHz, EUT horizontal.	916.184	57.5	34.2	55.0	1.0	3.0	0.0	H-Bilog	QP	0.0	91.7	94.0	-2.3	TX mid, 9.6kHz, EUT on side.	916.184	57.2	34.2	339.0	1.0	3.0	0.0	H-Bilog	QP	0.0	91.4	94.0	-2.6	TX mid, 9.6kHz, EUT horizontal.	924.805	55.5	34.3	333.0	1.0	3.0	0.0	H-Bilog	PK	0.0	89.8	94.0	-4.2	TX high, 9.6kHz, EUT horizontal.	916.183	55.4	34.2	233.0	1.0	3.0	0.0	V-Bilog	PK	0.0	89.6	94.0	-4.4	TX mid, 19.2kHz, EUT vertical.	924.797	55.2	34.3	46.0	1.0	3.0	0.0	H-Bilog	PK	0.0	89.5	94.0	-4.5	TX high, 9.6kHz, EUT on side.	924.912	55.1	34.3	333.0	1.0	3.0	0.0	H-Bilog	QP	0.0	89.4	94.0	-4.6	TX high, 9.6kHz, EUT horizontal.	916.181	55.1	34.2	233.0	1.0	3.0	0.0	V-Bilog	QP	0.0	89.3	94.0	-4.7	TX mid, 19.2kHz, EUT vertical.	924.912	54.8	34.3	46.0	1.0	3.0	0.0	H-Bilog	QP	0.0	89.1	94.0	-4.9	TX high, 9.6kHz, EUT on side.	916.083	53.8	34.2	249.0	1.0	3.0	0.0	V-Bilog	PK	0.0	88.0	94.0	-6.0	TX mid, 9.6kHz, EUT vertical.	916.075	53.6	34.2	222.0	1.0	3.0	0.0	V-Bilog	PK	0.0	87.8	94.0	-6.2	TX mid, 19.2kHz, EUT horizontal.	916.081	53.5	34.2	233.0	1.0	3.0	0.0	V-Bilog	PK	0.0	87.7	94.0	-6.3	TX mid, 9.6kHz, EUT horizontal.	916.184	53.4	34.2	249.0	1.0	3.0	0.0	V-Bilog	QP	0.0	87.6	94.0	-6.4	TX mid, 9.6kHz, EUT vertical.	916.181	53.3	34.2	222.0	1.0	3.0	0.0	V-Bilog	QP	0.0	87.5	94.0	-6.5	TX mid, 19.2kHz, EUT horizontal.	916.184	53.2	34.2	233.0	1.0	3.0	0.0	V-Bilog	QP	0.0	87.4	94.0	-6.6	TX mid, 9.6kHz, EUT horizontal.	916.096	52.9	34.2	0.0	1.0	3.0	0.0	H-Bilog	PK	0.0	87.1	94.0	-6.9	TX mid, 19.2kHz, EUT horizontal.	916.181	52.6	34.2	0.0	1.0	3.0	0.0	H-Bilog	QP	0.0	86.8	94.0	-7.2	TX mid, 19.2kHz, EUT horizontal.
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Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

CHANNELS INVESTIGATED

Low channel, Ch. 0 = 904.3 MHz

Mid channel, Ch. 5 = 916.13 MHz

High channel, Ch. 9 = 924.86 MHz

DATA RATES INVESTIGATED

9.6kHz

19.2kHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz

Stop Frequency 10 GHz

CLOCKS AND OSCILLATORS

Not provided

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HFV	12/29/2006	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	5/10/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	12
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
EV01 cables g,h,j			EVB	5/10/2007	13
EV01 cables c,g, h			EVA	12/29/2006	13
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13

MEASUREMENT BANDWIDTHS

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

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was transmitting and receiving while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

NORTHWEST EMC										Field Strength of Harmonics and Spurious Emissions				PSA 2007.05.07 EMI 2006.12.20	
EUT: PowerScan RF - Base Station 915 Mhz										Work Order: PSCI0210					
Serial Number: BS085314										Date: 06/10/07					
Customer: Datalogic Scanning, Inc.										Temperature: 21					
Attendees: None										Humidity: 39%					
Project: None										Barometric Pres.: 29.97					
Tested by: Holly Ashkannejhad					Power: 120VAC/60Hz					Job Site: EV01					
TEST SPECIFICATIONS										Test Method					
FCC 15.249:2006										ANSI C63.4:2003					
TEST PARAMETERS															
Antenna Height(s) (m)		1 - 4			Test Distance (m)		3								
COMMENTS															
See comments for data rate and position.															
EUT OPERATING MODES															
Base station transmitting, low channel															
DEVIATIONS FROM TEST STANDARD															
No deviations.															
Run #		1			Signature <i>Holly Ashkannejhad</i>										
Configuration #		1													
Results		Pass													


EUT:	PowerScan RF - Base Station 915 Mhz	Work Order:	PSCI0210
Serial Number:	BS085314	Date:	06/10/07
Customer:	Datalogic Scanning, Inc.	Temperature:	21
Attendees:	None	Humidity:	39%
Project:	None	Barometric Pres.:	29.97
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz
		Job Site:	EV01

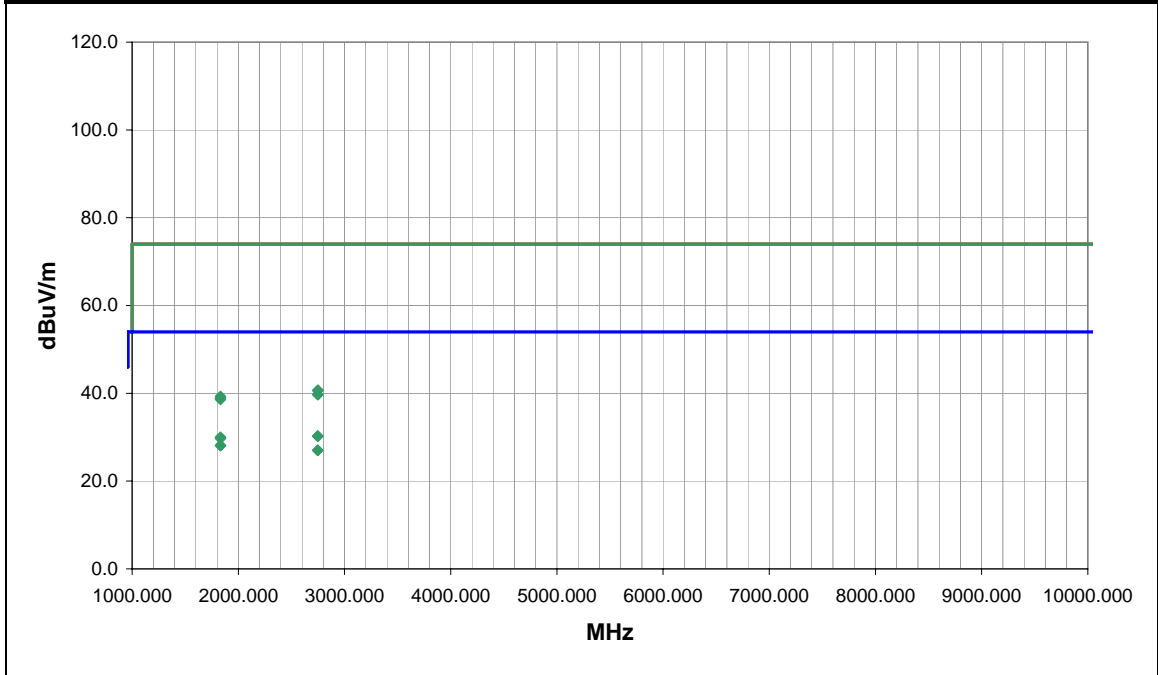
TEST SPECIFICATIONS	Test Method
FCC 15.249:2006	ANSI C63.4:2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS
See comments for data rate.

EUT OPERATING MODES
Base station transmitting, mid channel, 19.2kHz

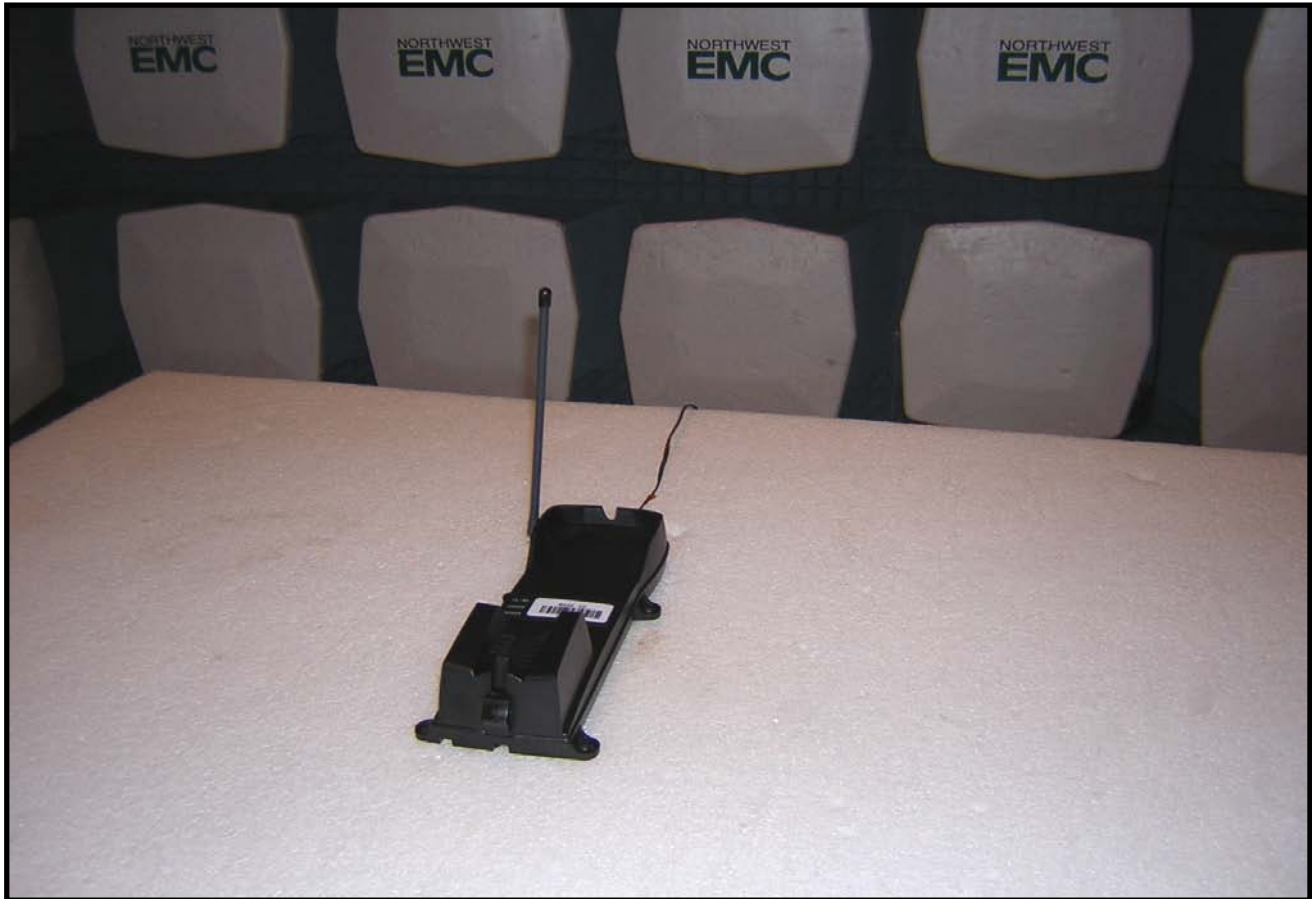
DEVIATIONS FROM TEST STANDARD		
No deviations.		
Run #	3	<div>Signature </div>
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2748.386	29.2	1.1	316.0	1.0	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7	19.2kHz
2748.441	29.1	1.1	318.0	1.0	3.0	0.0	H-Horn	AV	0.0	30.2	54.0	-23.8	9.6kHz
1832.264	31.8	-1.8	332.0	1.0	3.0	0.0	V-Horn	AV	0.0	30.0	54.0	-24.0	19.2kHz
1832.290	31.5	-1.8	331.0	1.0	3.0	0.0	V-Horn	AV	0.0	29.7	54.0	-24.3	9.6kHz
1832.239	29.9	-1.8	160.0	1.0	3.0	0.0	H-Horn	AV	0.0	28.1	54.0	-25.9	19.2kHz
1832.279	29.9	-1.8	238.0	1.0	3.0	0.0	H-Horn	AV	0.0	28.1	54.0	-25.9	9.6kHz
2748.367	25.9	1.1	346.0	1.0	3.0	0.0	V-Horn	AV	0.0	27.0	54.0	-27.0	9.6kHz
2748.451	25.9	1.1	360.0	1.0	3.0	0.0	V-Horn	AV	0.0	27.0	54.0	-27.0	19.2kHz
2748.663	39.6	1.1	318.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.7	74.0	-33.3	9.6kHz
2748.353	39.5	1.1	316.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.6	74.0	-33.4	19.2kHz
2747.457	38.6	1.1	346.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.7	74.0	-34.3	9.6kHz
2748.780	38.6	1.1	360.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.7	74.0	-34.3	19.2kHz
1832.180	41.1	-1.8	160.0	1.0	3.0	0.0	H-Horn	PK	0.0	39.3	74.0	-34.7	19.2kHz
1832.083	40.7	-1.8	332.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.9	74.0	-35.1	19.2kHz
1832.117	40.6	-1.8	331.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.8	74.0	-35.2	9.6kHz
1832.223	40.4	-1.8	238.0	1.0	3.0	0.0	H-Horn	PK	0.0	38.6	74.0	-35.4	9.6kHz

NORTHWEST EMC		Field Strength of Harmonics and Spurious Emissions		PSA 2007.05.07 EMI 2006.12.20									
EUT: PowerScan RF - Base Station 915 Mhz			Work Order: PSCI0210										
Serial Number: BS085314			Date: 06/10/07										
Customer: Datalogic Scanning, Inc.			Temperature: 21										
Attendees: None			Humidity: 39%										
Project: None			Barometric Pres.: 29.97										
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01									
TEST SPECIFICATIONS			Test Method										
FCC 15.249:2006			ANSI C63.4:2003										
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3									
COMMENTS													
See comments for data rate.													
EUT OPERATING MODES													
Base station transmitting, high channel													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		4											
Configuration #		1											
Results		Pass											
Signature <i>Holly Ashkannejhad</i>													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
1849.718	31.3	-1.7	340.0	1.0	3.0	0.0	V-Horn	AV	0.0	29.6	54.0	-24.4	9.6kHz
1849.750	31.3	-1.7	324.0	1.0	3.0	0.0	V-Horn	AV	0.0	29.6	54.0	-24.4	19.2kHz
2774.569	27.9	1.3	317.0	1.0	3.0	0.0	H-Horn	AV	0.0	29.2	54.0	-24.8	9.6kHz
2774.615	27.7	1.3	315.0	1.0	3.0	0.0	H-Horn	AV	0.0	29.0	54.0	-25.0	19.2kHz
1849.681	30.3	-1.7	327.0	1.0	3.0	0.0	H-Horn	AV	0.0	28.6	54.0	-25.4	9.6kHz
1849.771	30.0	-1.7	329.0	1.0	3.0	0.0	H-Horn	AV	0.0	28.3	54.0	-25.7	19.2kHz
2774.551	25.8	1.3	345.0	1.0	3.0	0.0	V-Horn	AV	0.0	27.1	54.0	-26.9	19.2kHz
2774.663	25.2	1.3	356.0	1.0	3.0	0.0	V-Horn	AV	0.0	26.5	54.0	-27.5	9.6kHz
2774.763	39.3	1.3	315.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.6	74.0	-33.4	19.2kHz
2774.330	38.9	1.3	356.0	1.0	3.0	0.0	V-Horn	PK	0.0	40.2	74.0	-33.8	9.6kHz
2774.657	38.8	1.3	317.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.1	74.0	-33.9	9.6kHz
2773.907	38.5	1.3	345.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.8	74.0	-34.2	19.2kHz
1849.533	40.3	-1.7	340.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.6	74.0	-35.4	9.6kHz
1849.600	40.3	-1.7	329.0	1.0	3.0	0.0	H-Horn	PK	0.0	38.6	74.0	-35.4	19.2kHz
1849.777	40.3	-1.7	324.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.6	74.0	-35.4	19.2kHz
1849.527	40.0	-1.7	327.0	1.0	3.0	0.0	H-Horn	PK	0.0	38.3	74.0	-35.7	9.6kHz





Receiver Spurious Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Base station, Receive mode, low channel
Base station, Receive mode, mid channel
Base station, Receive mode, high channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 5 GHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13
EV01 cables g,h,j			EVB	5/10/2007	13
EV01 cables c,g, h			EVA	12/29/2006	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	5/10/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	12
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24

MEASUREMENT BANDWIDTHS

Frequency Range	Peak Data	Quasi-Peak Data	Average Data
(MHz)	(kHz)	(kHz)	(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

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY


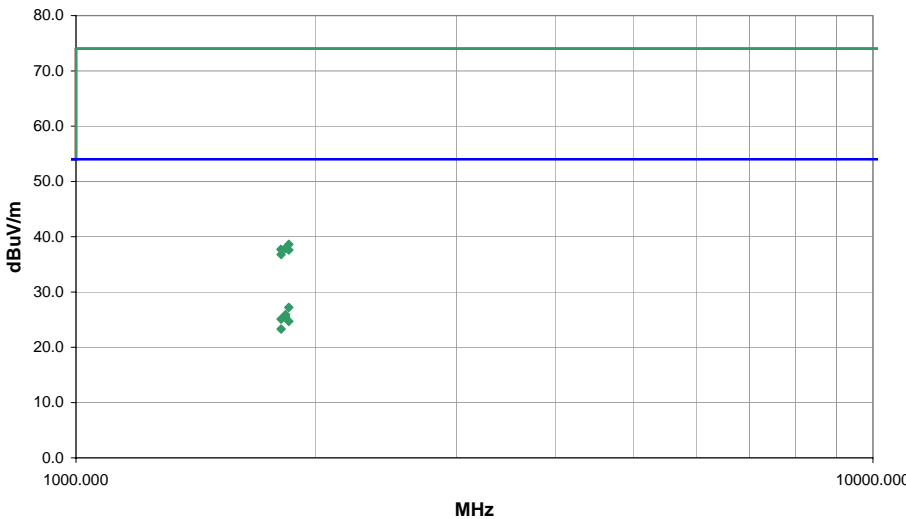
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

NORTHWEST EMC		Receiver Spurious Emissions		PSA 2007.05.07 EMI 2006.12.20									
EUT: PowerScan RF - Base Station 915 Mhz		Work Order: PSC10210											
Serial Number: BS085314		Date: 06/12/07											
Customer: Datalogic Scanning, Inc.		Temperature: 22° C											
Attendees: None		Humidity: 36%											
Project: None		Barometric Pres.: 30.11											
Tested by: David Divergigelis		Power: 120VAC/60Hz		Job Site: EV01									
TEST SPECIFICATIONS		Test Method											
FCC 15.109:2006		ANSI C63.4:2003											
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3									
COMMENTS													
Power Supply M/N: SC102TA0942F02. Please see comments for channel tested.													
EUT OPERATING MODES													
Base Station RX mode.													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #	1												
Configuration #	1												
Results	Pass												
Signature <i>[Signature]</i>													
<p>The graph plots dBuV/m on the y-axis (0.0 to 80.0) against MHz on the x-axis (10.000 to 1000.000). The signal level is a step function: 40 dBuV/m from 10 to 100 MHz, 43 dBuV/m from 100 to 200 MHz, 45 dBuV/m from 200 to 400 MHz, and 46 dBuV/m from 400 to 1000 MHz. Two green diamonds are plotted at approximately 915 MHz and 916 MHz, both at a level of about 44.5 dBuV/m.</p>													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
916.445	34.1	11.2	27.0	1.0	3.0	0.0	H-Bilog	PK	0.0	45.3	46.0	-0.7	RX mode, mid channel, EUT Horizontal
904.350	33.8	11.1	107.0	1.0	3.0	0.0	V-Bilog	PK	0.0	44.9	46.0	-1.1	RX mode, low channel, EUT on side
904.595	33.8	11.1	85.0	1.0	3.0	0.0	V-Bilog	PK	0.0	44.9	46.0	-1.1	RX mode, low channel, EUT Horizontal
904.787	33.3	11.1	49.0	1.0	3.0	0.0	H-Bilog	PK	0.0	44.4	46.0	-1.6	RX mode, low channel, EUT vertical
916.323	33.2	11.2	207.0	1.0	3.0	0.0	V-Bilog	PK	0.0	44.4	46.0	-1.6	RX mode, mid channel, EUT Horizontal
924.530	33.1	11.3	227.0	1.0	3.0	0.0	H-Bilog	PK	0.0	44.4	46.0	-1.6	RX mode, high channel, EUT Horizontal
904.228	33.1	11.1	317.0	1.0	3.0	0.0	H-Bilog	PK	0.0	44.2	46.0	-1.8	RX mode, low channel, EUT Horizontal
924.530	32.9	11.3	205.0	1.0	3.0	0.0	V-Bilog	PK	0.0	44.2	46.0	-1.8	RX mode, high channel, EUT Horizontal
903.855	32.9	11.1	254.0	1.0	3.0	0.0	V-Bilog	PK	0.0	44.0	46.0	-2.0	RX mode, low channel, EUT vertical
903.913	32.8	11.1	182.0	1.0	3.0	0.0	H-Bilog	PK	0.0	43.9	46.0	-2.1	RX mode, low channel, EUT on side
924.548	26.8	11.3	227.0	1.0	3.0	0.0	H-Bilog	QP	0.0	38.1	46.0	-7.9	RX mode, high channel, EUT Horizontal
924.853	26.8	11.3	205.0	1.0	3.0	0.0	V-Bilog	QP	0.0	38.1	46.0	-7.9	RX mode, high channel, EUT Horizontal
915.313	26.8	11.2	207.0	1.0	3.0	0.0	V-Bilog	QP	0.0	38.0	46.0	-8.0	RX mode, mid channel, EUT Horizontal
915.852	26.8	11.2	27.0	1.0	3.0	0.0	H-Bilog	QP	0.0	38.0	46.0	-8.0	RX mode, mid channel, EUT Horizontal
903.636	26.8	11.1	49.0	1.0	3.0	0.0	H-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT vertical
903.963	26.8	11.1	317.0	1.0	3.0	0.0	H-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT Horizontal
904.251	26.8	11.1	182.0	1.0	3.0	0.0	H-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT on side
904.266	26.8	11.1	254.0	1.0	3.0	0.0	V-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT vertical
904.342	26.8	11.1	107.0	1.0	3.0	0.0	V-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT on side
904.534	26.8	11.1	85.0	1.0	3.0	0.0	V-Bilog	QP	0.0	37.9	46.0	-8.1	RX mode, low channel, EUT Horizontal

NORTHWEST		Receiver Spurious Emissions		PSA 2007.05.07 EMI 2006.12.20									
EMC		EUT: PowerScan RF - Base Station 915 Mhz		Work Order: PSCI0210									
Serial Number: BS085314		Date: 06/12/07											
Customer: Datalogic Scanning, Inc.		Temperature: 22° C											
Attendees: None		Humidity: 36%											
Project: None		Barometric Pres.: 30.11											
Tested by: David Divergigelis		Power: 120VAC/60Hz		Job Site: EV01									
TEST SPECIFICATIONS		Test Method											
FCC 15.109:2006		ANSI C63.4:2003											
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3									
COMMENTS													
Power Supply M/N: SC102TA0942F02.													
EUT OPERATING MODES													
Base Station RX mode, high channel.													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #	2		<div style="text-align: right;"> <i>Signature</i>  </div>										
Configuration #	1												
Results	Pass												
													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
1849.698	28.9	-1.7	144.0	1.0	3.0	0.0	V-Horn	AV	0.0	27.2	54.0	-26.8	RX mode, High Channel, EUT Horizontal
1832.268	27.7	-1.8	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	25.9	54.0	-28.1	RX mode, Mid Channel, EUT Horizontal
1832.268	27.3	-1.8	42.0	1.0	3.0	0.0	H-Horn	AV	0.0	25.5	54.0	-28.5	RX mode, Mid Channel, EUT Horizontal
1808.598	27.1	-2.0	215.0	1.0	3.0	0.0	V-Horn	AV	0.0	25.1	54.0	-28.9	RX mode, Low Channel, EUT Horizontal
1849.643	26.4	-1.7	360.0	1.0	3.0	0.0	H-Horn	AV	0.0	24.7	54.0	-29.3	RX mode, High Channel, EUT Horizontal
1808.652	25.3	-2.0	0.0	1.8	3.0	0.0	H-Horn	AV	0.0	23.3	54.0	-30.7	RX mode, Low Channel, EUT Horizontal
1849.358	40.3	-1.7	144.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.6	74.0	-35.4	RX mode, High Channel, EUT Horizontal
1832.282	39.7	-1.8	42.0	1.0	3.0	0.0	H-Horn	PK	0.0	37.9	74.0	-36.1	RX mode, Mid Channel, EUT Horizontal
1832.623	39.7	-1.8	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	37.9	74.0	-36.1	RX mode, Mid Channel, EUT Horizontal
1808.262	39.7	-2.0	215.0	1.0	3.0	0.0	V-Horn	PK	0.0	37.7	74.0	-36.3	RX mode, Low Channel, EUT Horizontal
1849.725	39.3	-1.7	360.0	1.0	3.0	0.0	H-Horn	PK	0.0	37.6	74.0	-36.4	RX mode, High Channel, EUT Horizontal
1808.400	38.8	-2.0	0.0	1.8	3.0	0.0	H-Horn	PK	0.0	36.8	74.0	-37.2	RX mode, Low Channel, EUT Horizontal

