

# **EMC Test Report**

## **Radiated Spurious and Harmonic Emissions**

Class II Permissive Change to

Part 15.247, Certification, DTS Rules

For the Addition of Two

MaxRad Antenna Model(s): MAXC24503 & BMAXC24505

3 or 5 dB Gain (2400 to 2485 MHz Band)

External Vehicular Magnetic Mount Antenna

Used with IX600 Vehicular Mount

**FCC ID: KBCIX600-IWL**

WLAN, IEEE 802.11 (b & g)

**Model: IX600-IWL with IX600 Vehicle Mount**

Prepared on Behalf of

**Itronix, Corporation**  
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November 7, 2005

## Test Report

## TABLE OF CONTENTS

Cover Page		1
Table of Contents		2
Test 1	6 dB Bandwidth	refer to OEM test report
Test 2	Conducted Peak RF Power Output Part 15.247(b) & Equivalent Isotropic Radiated Power	refer to OEM test report
Test 3	MPE Calculations	refer to New Exhibit "MPE - 3 & 5 dB gain Ext. MaxRad Ant thru Vehicle Mount"
Test 4	Antenna Conducted Spurious Emissions	refer to OEM test report
Test 4	Radiated Harmonics and Spurious Emissions	3 – 10
Test 4	Field Strength of Fundamental & Restricted Band Edges	11 - 22
Test 6	Peak Power Spectral Density, PPSD	refer to OEM test report
Test 7	AC Conducted RF Spurious Emissions 150 kHz to 30 MHz	N/A Vehicle Mount
	Block Diagram of Test Set up, Equipment List and	refer to New Exhibit Exhibit "Appendix A Test Setup_Photos_Equipment list"

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL – (802.11b @ 11Mb) with IX600 Vehicle Mount & MAXRAD Model: MAXC24503 (3 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.105

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Vertical**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS										
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBu/V	Margin in dB below LIMIT	
<b>Fo - 2.412</b>										
4.824	33.00	V	Peak	32.45	3.97	23.2	46.22	74	27.78	
4.824	21.68	V	Average	32.45	3.97	23.2	34.90	54	19.10	
7.236	34.37	V	Peak	36.35	4.42	25.9	49.24	74	27.76	
7.236	24.87	V	Average	36.35	4.42	25.9	39.74	54	14.26	
<b>Fo - 2.437</b>										
4.874	32.45	V	Peak	32.60	3.97	23.2	45.82	74	28.18	
4.874	21.55	V	Average	32.60	3.97	23.2	34.92	54	19.08	
7.311	37.12	V	Peak	36.57	4.42	25.9	52.51	74	21.79	
7.311	25.02	V	Average	36.57	4.42	25.9	40.11	54	13.89	
<b>Fo - 2.462</b>										
4.924	33.39	V	Peak	33.01	3.97	23.2	47.17	74	26.83	
4.924	22.26	V	Average	33.01	3.97	23.2	36.04	54	17.96	
7.386	36.36	V	Peak	36.77	4.42	25.9	51.65	74	22.35	
7.386	25.91	V	Average	36.77	4.42	25.9	41.20	54	12.80	
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>										
Channel	Frequency in GHz	Harmonics Observed					Limit	74 dBuV/m Peak & 54 dBuV/m Average		
Low Ch.	2.412									
<b>4Fo - 10Fo</b>	<b>9.668 - 24.120</b>	None - at or < noise floor @ 1 meter						All emissions < 54 dBuV/m		
Mid Ch.	2.437									
<b>4Fo - 10Fo</b>	<b>9.784 - 24.370</b>	None - at or < noise floor @ 1 meter						All emissions < 54 dBuV/m		
High Ch.	2.4620									
<b>4Fo - 10Fo</b>	<b>9.848 - 24.620</b>	None - at or < noise floor @ 1 meter						All emissions < 54 dBuV/m		

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11b @ 11Mb) with IX600 Vehicle Mount & MAXRAD Model: MAXC24503 - (3 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.1053

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Horizontal**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horiz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBu/V	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	33.52	H	Peak	32.45	3.97	23.2	46.72	74	27.28
4.824	20.93	H	Average	32.45	3.97	23.2	34.15	54	19.85
7.236	37.05	H	Peak	36.35	4.42	25.9	51.92	74	22.08
7.236	24.81	H	Average	36.35	4.42	25.9	39.68	54	14.32
<b>Fo - 2.437</b>									
4.874	33.24	H	Peak	32.60	3.97	23.2	46.61	74	27.39
4.874	21.22	H	Average	32.60	3.97	23.2	34.59	54	19.41
7.311	37.69	H	Peak	36.57	4.42	25.9	52.78	74	21.22
7.311	25.00	H	Average	36.57	4.42	25.9	40.09	54	13.91
<b>Fo - 2.462</b>									
4.924	33.74	H	Peak	33.01	3.97	23.2	47.52	74	26.48
4.924	22.03	H	Average	33.01	3.97	23.2	35.81	54	18.19
7.386	37.16	H	Peak	36.77	4.42	25.9	52.45	74	21.55
7.386	25.43	H	Average	36.77	4.42	25.9	40.72	54	13.28
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
4Fo - 10Fo	9.648 - 24.120	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
4Fo - 10Fo	9.748 - 24.370	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
4Fo - 10Fo	9.848 - 24.620	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11b @ 11Mb) with IX600 Vehicle Mount & Model: MAXC24505 - (5 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.105

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Vertical**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBuV	Ant. Vert. or Horz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBuV	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	33.16	V	Peak	32.45	3.97	23.2	46.38	74	27.62
4.824	20.99	V	Average	32.45	3.97	23.2	34.21	54	19.79
7.236	36.60	V	Peak	36.35	4.42	25.9	51.47	74	22.53
7.236	24.81	V	Average	36.35	4.42	25.9	39.68	54	14.32
<b>Fo - 2.437</b>									
4.874	33.20	V	Peak	32.60	3.97	23.2	46.57	74	27.43
4.874	21.15	V	Average	32.60	3.97	23.2	34.52	54	19.48
7.311	36.90	V	Peak	36.57	4.42	25.9	51.99	74	22.01
7.311	25.09	V	Average	36.57	4.42	25.9	40.18	54	13.82
<b>Fo - 2.462</b>									
4.924	33.90	V	Peak	33.01	3.97	23.2	47.68	74	26.32
4.924	22.32	V	Average	33.01	3.97	23.2	36.10	54	17.90
7.386	37.96	V	Peak	36.77	4.42	25.9	53.25	74	20.75
7.386	25.66	V	Average	36.77	4.42	25.9	40.75	54	13.25
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
<b>4Fo - 10Fo</b>	<b>9.668 - 24.120</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
<b>4Fo - 10Fo</b>	<b>9.784 - 24.370</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
<b>4Fo - 10Fo</b>	<b>9.848 - 24.620</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11b @ 11Mb) with IX600 Vehicle Mount & MAXRAD Model: BMAXC24505 - (5 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.1053

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Horizontal**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horiz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBu/V	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	32.75	H	Peak	32.45	3.97	23.2	45.97	74	28.03
4.824	21.03	H	Average	32.45	3.97	23.2	34.23	54	19.77
7.236	38.14	H	Peak	36.35	4.42	25.9	53.01	74	20.99
7.236	24.81	H	Average	36.35	4.42	25.9	39.68	54	14.32
<b>Fo - 2.437</b>									
4.874	33.45	H	Peak	32.60	3.97	23.2	46.82	74	27.18
4.874	21.17	H	Average	32.60	3.97	23.2	34.54	54	19.46
7.311	38.33	H	Peak	36.57	4.42	25.9	53.42	74	20.58
7.311	25.51	H	Average	36.57	4.42	25.9	40.60	54	13.40
<b>Fo - 2.462</b>									
4.924	33.37	H	Peak	33.01	3.97	23.2	46.95	74	27.05
4.924	22.11	H	Average	33.01	3.97	23.2	35.89	54	18.11
7.386	37.65	H	Peak	36.77	4.42	25.9	52.94	74	21.06
7.386	25.49	H	Average	36.77	4.42	25.9	40.78	54	13.22
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
4Fo - 10Fo	9.648 - 24.120	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
4Fo - 10Fo	9.748 - 24.370	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
4Fo - 10Fo	9.848 - 24.620	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL – (802.11g @ 54Mb) with IX600 Vehicle Mount & MAXRAD Model: MAXC24503 (3 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.105

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Vertical**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBu/V	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	32.34	V	Peak	32.45	3.97	23.2	46.91	74	27.09
4.824	22.01	V	Average	32.45	3.97	23.2	35.23	54	18.77
7.236	36.18	V	Peak	36.35	4.42	25.9	51.05	74	22.95
7.236	24.92	V	Average	36.35	4.42	25.9	39.79	54	14.21
<b>Fo - 2.437</b>									
4.874	31.31	V	Peak	32.60	3.97	23.2	44.68	74	29.32
4.874	21.07	V	Average	32.60	3.97	23.2	34.44	54	19.56
7.311	35.43	V	Peak	36.57	4.42	25.9	50.52	74	23.48
7.311	24.95	V	Average	36.57	4.42	25.9	40.04	54	13.96
<b>Fo - 2.462</b>									
4.924	34.98	V	Peak	33.01	3.97	23.2	48.76	74	25.24
4.924	22.66	V	Average	33.01	3.97	23.2	36.44	54	17.56
7.386	36.57	V	Peak	36.77	4.42	25.9	51.86	74	22.14
7.386	25.57	V	Average	36.77	4.42	25.9	40.86	54	13.14
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
4Fo - 10Fo	9.668 - 24.120	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
4Fo - 10Fo	9.784 - 24.370	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
4Fo - 10Fo	9.848 - 24.620	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11g @ 54Mb) with IX600 Vehicle Mount & MAXRAD Model: MAXC24503 - (3 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.1053

Frequency Range Observed: 0 to 25 GHz

Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Horizontal**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horiz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBu/V	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	34.61	H	Peak	32.45	3.97	23.2	47.83	74	26.17
4.824	21.99	H	Average	32.45	3.97	23.2	35.21	54	18.79
7.236	37.05	H	Peak	36.35	4.42	25.9	51.92	74	22.08
7.236	24.53	H	Average	36.35	4.42	25.9	39.40	54	14.60
<b>Fo - 2.437</b>									
4.874	33.88	H	Peak	32.60	3.97	23.2	47.25	74	26.75
4.874	21.67	H	Average	32.60	3.97	23.2	35.04	54	18.96
7.311	37.35	H	Peak	36.57	4.42	25.9	52.44	74	21.56
7.311	35.61	H	Average	36.57	4.42	25.9	40.70	54	13.30
<b>Fo - 2.462</b>									
4.924	34.09	H	Peak	33.01	3.97	23.2	47.87	74	26.13
4.924	22.33	H	Average	33.01	3.97	23.2	36.11	54	17.89
7.386	37.36	H	Peak	36.77	4.42	25.9	52.65	74	21.35
7.386	25.71	H	Average	36.77	4.42	25.9	41.00	54	13.00
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
4Fo - 10Fo	9.648 - 24.120	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
4Fo - 10Fo	9.748 - 24.370	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
4Fo - 10Fo	9.848 - 24.620	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				



### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11g @ 54Mb) with IX600 Vehicle Mount & Model: BMAXC24505 - (5 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.105

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Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Vertical**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBu/V	Ant. Vert. or Horz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBuV	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	34.06	V	Peak	32.45	3.97	23.2	47.28	74	26.72
4.824	21.37	V	Average	32.45	3.97	23.2	34.59	54	19.41
7.236	37.11	V	Peak	36.35	4.42	25.9	51.98	74	22.02
7.236	24.90	V	Average	36.35	4.42	25.9	39.77	54	14.23
<b>Fo - 2.437</b>									
4.874	33.41	V	Peak	32.60	3.97	23.2	46.78	74	27.22
4.874	21.54	V	Average	32.60	3.97	23.2	34.91	54	19.09
7.311	37.48	V	Peak	36.57	4.42	25.9	52.57	74	21.43
7.311	25.12	V	Average	36.57	4.42	25.9	40.21	54	13.79
<b>Fo - 2.462</b>									
4.924	33.94	V	Peak	33.01	3.97	23.2	47.72	74	26.28
4.924	22.16	V	Average	33.01	3.97	23.2	35.94	54	18.06
7.386	37.85	V	Peak	36.77	4.42	25.9	53.14	74	20.86
7.386	25.58	V	Average	36.77	4.42	25.9	40.87	54	13.13
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed			Limit 74 dBuV/m Peak & 54 dBuV/m Average				
Low Ch.	2.412								
<b>4Fo - 10Fo</b>	<b>9.668 - 24.120</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
Mid Ch.	2.437								
<b>4Fo - 10Fo</b>	<b>9.784 - 24.370</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				
High Ch.	2.4620								
<b>4Fo - 10Fo</b>	<b>9.848 - 24.620</b>	None - at or < noise floor @ 1 meter			All emissions < 54 dBuV/m				

### TEST 4: FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11g @ 54Mb) with IX600 Vehicle Mount & MAXRAD Model: BMAXC24505 - (5 dB gain ant.)

Minimum Standard Specified: Part 15.247(c)

Authorization Procedure: Part 2.1053

Frequency Range Observed: 0 to 25 GHz Date: 10/28/05

Test Equipment Setup: Refer to block diagram & setup photos in Appendix A

**Horn Antenna Horizontal**

NOTE: No emissions measurable at 3 meters. Antenna was moved into 1 meter - antenna to EUT spacing.

RADIATED HARMONIC AND SPURIOUS EMISSIONS & RESTRICTED BANDS									
Frequency GHz	Max. SA Rdg. dBuV	Ant. Vert. or Horiz.	Peak or Average Detector	Antenna Factor dB @ 1 meter	Cable & filter loss dB	Amp Gain	Corrected Reading dBuV/m	3 m Limit 74 Peak 54 Avg. dBuV	Margin in dB below LIMIT
<b>Fo - 2.412</b>									
4.824	33.19	H	Peak	32.45	3.97	23.2	46.61	74	27.59
4.824	21.05	H	Average	32.45	3.97	23.2	34.25	54	19.75
7.236	36.28	H	Peak	36.35	4.42	25.9	51.15	74	22.85
7.236	24.94	H	Average	36.35	4.42	25.9	39.81	54	14.19
<b>Fo - 2.437</b>									
4.874	33.08	H	Peak	32.60	3.97	23.2	46.45	74	27.55
4.874	21.18	H	Average	32.60	3.97	23.2	34.55	54	19.45
7.311	36.84	H	Peak	36.57	4.42	25.9	51.93	74	22.07
7.311	24.92	H	Average	36.57	4.42	25.9	40.01	54	13.99
<b>Fo - 2.462</b>									
4.924	33.75	H	Peak	33.01	3.97	23.2	47.53	74	26.47
4.924	22.03	H	Average	33.01	3.97	23.2	35.81	54	18.19
7.386	37.27	H	Peak	36.77	4.42	25.9	52.56	74	21.44
7.386	25.42	H	Average	36.77	4.42	25.9	40.71	54	13.29
<b>Harmonic emissions on all three channels (low, mid &amp; high) 4Fo - 10Fo at or below noise floor</b>									
Channel	Frequency in GHz	Harmonics Observed					Limit 74 dBuV/m Peak & 54 dBuV/m Average		
Low Ch.	2.412								
4Fo - 10Fo	9.648 - 24.120	None - at or < noise floor @ 1 meter					All emissions < 54 dBuV/m		
Mid Ch.	2.437								
4Fo - 10Fo	9.748 - 24.370	None - at or < noise floor @ 1 meter					All emissions < 54 dBuV/m		
High Ch.	2.4620								
4Fo - 10Fo	9.848 - 24.620	None - at or < noise floor @ 1 meter					All emissions < 54 dBuV/m		

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11b @ 11Mb) with IX600 Vehicle Mount & Model: MAXC24503 - (3 dB gain antenna)

**Minimum Standard Specified:** Part 15.247(c), 15.205 & 15.209. Radiated emissions, which fall in the restricted bands, as defined in Part 15.205(a), must also comply with the radiated emission limits specified in Part 15.209(a). All others must be < -20dBc.

Spectrum OATS at Fluke Park II

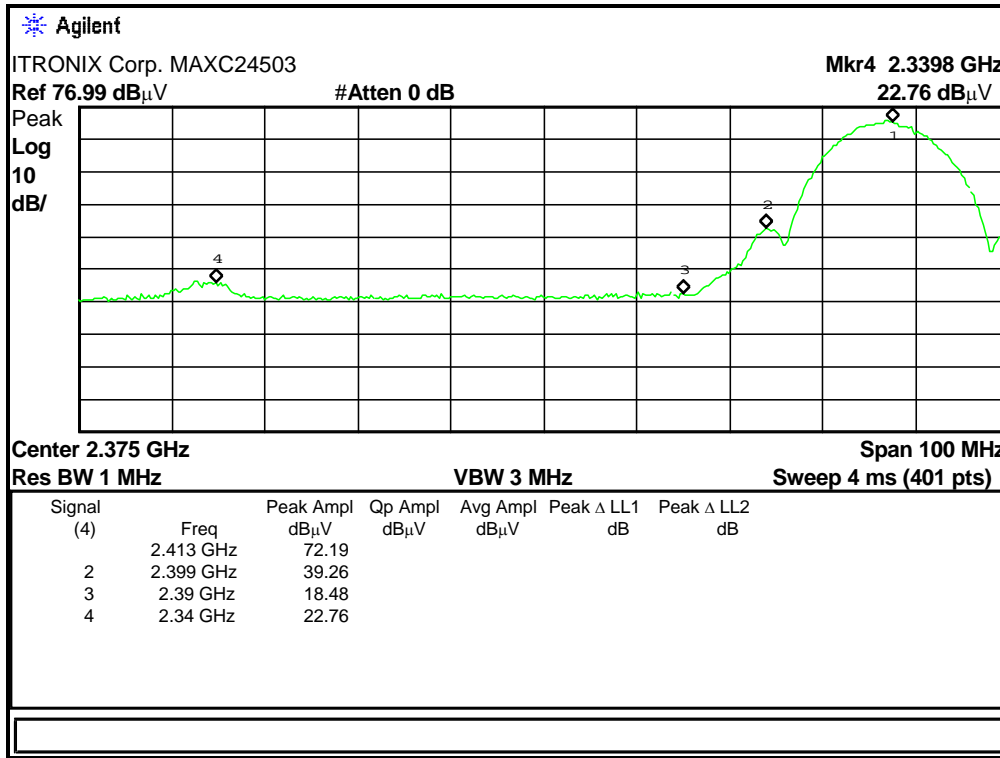
Test Date: 10/28/05

#### Maximum Field Strength for Low, Mid, High Channels and Band Edges

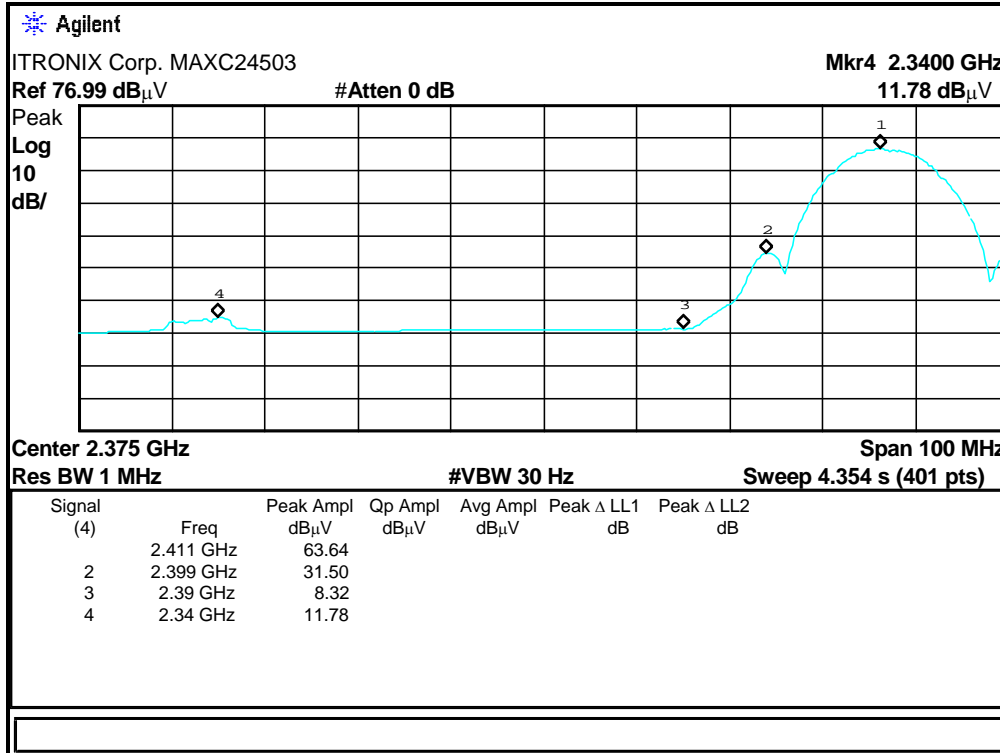
WLAN Channels 1, 6 & 11 Frequency in MHz	Ant. Vert/ Horz	Spectrum Analyzer Reading dBuV	Ant Factor	SA Amp Gain	Cable Loss	dBuV/m @ 3 meters	Spur. Limit	Margin dB
Channel 1 2412.0	V	72.19 PEAK	28.37	inc	2.68	103.24		
Channel 1 2412.0	V	63.64 AVG	28.37	inc	2.68	94.69		
Rest. Band Edge 2390.0	V	18.48 PEAK	28.37	inc	2.68	49.53	74	24.47
Rest. Band Edge 2390.0	V	8.32 AVG	28.37	inc	2.68	39.37	54	14.63
Highest Level 2399.0	V	39.26 PEAK	28.37	inc	2.68	70.31	20 dBc	12.93
Highest Level 2399.0	V	31.50 AVG	28.37	inc	2.68	62.55	20 dBc	12.14
Rest. Band 2340.0	V	22.76 PEAK	28.37	inc	2.68	53.81	74	20.19
Rest. Band 2340.0	V	11.78 AVG	28.37	inc	2.68	42.83	54	11.17
Channel 6 2437.0	V	77.68 PEAK	28.37	inc	2.68	108.73		
Channel 6 2437.0	V	69.76 AVG	28.37	inc	2.68	100.81		
Channel 11 2462.0	V	76.04 PEAK	28.37	inc	2.68	107.09		
Channel 11 2462.0	V	68.09 AVG	28.37	inc	2.68	99.14		
Rest. Band Edge 2483.5	V	22.09 PEAK	28.37	inc	2.68	53.14	74	20.86
Rest. Band Edge 2483.5	V	10.81 AVG	28.37	inc	2.68	41.86	54	12.14
Highest Level 2486.0	V	22.09 PEAK	28.37	inc	2.68	53.87	20 dBc	33.95
Highest Level 2487.0	V	10.52 AVG	28.37	inc	2.68	41.57	20 dBc	37.57

Supporting upper and lower band-edge plots with "worst" case Vertical antenna polarization are on the next 2 pages.

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL

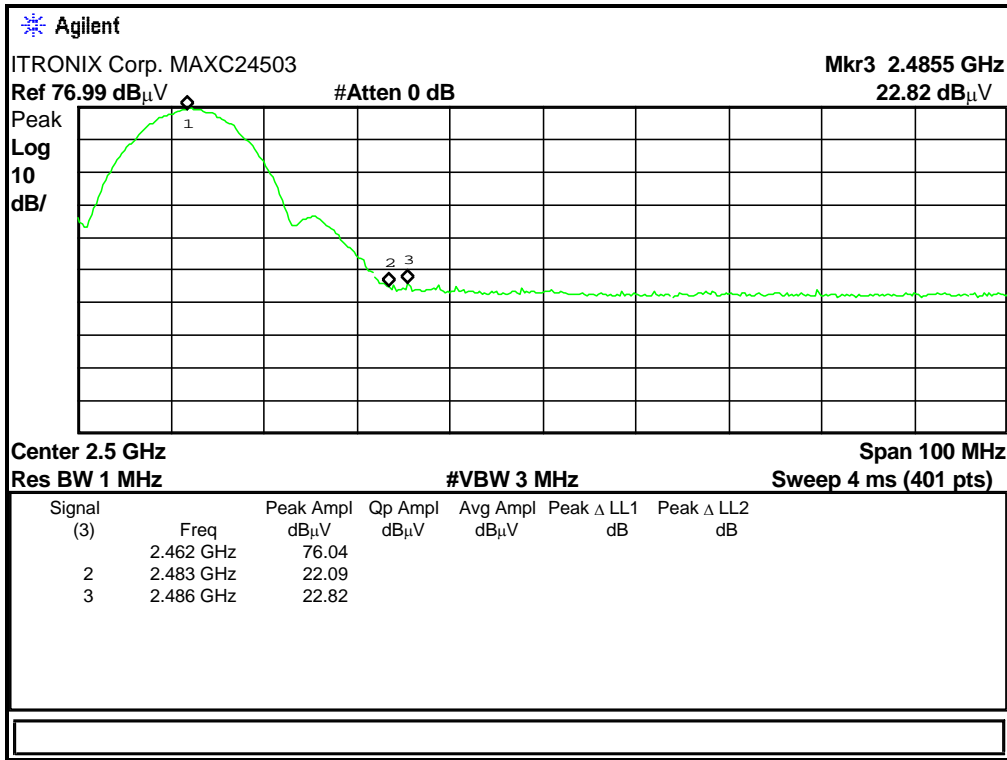


PEAK

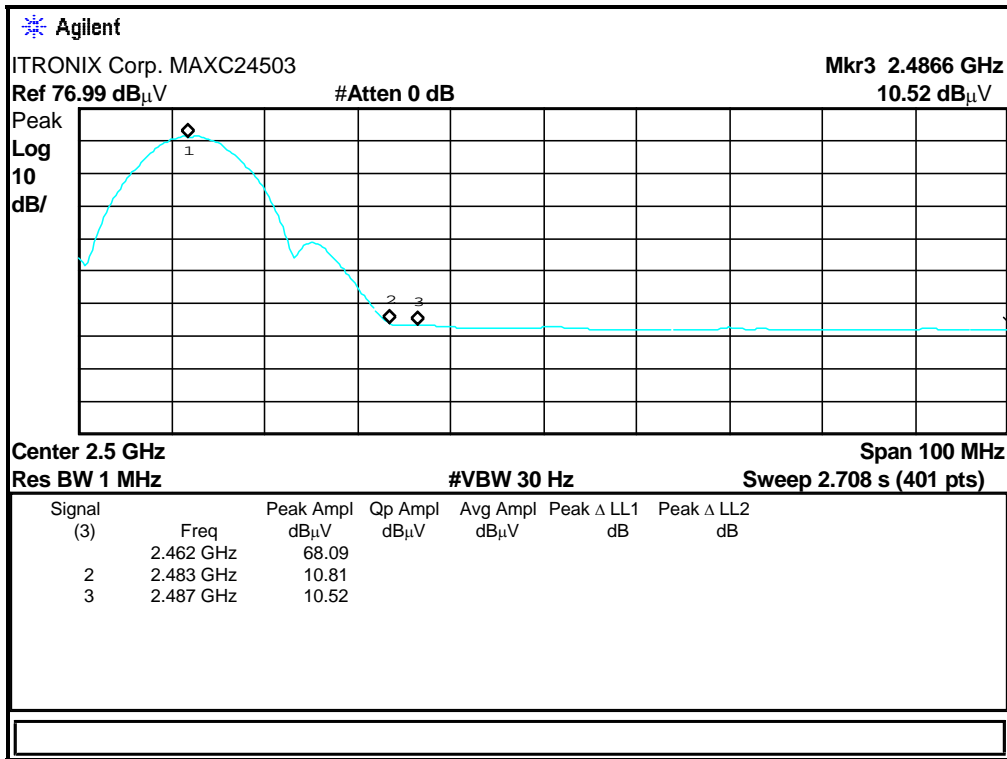


AVERAGE

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL



PEAK



AVERAGE

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11b @ 11Mb) with IX600 Vehicle Mount & Model: BMAXC24505 - (5 dB gain antenna)

**Minimum Standard Specified:** Part 15.247(c), 15.205 & 15.209. Radiated emissions, which fall in the restricted bands, as defined in Part 15.205(a), must also comply with the radiated emission limits specified in Part 15.209(a). All others must be < -20dBc.

Spectrum OATS at Fluke Park II

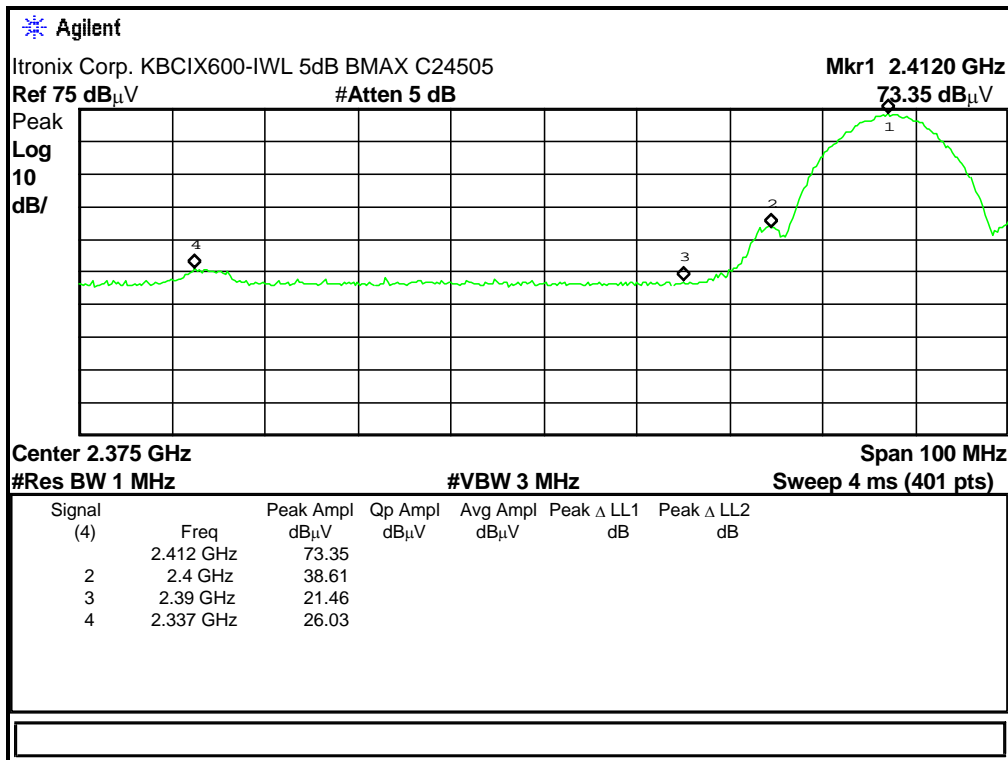
Test Date: 10/28/05

#### Maximum Field Strength for Low, Mid, High Channels and Band Edges

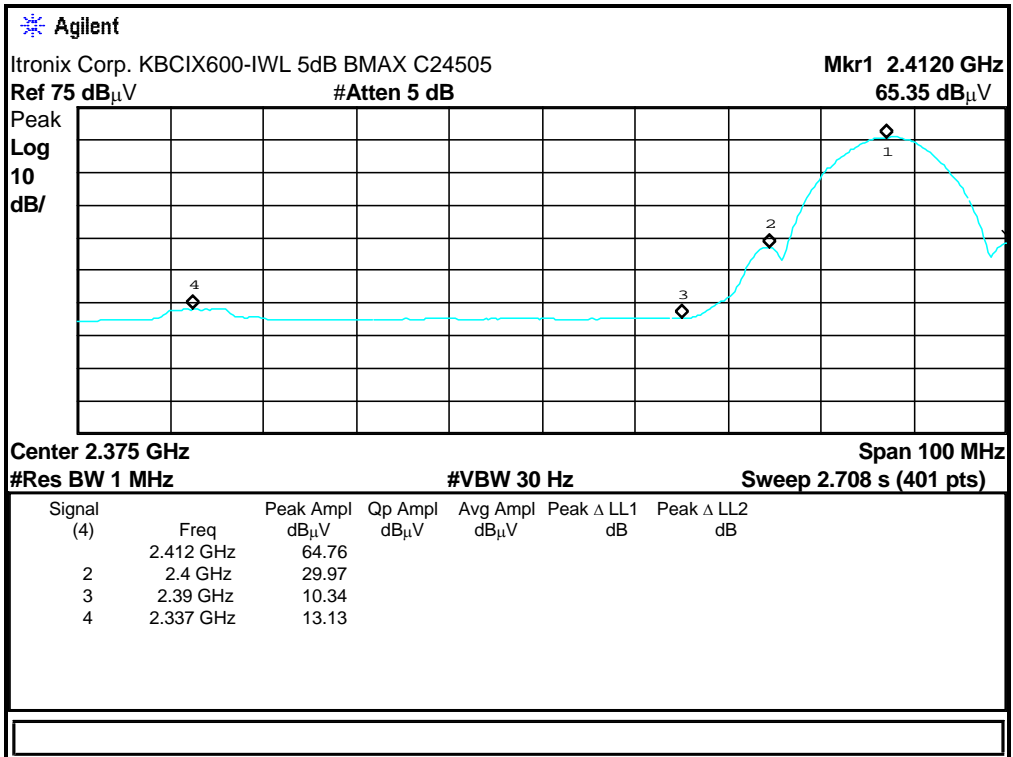
WLAN Channels 1, 6 & 11 Frequency in MHz	Ant. Vert/ Horz	Spectrum Analyzer Reading dBuV	Ant Factor	SA Amp Gain	Cable Loss	dBuV/m @3meters	Spurious Limit dBuV/m or 20 dBc	Margin dB
Channel 1 2412.0	V	73.25 PEAK	28.37	inc	2.68	104.30		
Channel 1 2412.0	V	64.76 AVG	28.37	inc	2.68	95.81		
Rest. Band Edge 2390.0	V	21.46 PEAK	28.37	inc	2.68	52.51	74	21.49
Rest. Band Edge 2390.0	V	10.31 AVG	28.37	inc	2.68	41.39	54	12.61
Highest Level 2400.0	V	38.61 PEAK	28.37	inc	2.68	69.66	20 dBc	14.64
Highest Level 2400.0	V	29.97 AVG	28.37	inc	2.68	61.02	20 dBc	14.79
Restricted Band 2337.0	V	26.03 PEAK	28.37	inc	2.68	57.08	74	16.92
Restricted Band 2337.0	V	13.13 AVG	28.37	inc	2.68	44.18	54	9.82
Channel 6 2437.0	V	77.20 PEAK	28.37	inc	2.68	108.25		
Channel 6 2437.0	V	69.07 AVG	28.37	inc	2.68	100.41		
Channel 11 2462.0	V	76.99 PEAK	28.37	inc	2.68	107.90		
Channel 11 2462.0	V	69.07 AVG	28.37	inc	2.68	100.12		
Rest. Band Edge 2483.5	V	19.83 PEAK	28.37	inc	2.68	50.88	74	23.12
Rest. Band Edge 2483.5	V	10.50 AVG	28.37	inc	2.68	41.55	54	12.45
Restricted Band 2488.0	V	19.69 PEAK	28.37	inc	2.68	50.74	74	23.26
Restricted Band 2488.0	V	10.01 AVG	28.37	inc	2.68	41.06	54	12.94
Highest Lvl Rest. B 2500.0	V	21.49 PEAK	28.37	inc	2.68	52.54	74	21.46
Highest Lvl Rest. B 2500.0	V	10.87 AVG	28.37	inc	2.68	41.92	54	12.08

Supporting upper and lower band-edge plots with "worst" case Vertical antenna polarization are on the next 2 pages.

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL

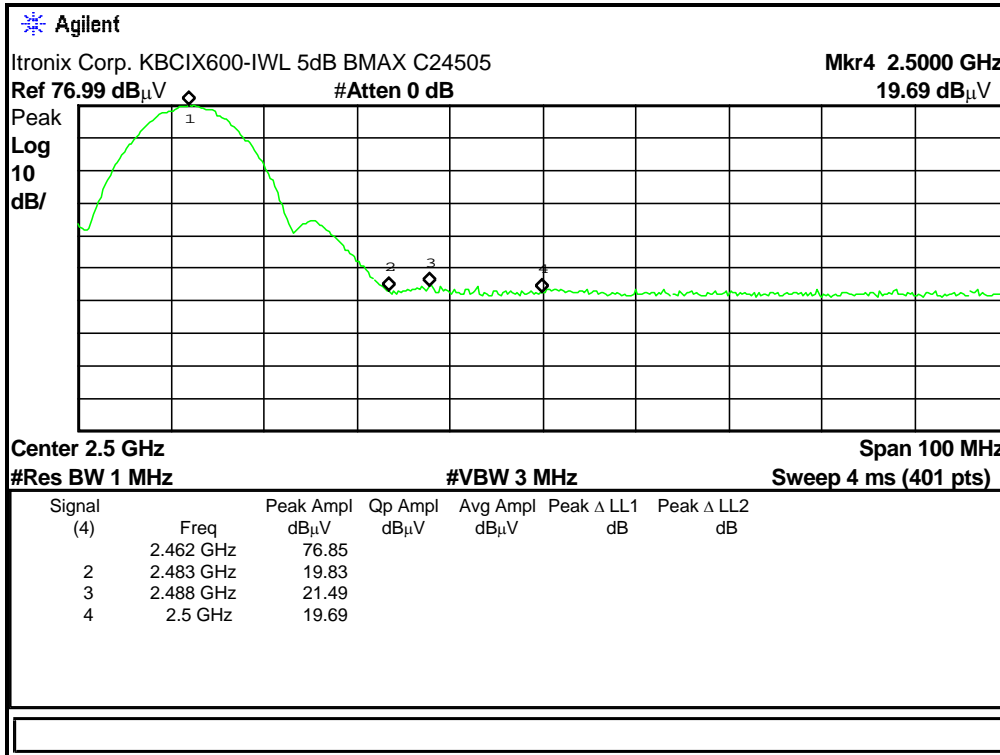


PEAK

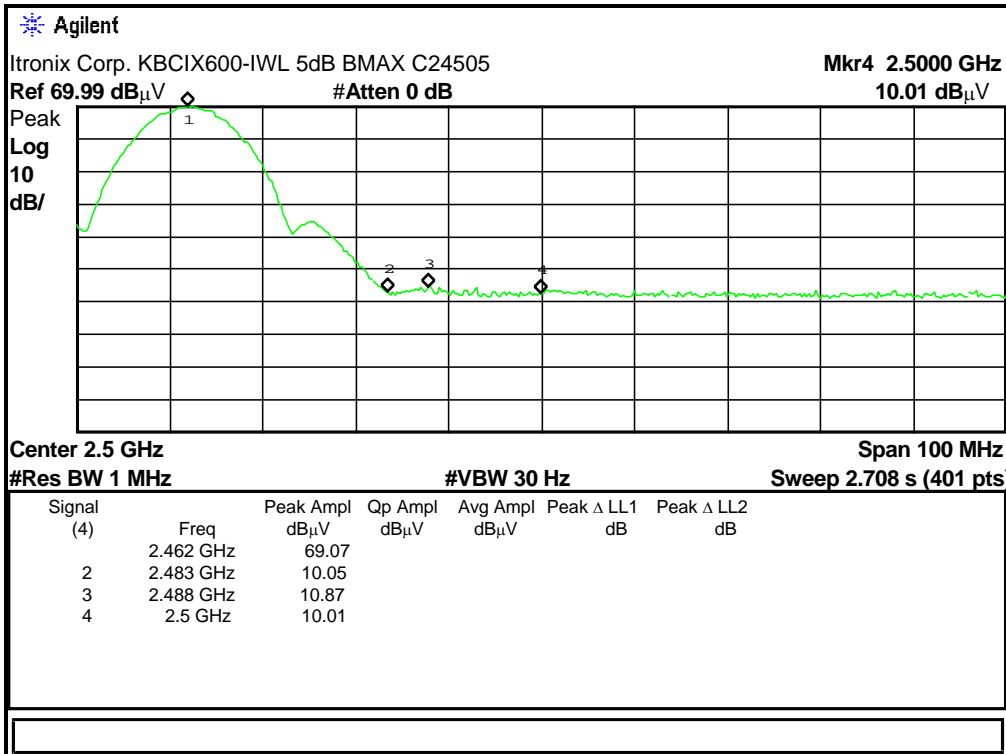


AVERAGE

**TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL**



**PEAK**



**AVERAGE**



### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11g @ 54Mb) with IX600 Vehicle Mount & Model: MAXC24503 - (3 dB gain antenna)

**Minimum Standard Specified:** Part 15.247(c), 15.205 & 15.209. Radiated emissions, which fall in the restricted bands, as defined in Part 15.205(a), must also comply with the radiated emission limits specified in Part 15.209(a). All others must be < -20dBc.

Spectrum OATS at Fluke Park II

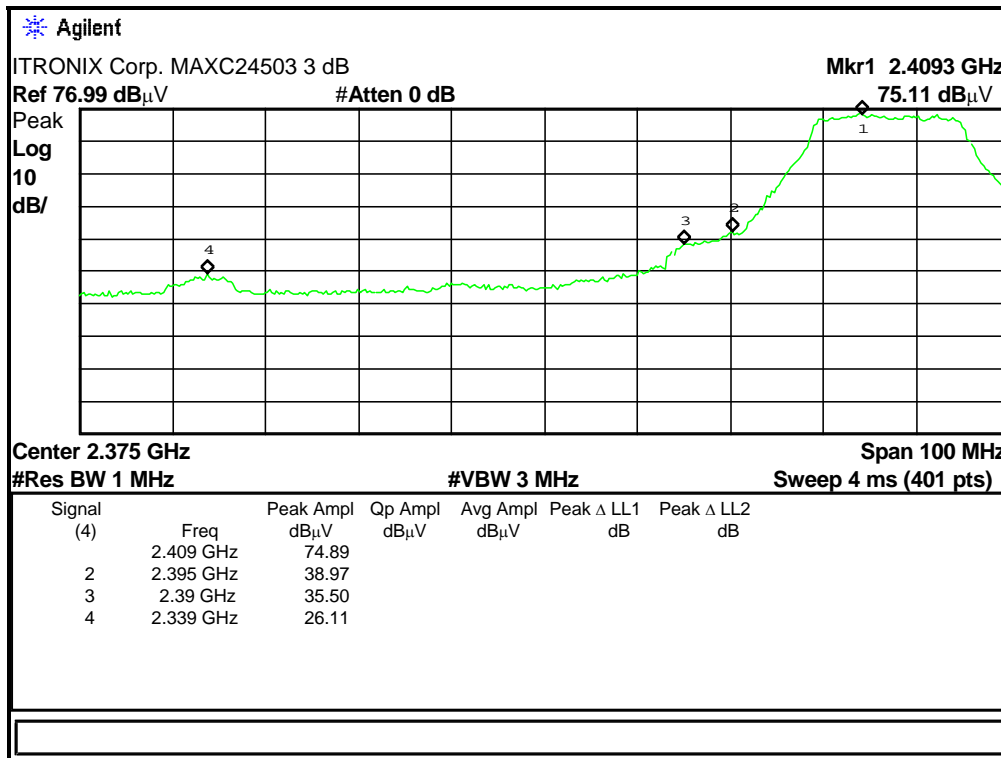
Test Date: 10/28/05

#### Maximum Field Strength for Low, Mid, High Channels and Band Edges

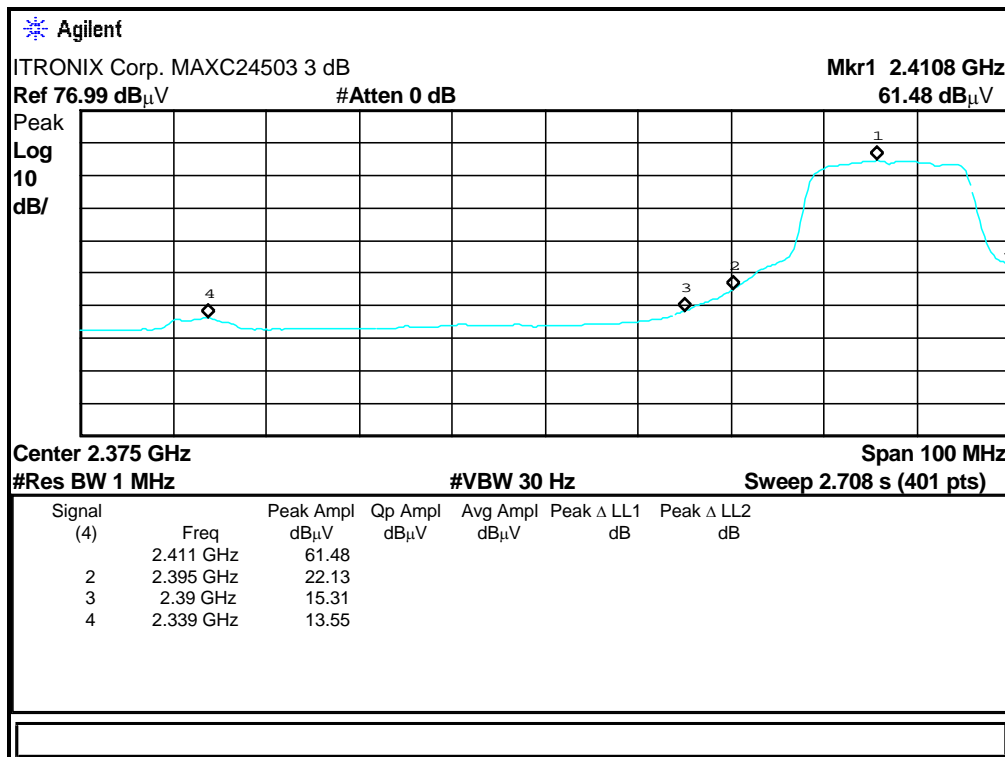
WLAN Channels 1, 6 & 11 Frequency in MHz	Ant. Vert/ Horz	Spectrum Analyzer Reading dBuV	Ant Factor	SA Amp Gain	Cable Loss	dBuV/m @ 3 meters	Spur. Limit	Margin dB
Channel 1 2412.0	V	74.89 PEAK	28.37	inc	2.68	105.94		
Channel 1 2412.0	V	61.48 AVG	28.37	inc	2.68	92.53		
Rest. Band Edge 2390.0	V	35.50 PEAK	28.37	inc	2.68	66.55	74	7.45
Rest. Band Edge 2390.0	V	15.31 AVG	28.37	inc	2.68	46.36	54	7.64
Highest Level 2395.0	V	38.97 PEAK	28.37	inc	2.68	70.02	20 dBc	15.95
Highest Level 2395.0	V	22.13 AVG	28.37	inc	2.68	53.18	20 dBc	19.35
Rest. Band 2339.0	V	26.11 PEAK	28.37	inc	2.68	57.14	74	16.86
Rest. Band 2339.0	V	13.55 AVG	28.37	inc	2.68	44.60	54	9.40
Channel 6 2437.0	V	74.48 PEAK	28.37	inc	2.68	108.53		
Channel 6 2437.0	V	64.25 AVG	28.37	inc	2.68	95.30		
Channel 11 2462.0	V	75.60 PEAK	28.37	inc	2.68	106.65		
Channel 11 2462.0	V	63.58 AVG	28.37	inc	2.68	94.63		
Rest. Band Edge 2483.5	V	28.36 PEAK	28.37	inc	2.68	59.41	74	14.59
Rest. Band Edge 2483.5	V	11.69 AVG	28.37	inc	2.68	42.74	54	11.26
Highest Level 2495.0	V	25.45 PEAK	28.37	inc	2.68	56.50	20 dBc	17.50
Highest Level 2495.0	V	12.53 AVG	28.37	inc	2.68	43.58	20 dBc	10.42

Supporting upper and lower band-edge plots with "worst" case Vertical antenna polarization, are on the next 2 pages.

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL

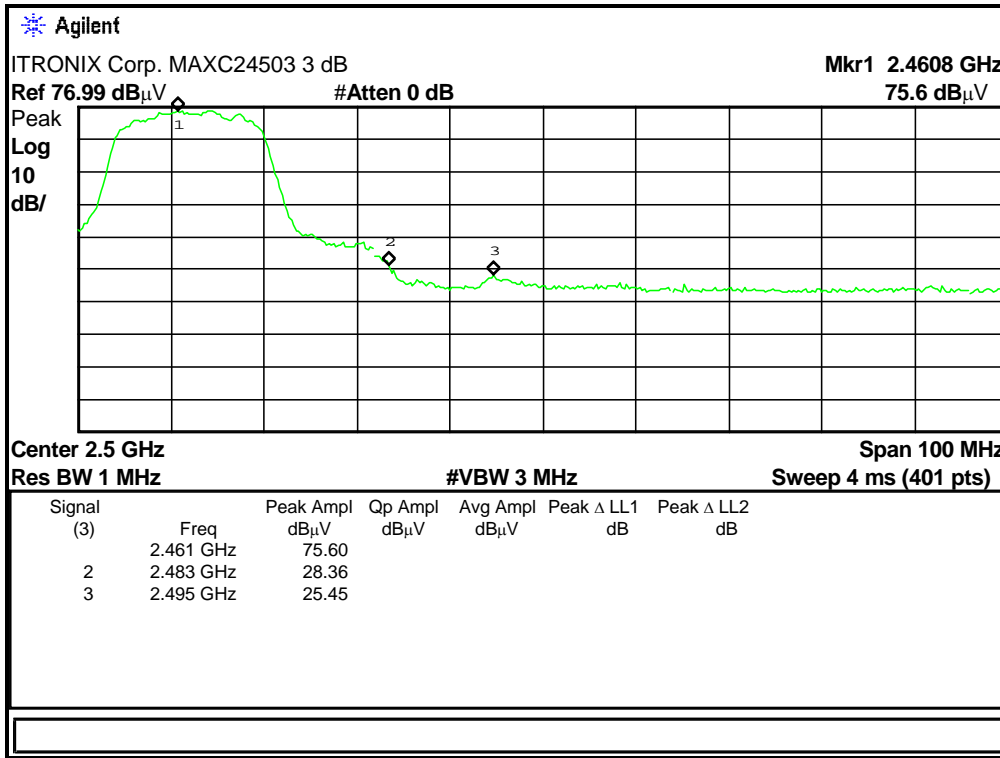


PEAK

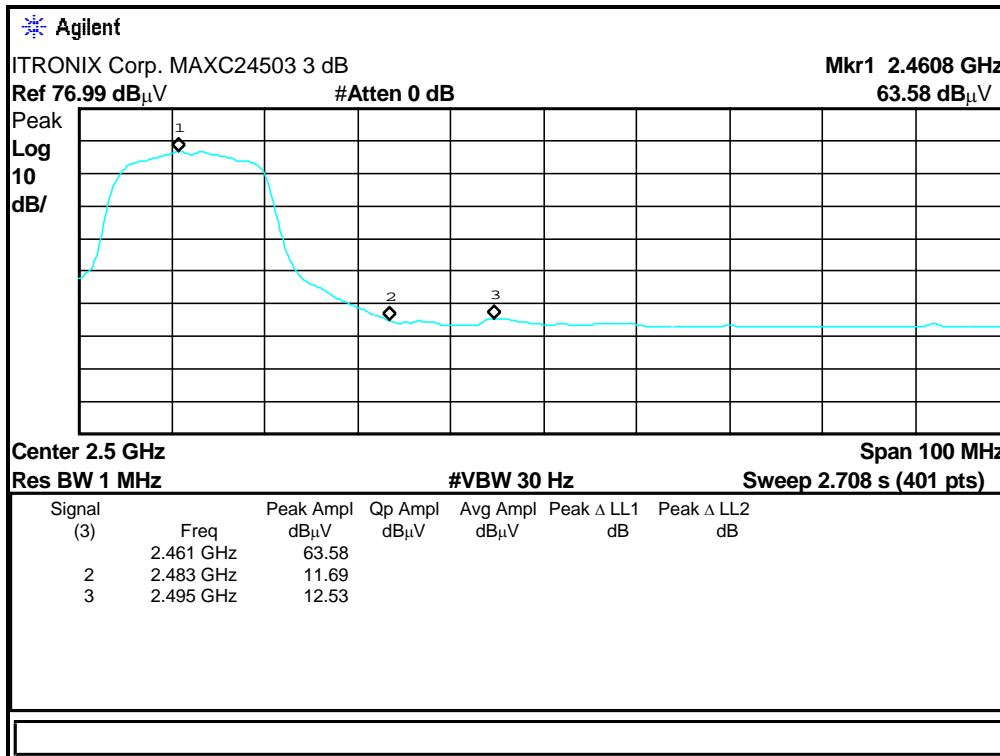


AVERAGE

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL



PEAK



AVERAGE

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES

**FCC ID:** KBCIX600-IWL

**Applicant:** Itronix, Corporation

**Model:** IX600-IWL - (802.11g @ 54Mb) with IX600 Vehicle Mount & Model: BMAXC24505 - (5 dB gain antenna)

**Minimum Standard Specified:** Part 15.247(c), 15.205 & 15.209. Radiated emissions, which fall in the restricted bands, as defined in Part 15.205(a), must also comply with the radiated emission limits specified in Part 15.209(a). All others must be < -20dBc.

Spectrum OATS at Fluke Park II

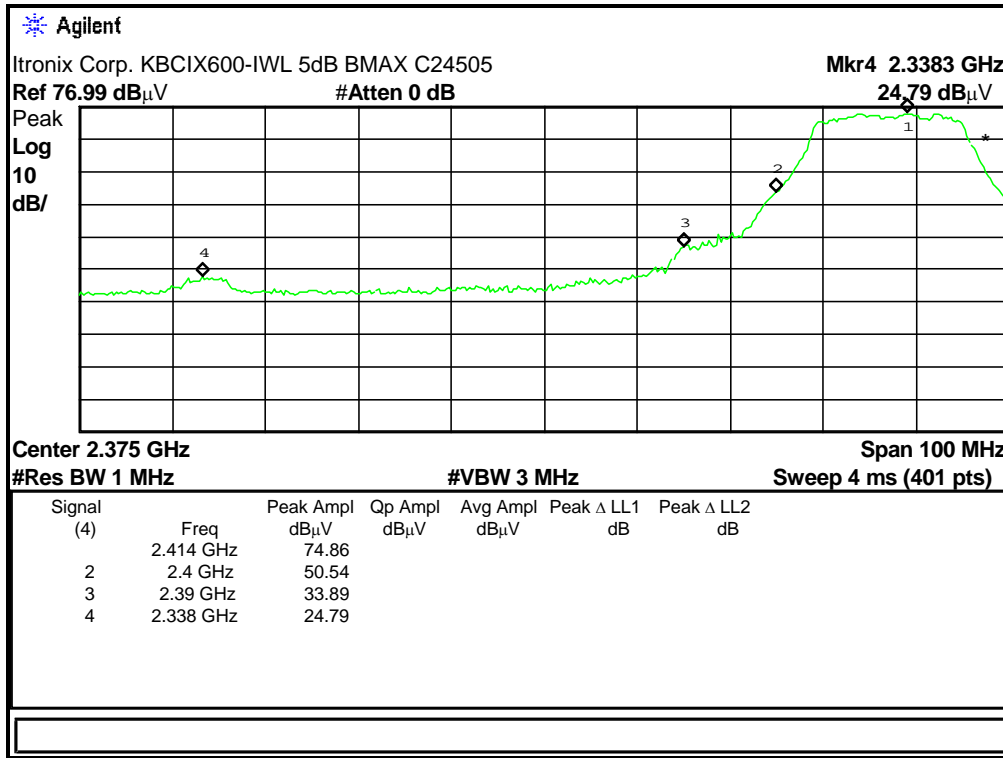
Test Date: 10/28/05

#### Maximum Field Strength for Low, Mid, High Channels and Band Edges

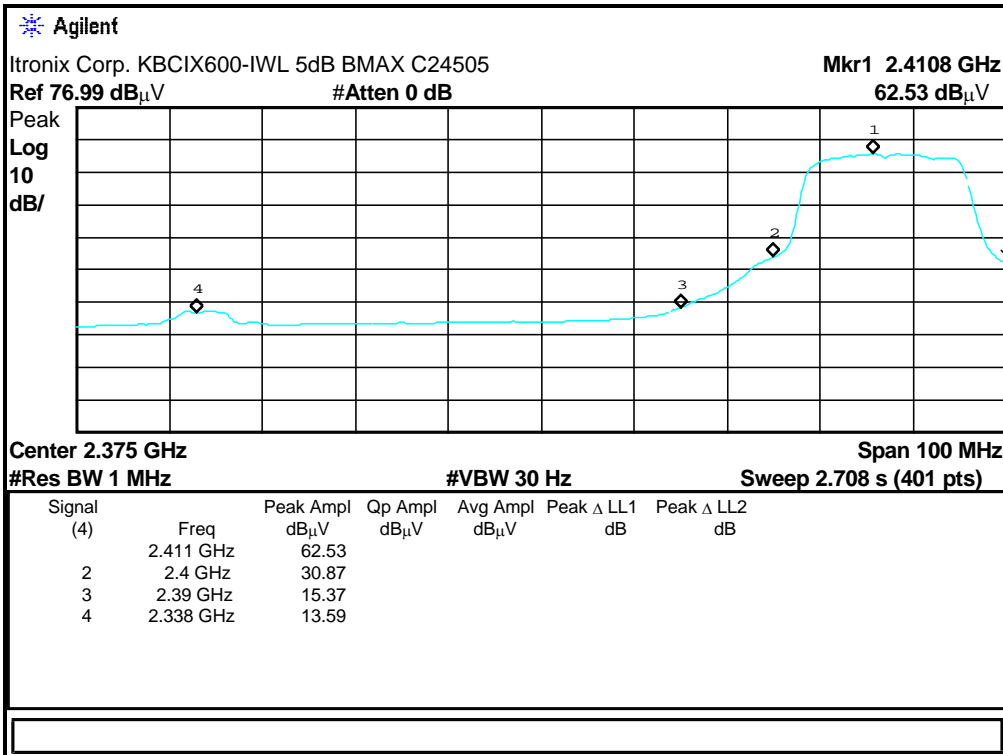
WLAN Channels 1, 6 & 11 Frequency in MHz	Ant. Vert/ Horz	Spectrum Analyzer Reading dBuV	Ant Factor	SA Amp Gain	Cable Loss	dBuV/m @3meters	Spurious Limit dBuV/m or 20 dBc	Margin dB
Channel 1 2412.0	V	74.86 PEAK	28.37	inc	2.68	105.91		
Channel 1 2412.0	V	62.53 AVG	28.37	inc	2.68	93.58		
Rest. Band Edge 2390.0	V	33.89 PEAK	28.37	inc	2.68	64.94	74	9.06
Rest. Band Edge 2390.0	V	15.37 AVG	28.37	inc	2.68	46.42	54	7.58
Highest Level 2400.0	V	50.54 PEAK	28.37	inc	2.68	81.59	20 dBc	4.32
Highest Level 2400.0	V	30.87 AVG	28.37	inc	2.68	61.92	20 dBc	11.66
Restricted Band 2339.0	V	24.79 PEAK	28.37	inc	2.68	55.84	74	18.16
Restricted Band 2339.0	V	13.59 AVG	28.37	inc	2.68	44.64	54	9.36
Channel 6 2437.0	V	75.80 PEAK	28.37	inc	2.68	106.85		
Channel 6 2437.0	V	63.85 AVG	28.37	inc	2.68	94.90		
Channel 11 2462.0	V	76.72 PEAK	28.37	inc	2.68	107.77		
Channel 11 2462.0	V	64.20 AVG	28.37	inc	2.68	95.25		
Rest. Band Edge 2483.5	V	30.17 PEAK	28.37	inc	2.68	61.22	74	12.78
Rest. Band Edge 2483.5	V	13.48 AVG	28.37	inc	2.68	44.53	54	9.47
Restricted Band 2494.0	V	24.81 PEAK	28.37	inc	2.68	55.86	74	18.14
Restricted Band 2494.0	V	13.05 AVG	28.37	inc	2.68	44.20	54	9.80
Highest Lvl Rest. B 2500.0	V	20.73 PEAK	28.37	inc	2.68	51.78	74	22.22
Highest Lvl Rest. B 2500.0	V	10.64 AVG	28.37	inc	2.68	41.69	54	12.31

Supporting upper and lower band-edge plots with "worst" case Vertical antenna polarization are on the next 2 pages.

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL

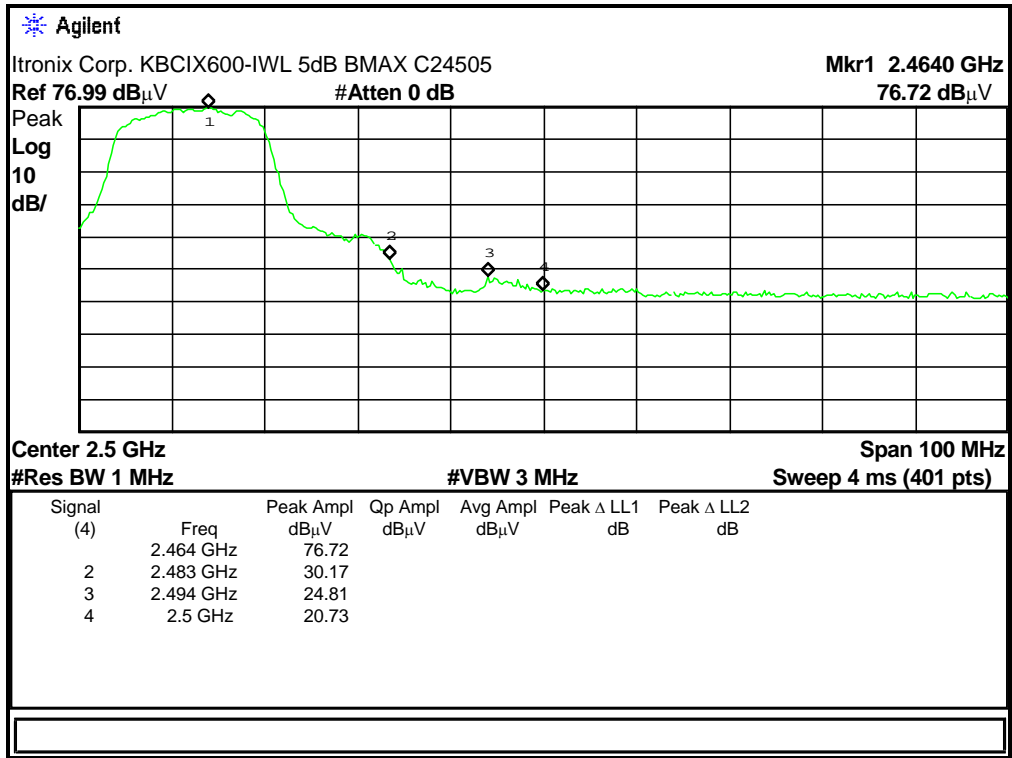


PEAK

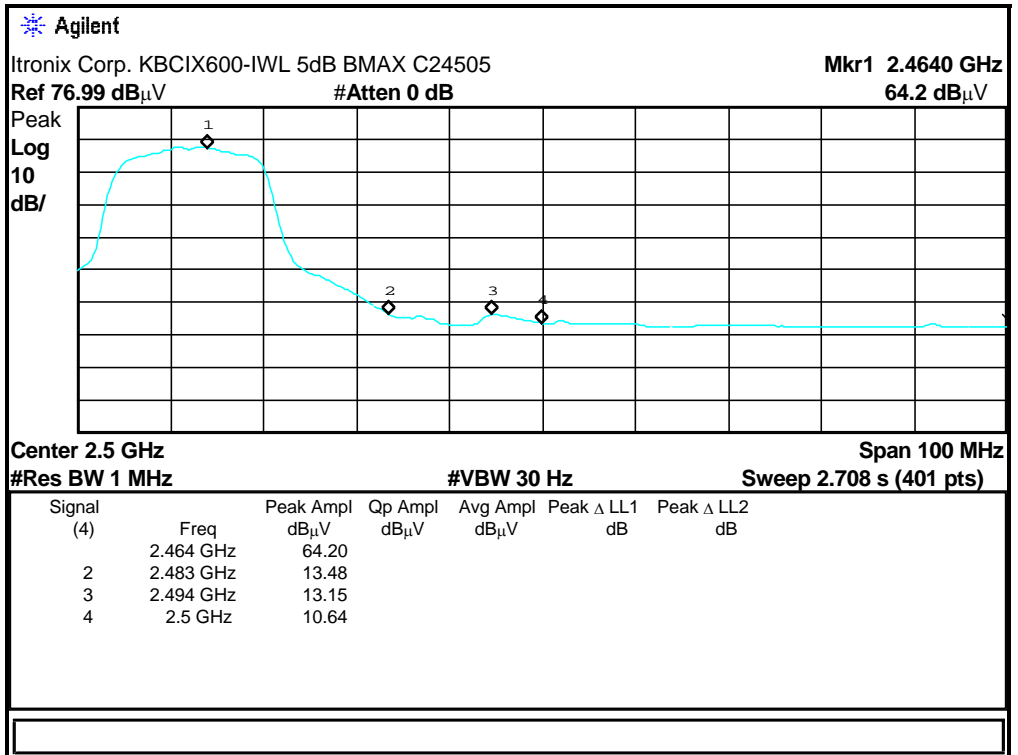


AVERAGE

### TEST 4: FIELD STRENGTH OF FUNDAMENTAL AND BAND EDGES - VERTICAL



PEAK



AVERAGE