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November 19, 2003

Compliance Certification Services
561F Monterey Road,
Morgan Hill, Ca 95037-9001

RE: ITRONIX CORPORATION
FCC ID:KBCIX260MPIA755BT

Gentlemen:

ITRONIX CORPORATION is submitting data for the above referenced rugged laptop PC that contains three co-located transmitters. This data is from the previously filed KBCIX260MPIA750BT test report with the same Bluetooth and WLAN RF devices installed.
The results of the Test Reports referenced below demonstrate the equipment complies with the Part 15 limits.

Reports include EMC measurements of the previously Certified Intentional Radiator, FCC ID:LDK102042, Model MPI350 show continued compliance with the limits established in Part 15.247 for DTS.

Reports include EMC measurements of the previously Certified Intentional Radiator, FCC ID:POOWML-CIIXX, Model: WML-C11NU, confirm compliance with Part 15.247 DSS rules for FHSS.

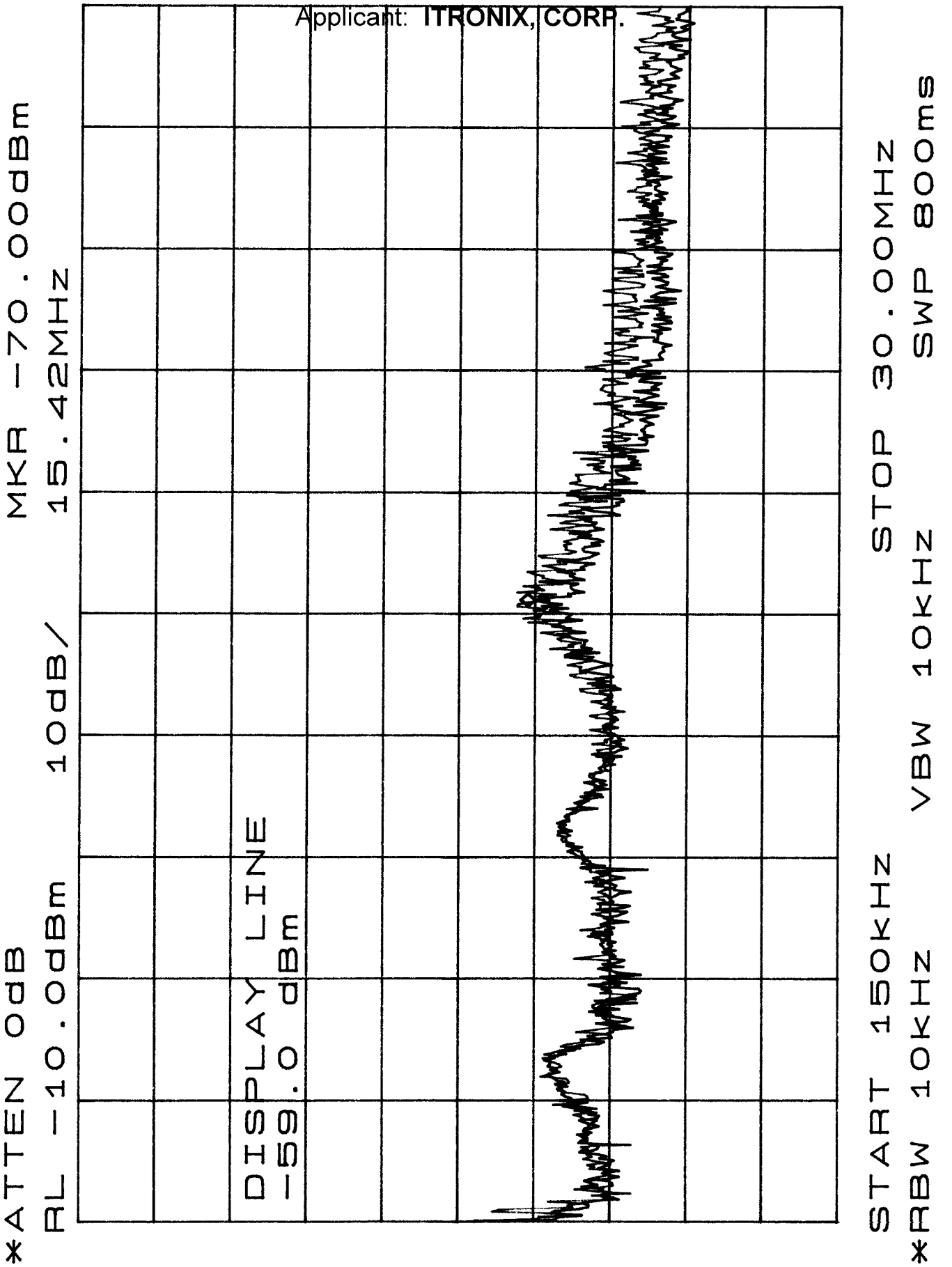
Test Report 1
Test Report 2
Test Report 3
Test Report 4
Test Report 5
Test Report 6
Test Report 7
Test Setup

Sincerely,

Mark Harwood

ITRONIX CORPORATION

Applicant: **ITRONIX, CORP.**



FCC ID: KBCIX260MPIA750BT **AC Power Conducted Emissions Plot 1**
Part 15.207

12 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA

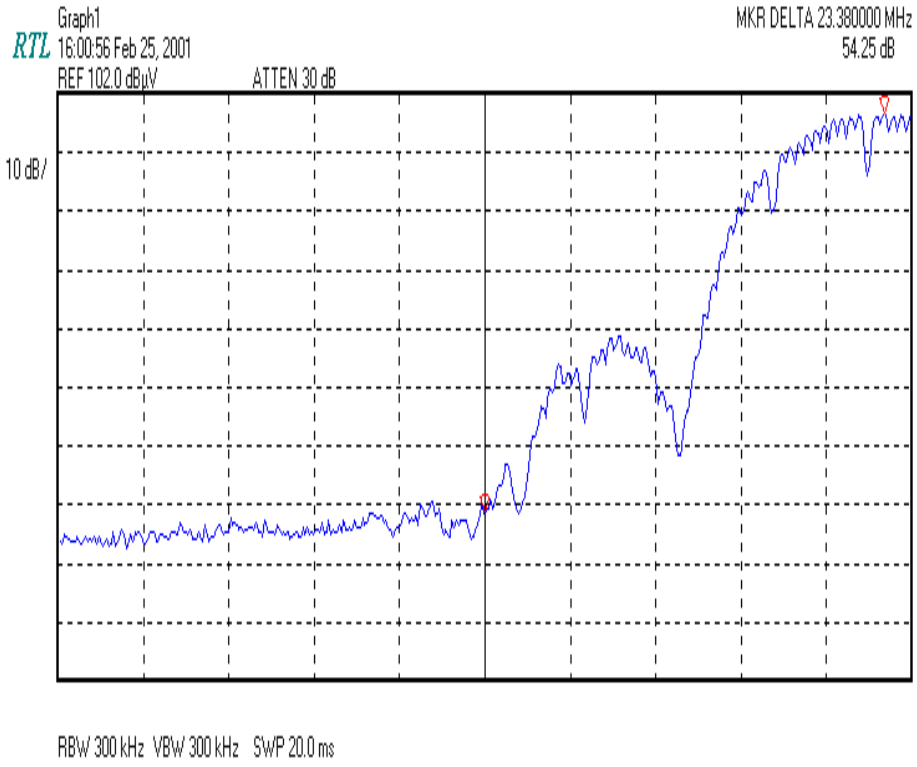
Compliance with the band edges was performed using the FCC's "Radiated Measurement at a Band Edge" guidance document. The final data derived below were from radiated measurements only. The data taken in this report represents the worst case at 11 MBPS. Data rates of 5.5MBPS, 2 MBPS and 1 MBPS were investigated and found to be in compliance. Both absolute and delta method were performed with the same results.

TABLE 28: RESTRICTED BAND EDGE

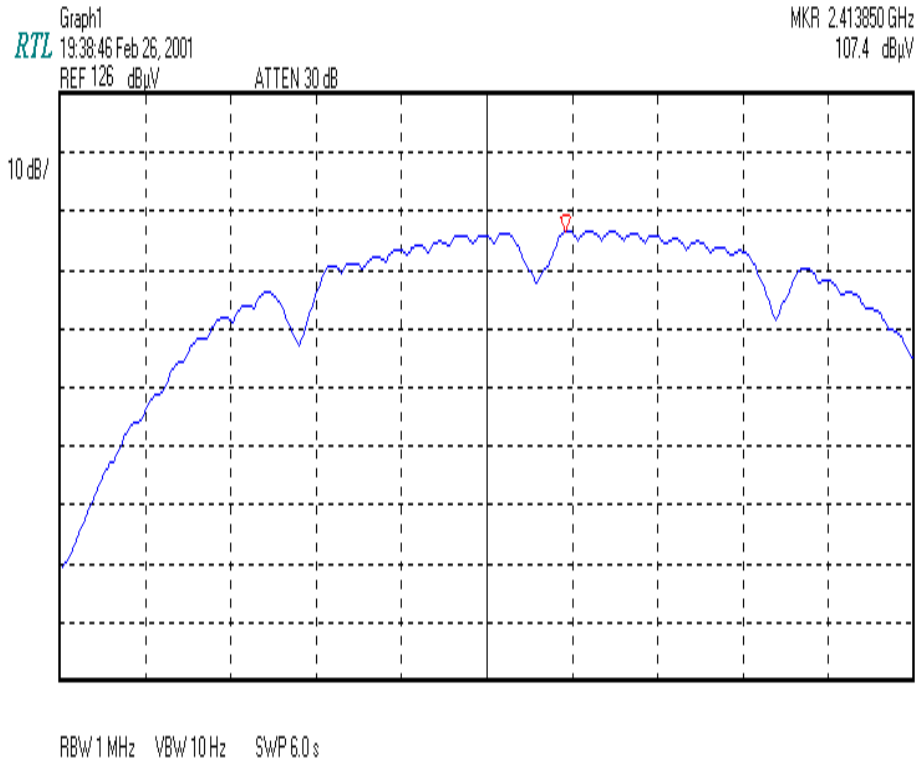
Band edge Measurement					
Antenna	**Channel Set to**	**Frequency tested MHz**	**Field Strength Level (dBµV/m)**	**FCC Limit (dBµV/m)**	**FCC Margin (dB)**
Cisco Dipole	1	2390.0	53.1	54.0	-0.9
	11	2483.5	53.9	54.0	-0.1
Dell Dipole	1	2390.0	41.4	54.0	-12.6
	11	2483.5	52.4	54.0	-1.6
Dell Inverted F	1	2390.0	40.4	54.0	-13.6
	11	2483.5	46.9	54.0	-7.1
Toshiba Chip	1	2390.0	37.9	54.0	-16.1
	11	2483.5	47.2	54.0	-6.8
Toshiba Inverted F	1	2390.0	39.8	54.0	-14.2
	11	2483.5	50.2	54.0	-3.8

15 BANDEDGE PLOTS

PLOT 1: CHANNEL 1 CISCO DIPOLE ANTENNA 1MHZ/10HZ

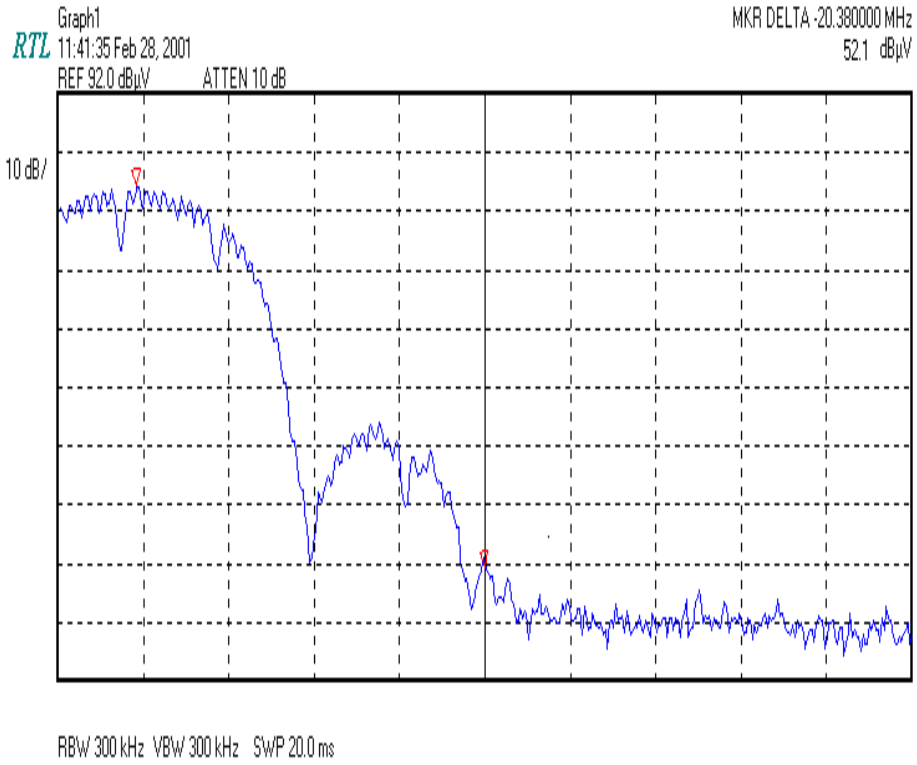


PLOT 2: CHANNEL 1 CISCO DIPOLE ANTENNA

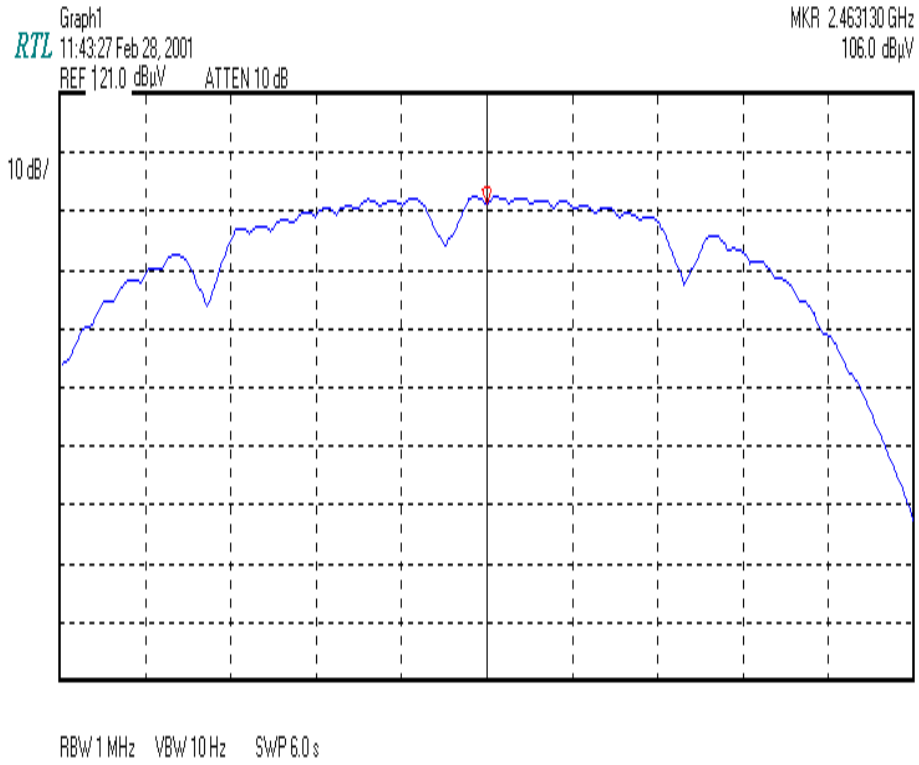


Note site factor entered into analyzer register for corrected final result.

PLOT 3: CHANNEL 11 CISCO DIPOLEANTENNA

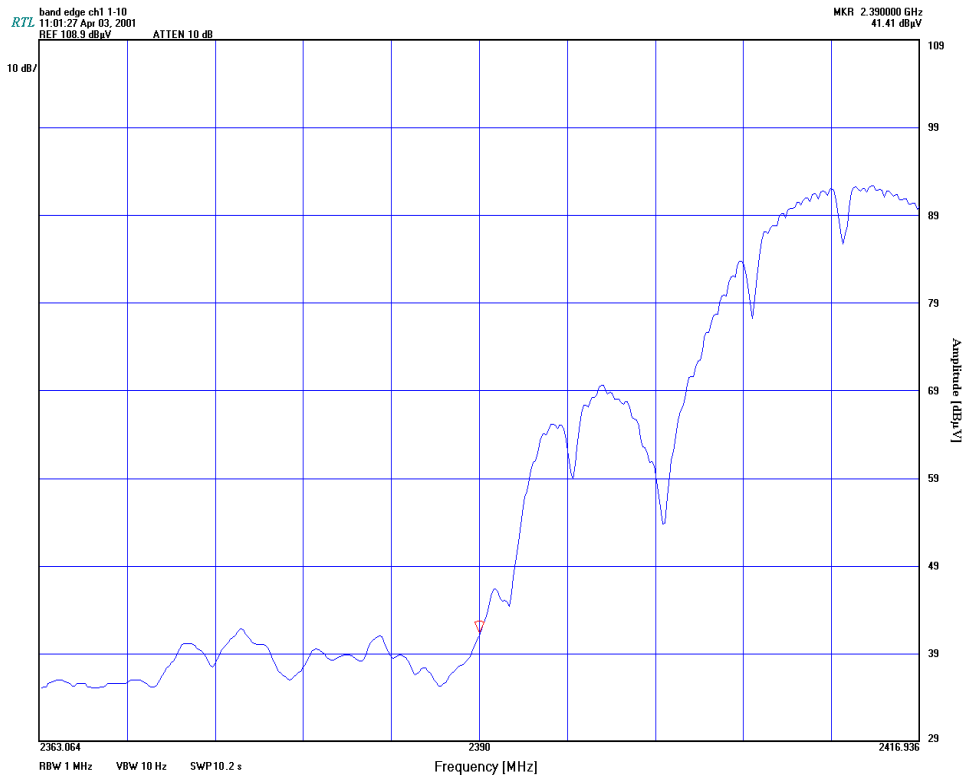


PLOT 4: CHANNEL 11 CISCO DIPOLE ANTENNA

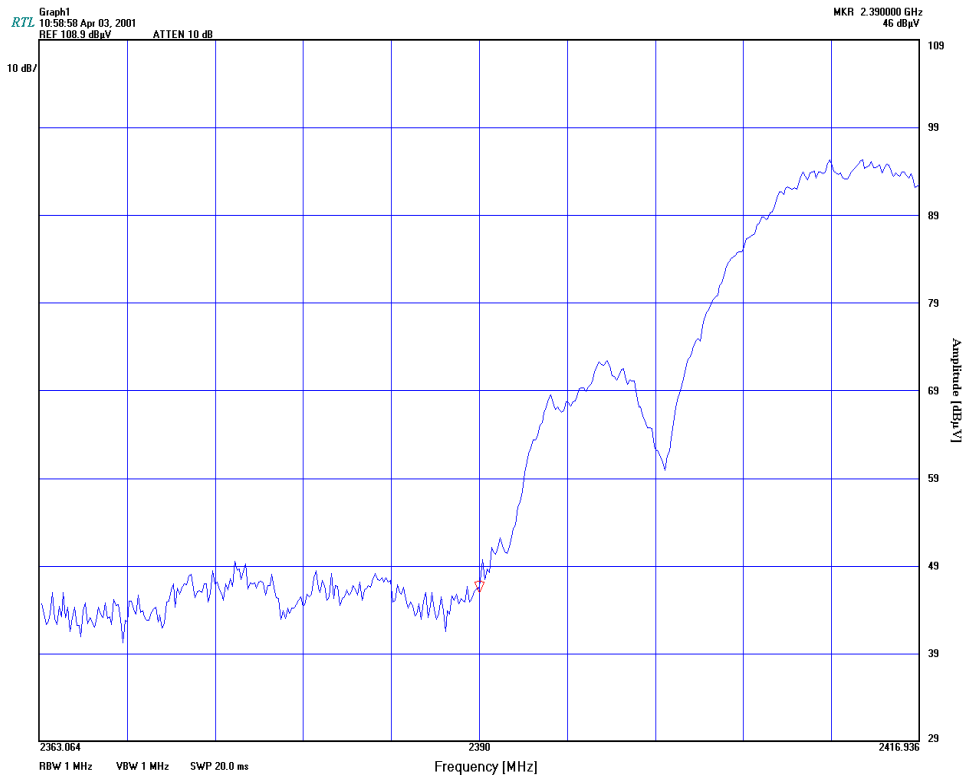


Note site factor entered into analyzer register for corrected final result.

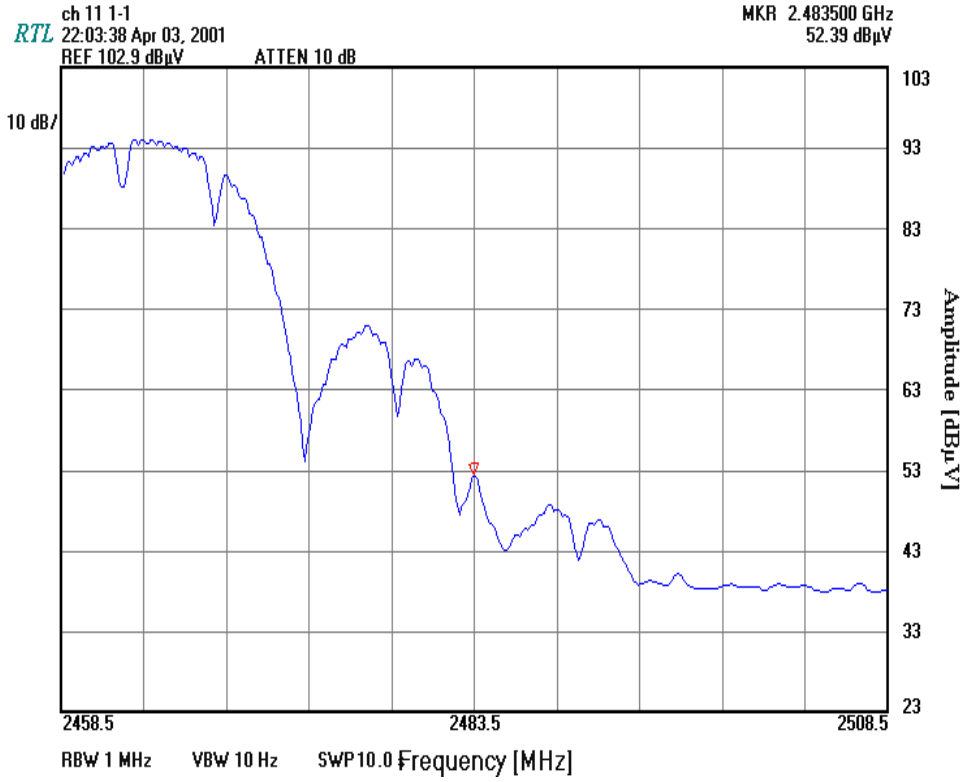
PLOT 5: CHANNEL 1 DELL DIPOLE ANTENNA 1MHZ/10HZ



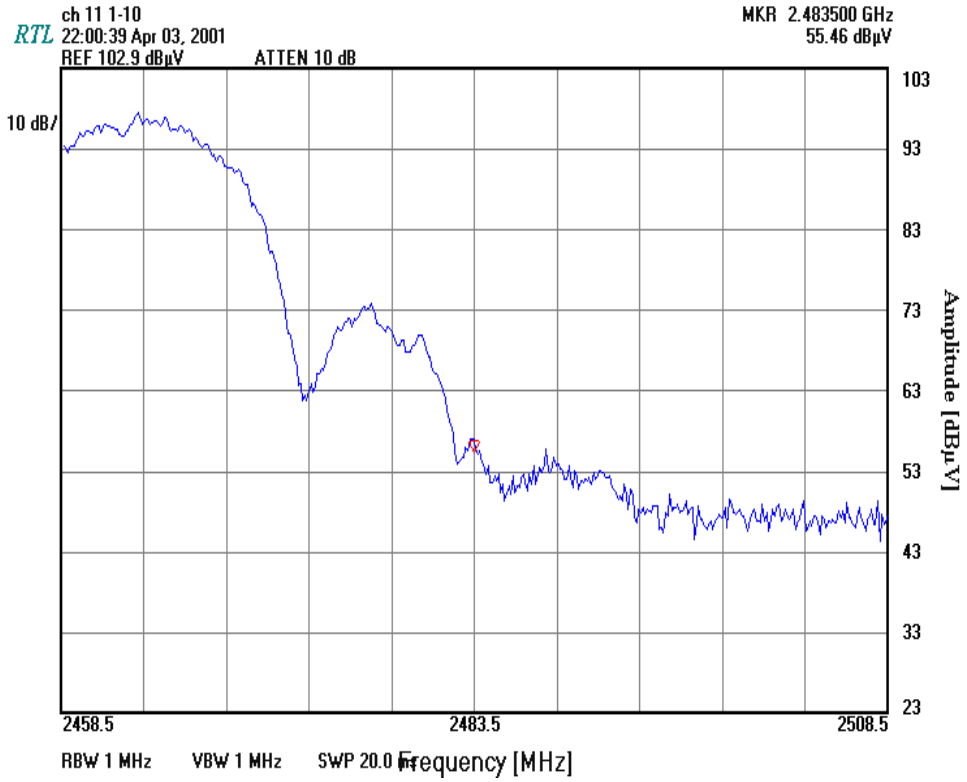
PLOT 6 CHANNEL 1 DELL DIPOLE ANTENNA 1MHZ/1MHZ



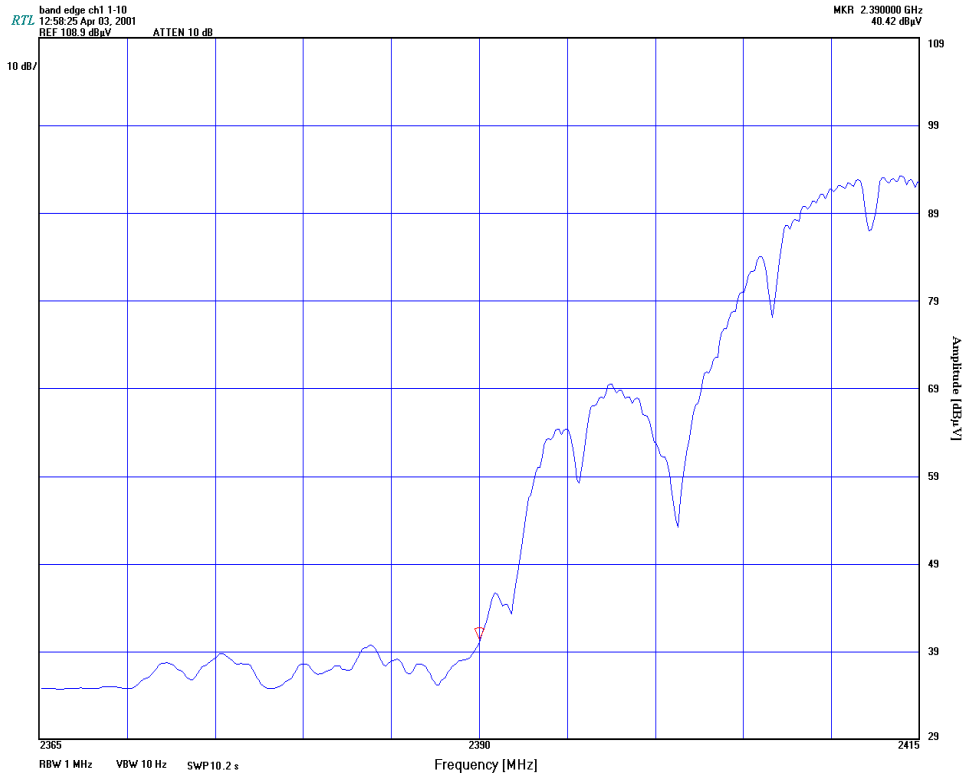
PLOT 7 CHANNEL 11 DELL DIPOLE ANTENNA 1MHZ/10HZ



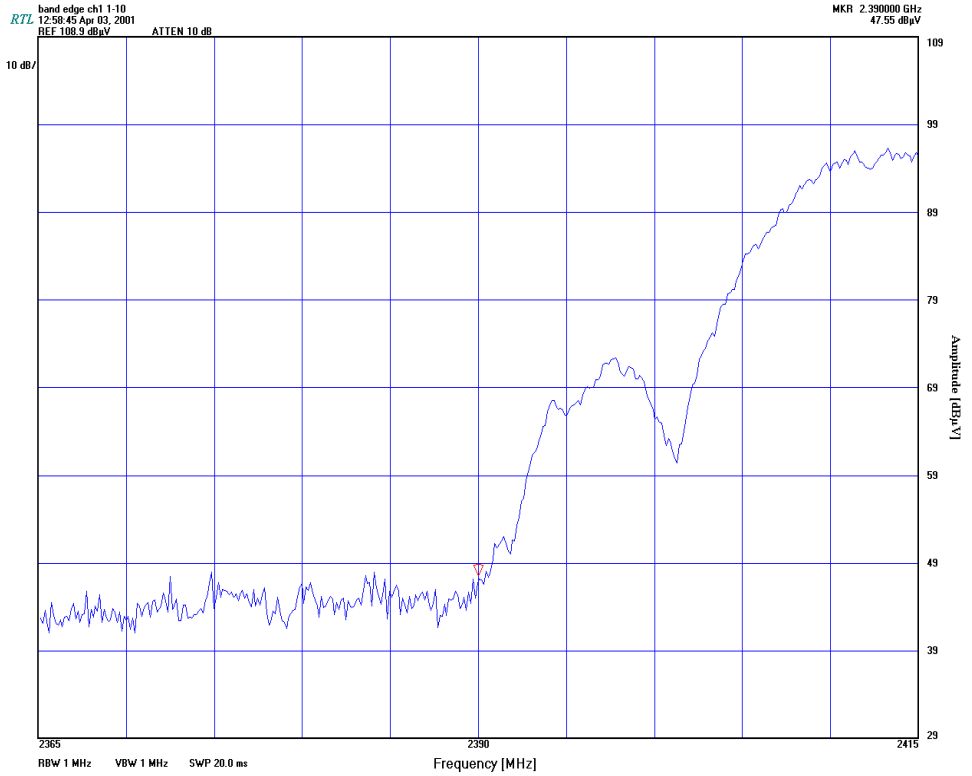
PLOT 8 CHANNEL 11 DELL DIPOLE ANTENNA 1MHZ/1MHZ



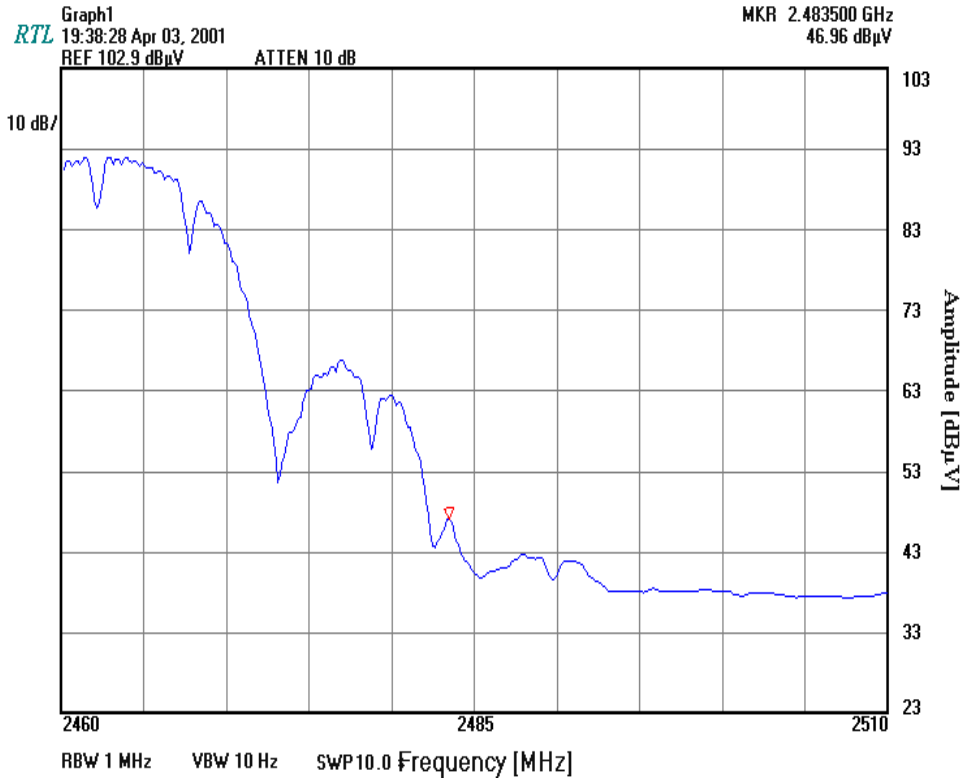
PLOT 9 CHANNEL 1 DELL INVERTED F ANTENNA 1MHZ/10HZ



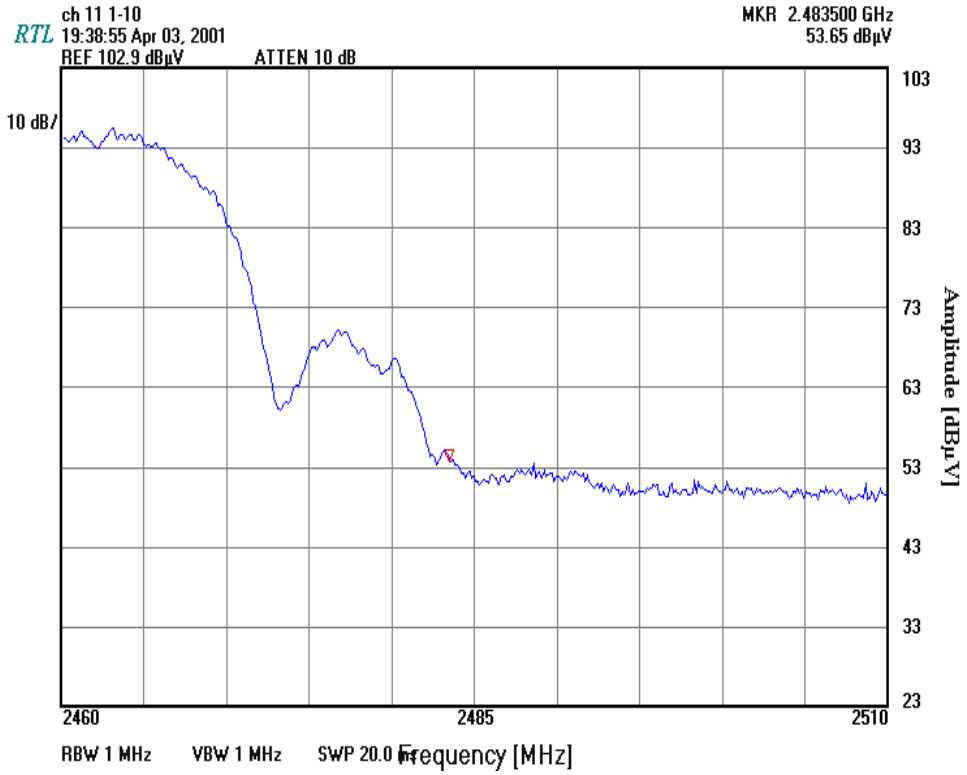
PLOT 10 CHANNEL 1 DELL INVERTED F ANTENNA 1MHZ/1MHZ



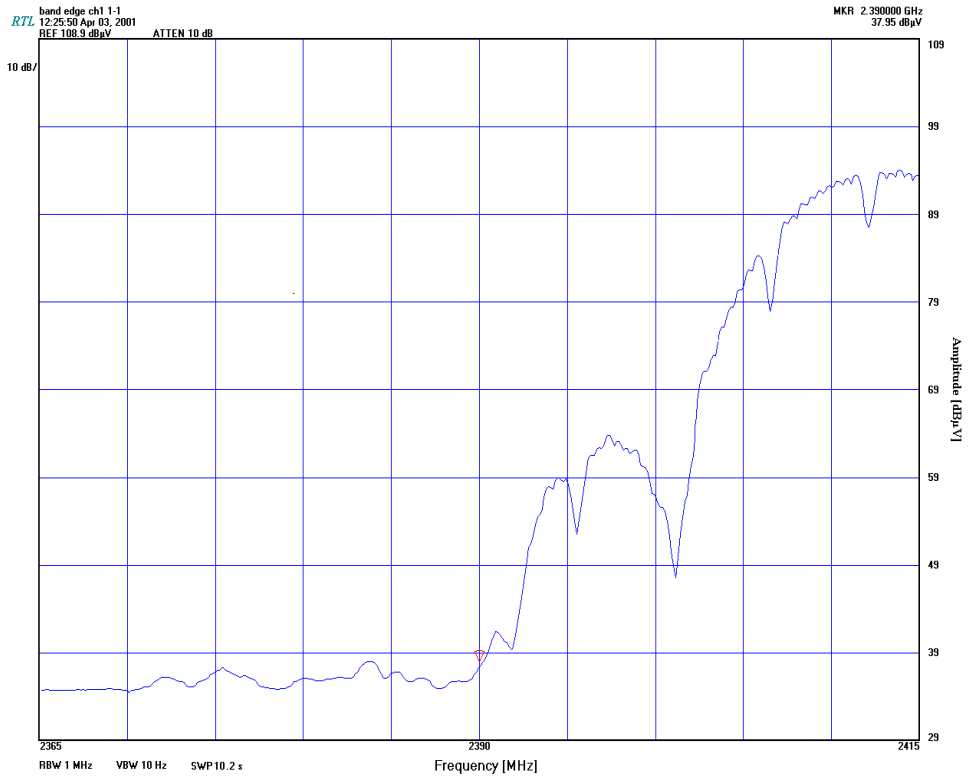
PLOT 11 CHANNEL 11 DELL INVERTED F ANTENNA 1MHZ/10HZ



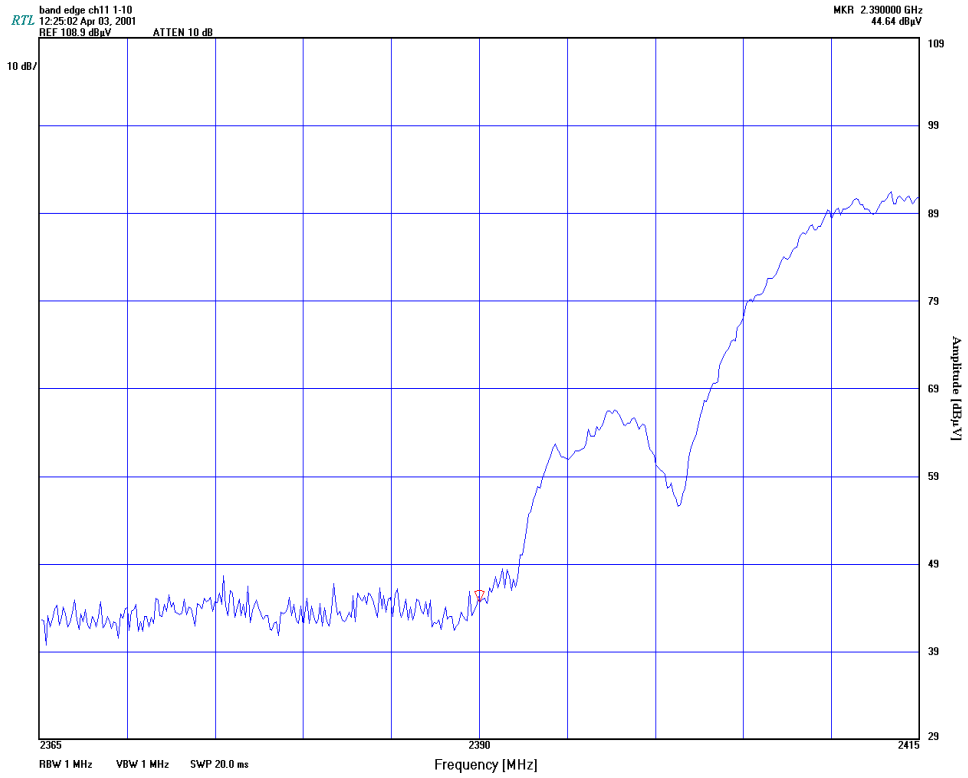
PLOT 12 CHANNEL 11 DELL INVERTED F ANTENNA 1MHZ/1MHZ



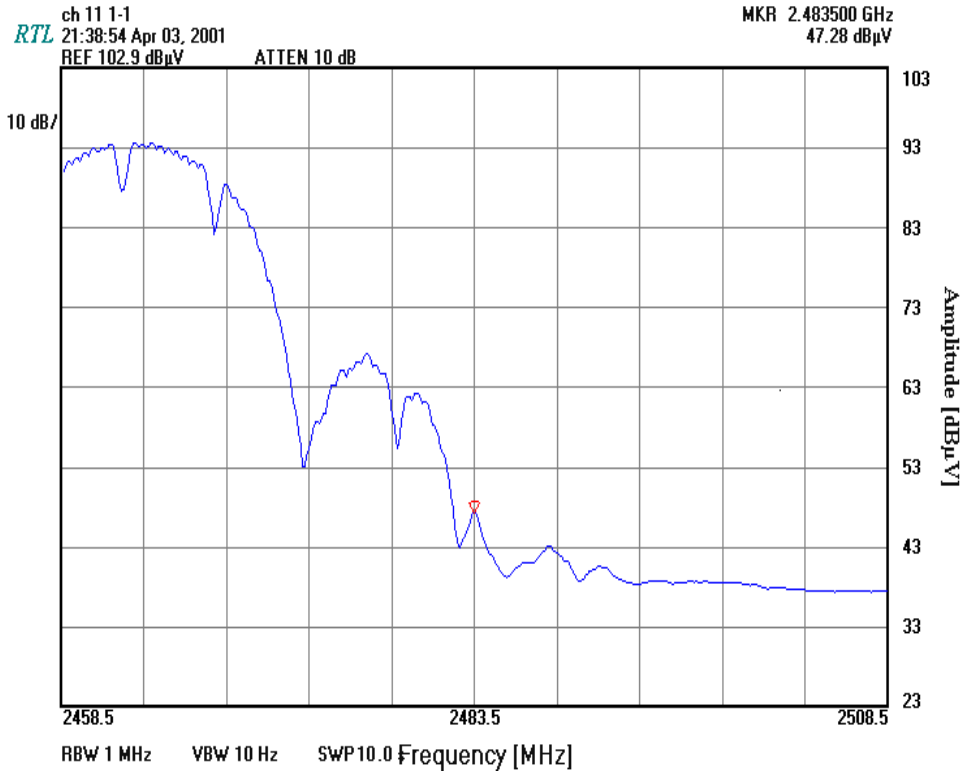
PLOT 13 CHANNEL 1 TOSHIBA CHIP ANTENNA 1MHZ/10HZ



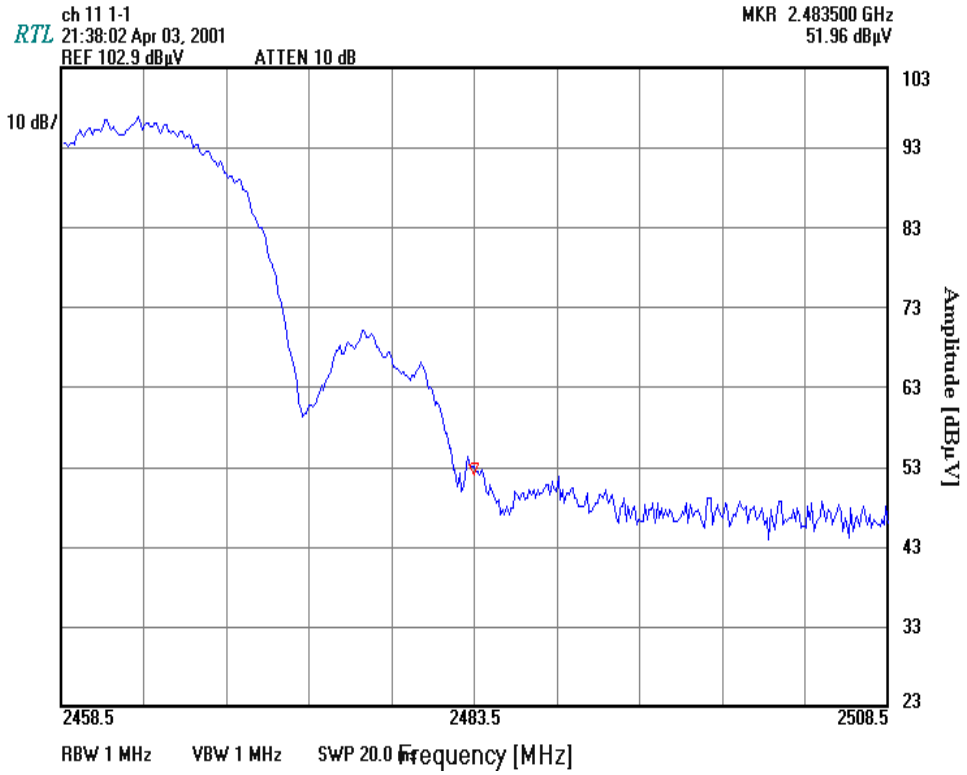
PLOT 14 CHANNEL 1 TOSHIBA CHIP ANTENNA 1MHZ/1MHZ



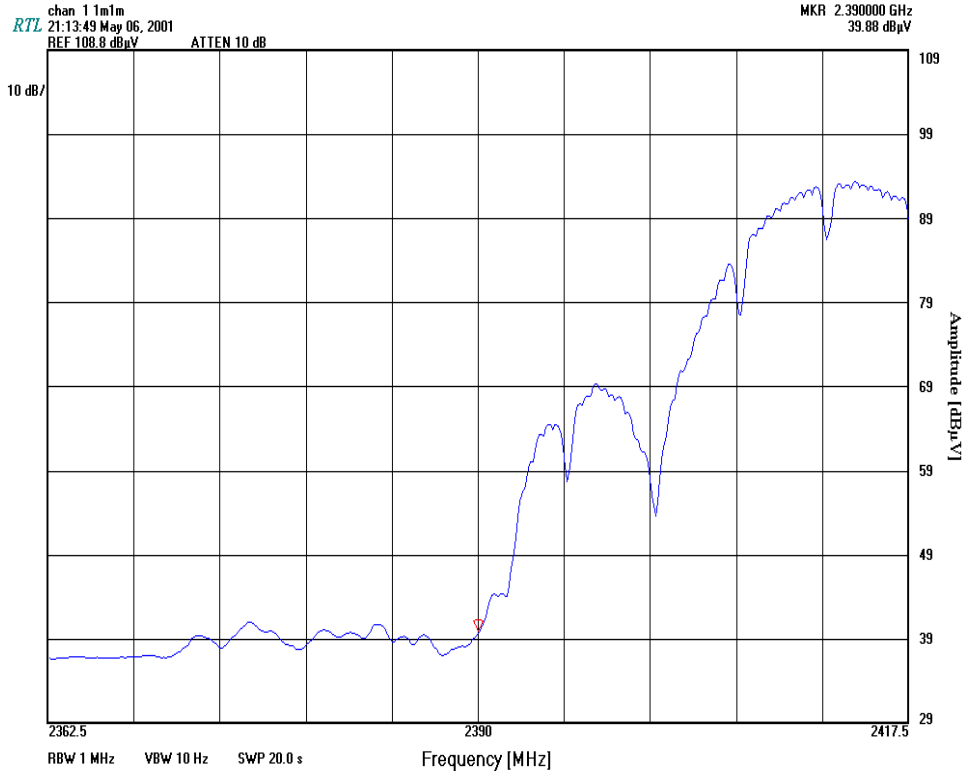
PLOT 15 CHANNEL 11 TOSHIBA CHIP ANTENNA 1MHZ/10HZ



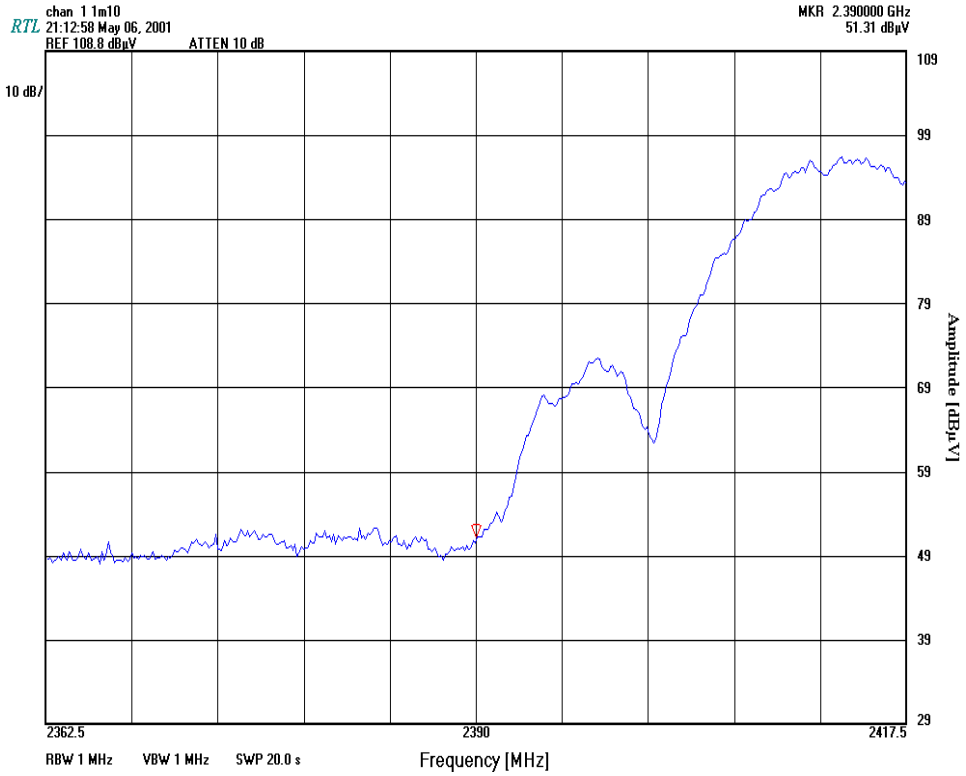
PLOT 16 CHANNEL 11 TOSHIBA CHIP ANTENNA 1MHZ/1MHZ



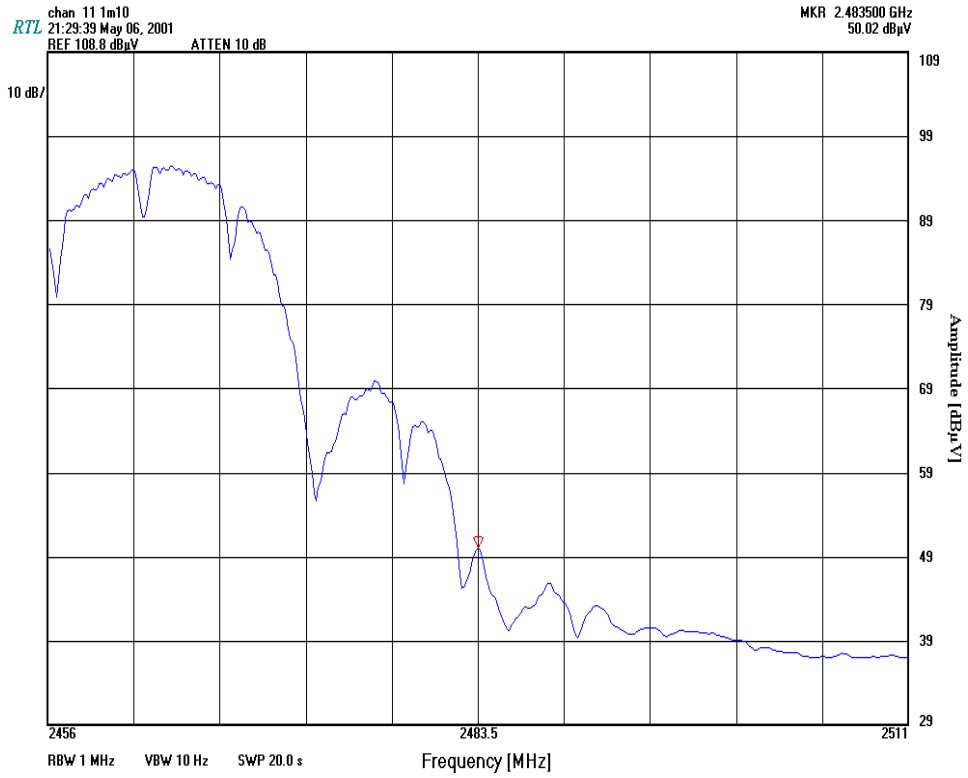
PLOT 17 CHANNEL 1 INVERTED F TOSHIBA ANTENNA 1MHZ/10HZ



PLOT 18 CHANNEL 1 INVERTED F TOSHIBA ANTENNA 1MHZ/1MHZ



PLOT 19 CHANNEL 11 INVERTED F TOSHIBA ANTENNA 1MHZ/10HZ



PLOT 20 CHANNEL 11 INVERTED F TOSHIBA ANTENNA 1MHZ/1MHZ

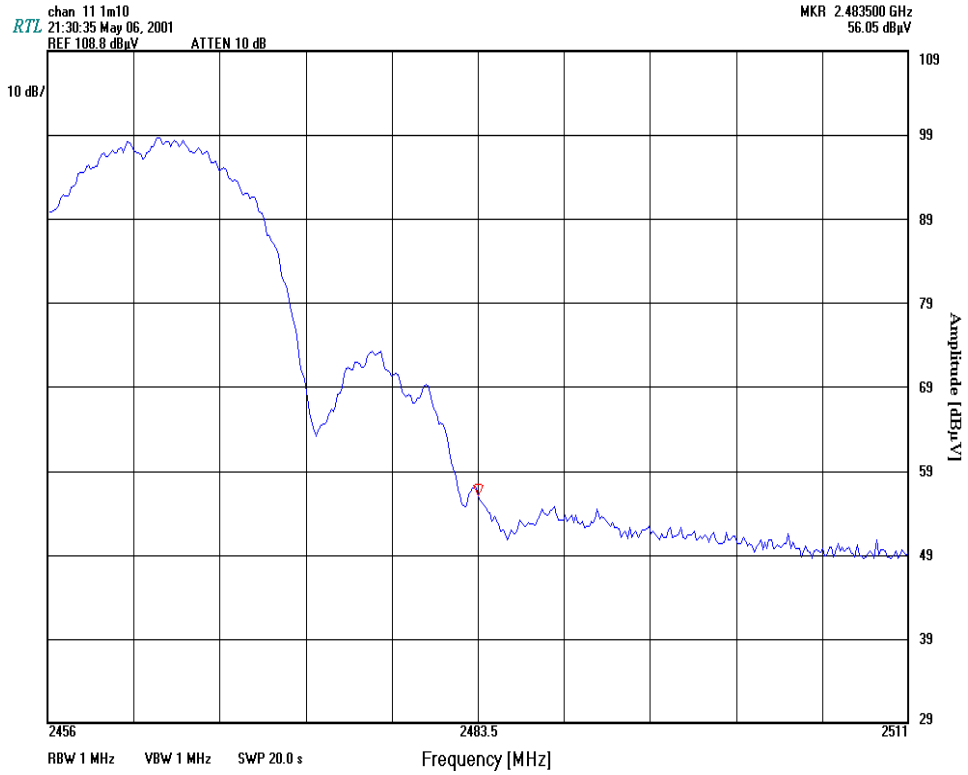


EXHIBIT 6G TEST: FIELD STRENGTH OF SPURIOUS RADIATION EMISSIONS

FCC ID:	KBCIX260MPIA750BT
Applicant:	ITRONIX Corp.
Model:	IX260 with MPI350, Aircard750 & Bluetooth
Minimum Standard Specified:	Part 15.247(c)
Test Results:	Equipment complies with standard
Authorization Procedure:	Part 2.1053
Test Equipment Set Up:	See Block Diagram in Exhibit 7 08/18/03
Frequency Range Observed:	0 to 25 Ghz

NOTE: **Simultaneous co-location transmit on the identical RF channels with the MPI 350 WLAN and the Bluetooth transmitter. Both transmitters @ HIGH POWER**

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**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Limit 74 Peak 54 Avg dBu/V**	**Margin in dB below LIMIT**
Fo - 2.417									
4.834	50.67	H	Peak	32.83	3.95	23.2	64.25	74	9.75
4.834	31.33	H	Average	32.83	3.95	23.2	44.91	54	9.09
7.251	45.67	V	Peak	36.77	4.55	25.9	61.09	74	12.91
7.251	31.50	V	Average	36.77	4.55	25.9	46.92	54	7.08
9.668	42.33	V	Peak	37.55	5.0	24.5	60.38	74	13.62
9.668	28.17	V	Average	37.55	5.0	24.5	46.38	54	7.62
Fo – 2.437									
4.874	50.17	H	Peak	33.33	3.95	23.2	64.25	74	9.75
4.874	31.83	H	Average	33.33	3.95	23.2	45.91	54	8.09
7.311	47.0	V	Peak	36.77	4.55	25.9	62.42	74	11.58
7.311	32.17	V	Average	36.77	4.55	25.9	47.59	54	6.41
9.746	42.83	V	Peak	38.33	5.0	24.7	61.46	74	12.54
9.746	29.67	V	Average	38.33	5.0	24.7	48.30	54	5.70
Fo – 2.462									
4.924	53.33	H	Peak	33.33	3.95	23.2	67.41	74	6.59
4.924	32.17	H	Average	33.33	3.95	23.2	46.25	54	7.75
7.386	49.0	V	Peak	36.77	4.55	25.9	64.42	74	9.58
7.386	33.17	V	Average	36.77	4.55	25.9	48.59	54	5.41
9.848	46.83	V	Peak	38.33	5.0	24.7	65.46	74	8.54
9.848	31.0	V	Average	38.33	5.0	24.7	49.63	54	4.37

Harmonic emissions on all three channels (low, mid & high) 5Fo – 10Fo at or below noise floor

Channel	**Frequency in GHz**	**Harmonics Observed**	**Limit 74 dBuV/m Peak & 54 dBuV/m Average**
Low Ch.	2.402		
5Fo – 10Fo	12.085 – 24.170	None -at or < noise floor @3m	All emissions < 54 dBuV/m
Mid Ch.	2.441		
5Fo – 10Fo	12.205 – 24.410	None -at or < noise floor @3m	All emissions < 54 dBuV/m
High Ch.	2.480		
5F o- 10Fo	12.400 – 24.800	None -at or < noise floor @3m	All emissions < 54 dBuV/m

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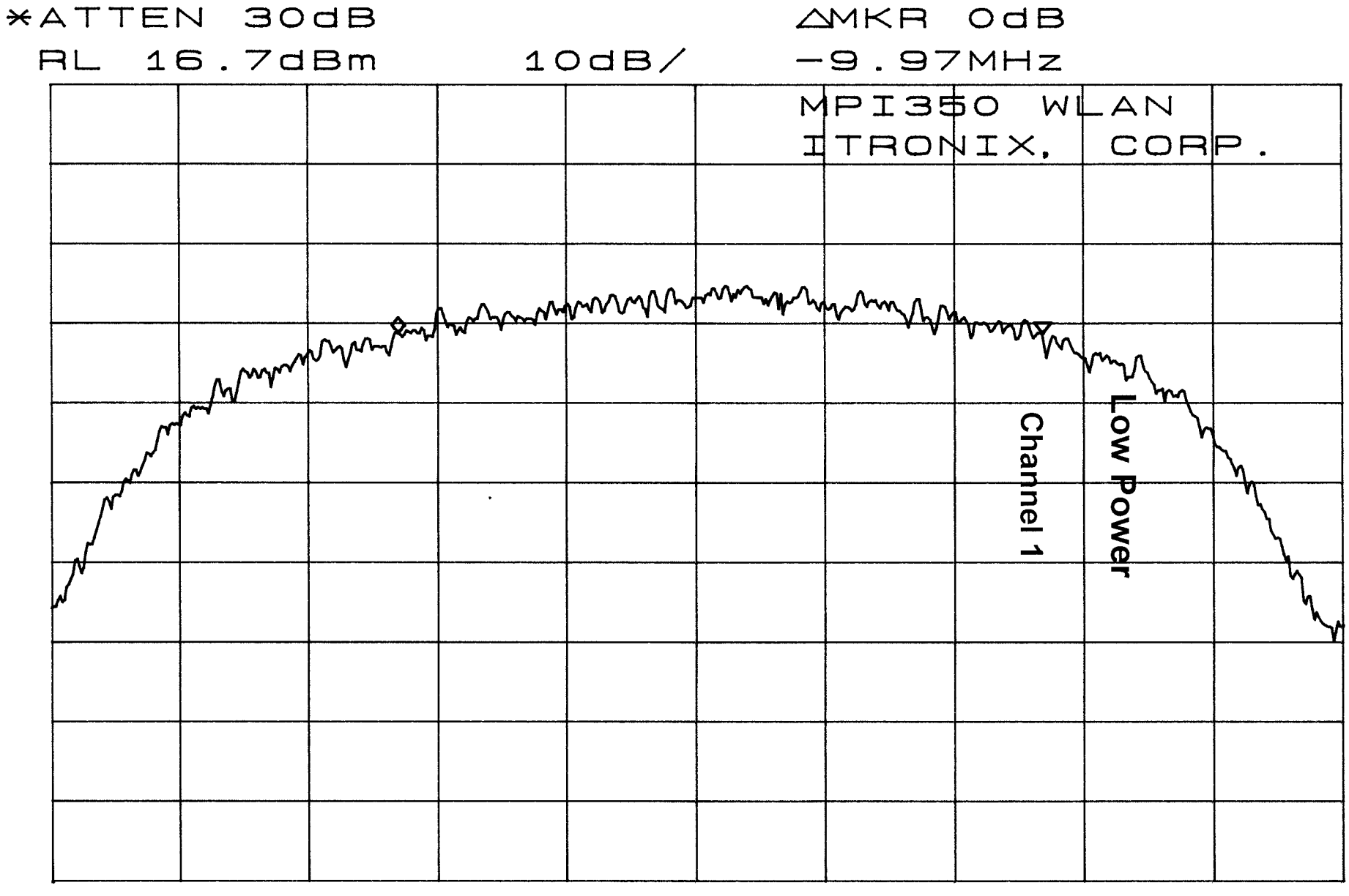
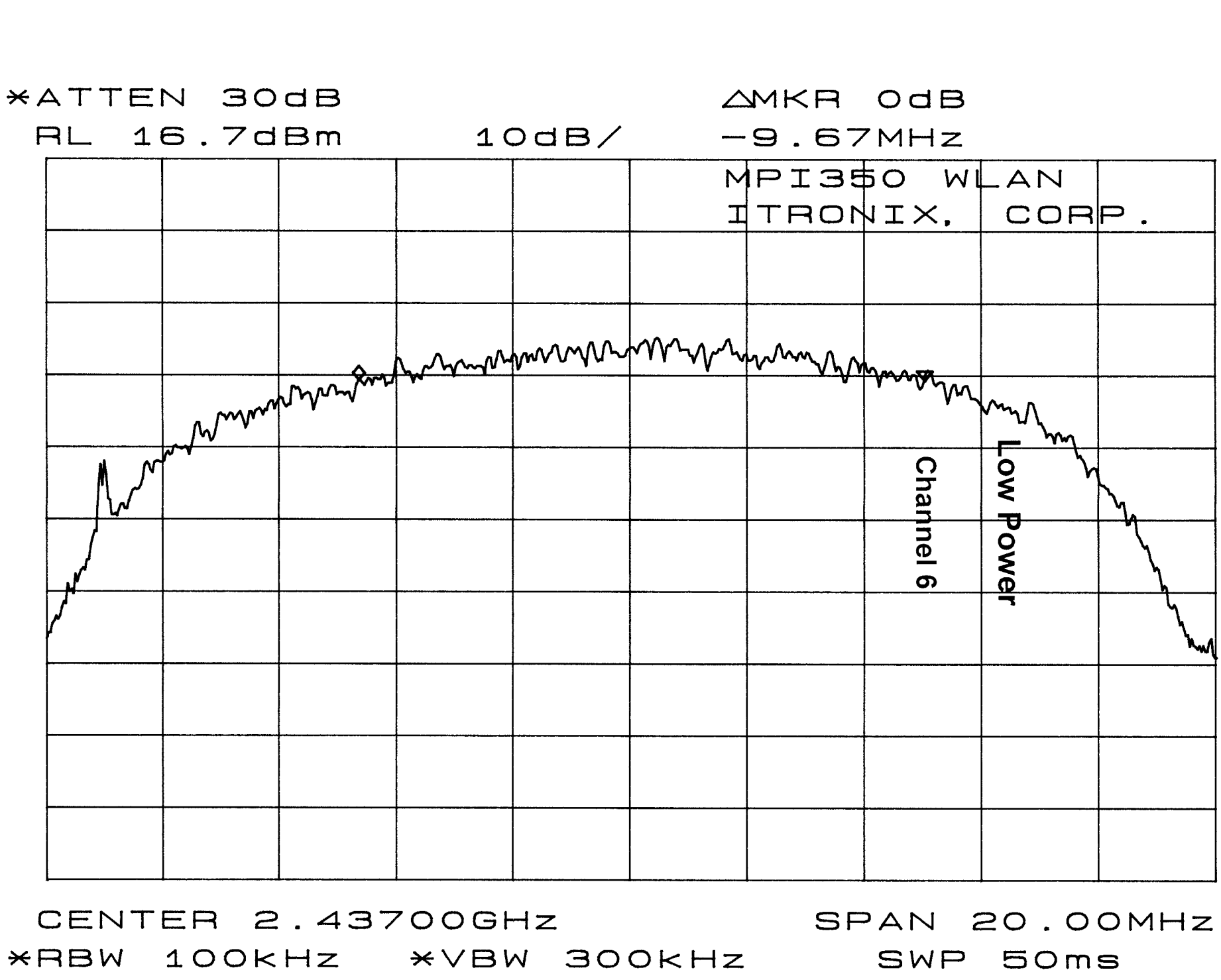
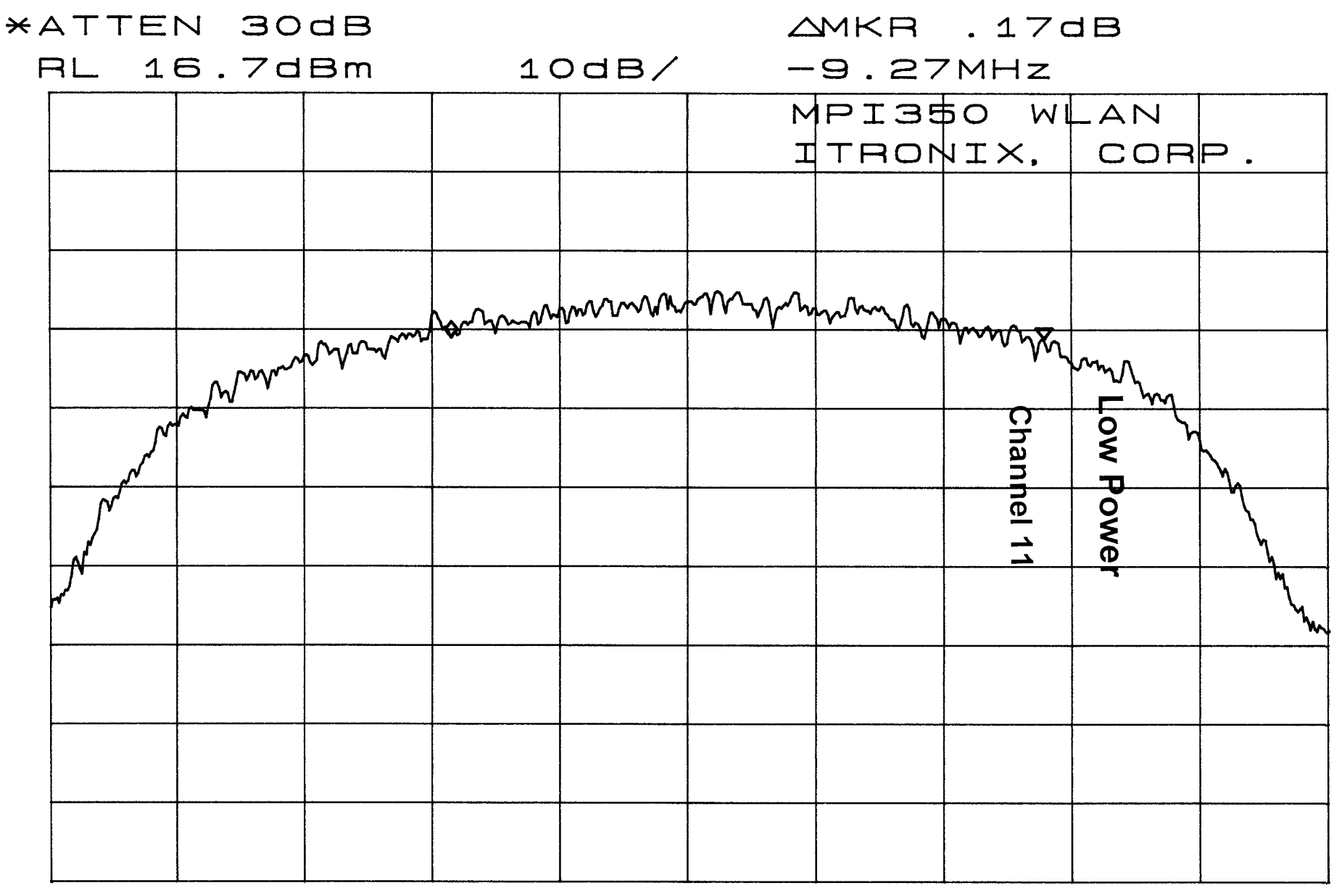
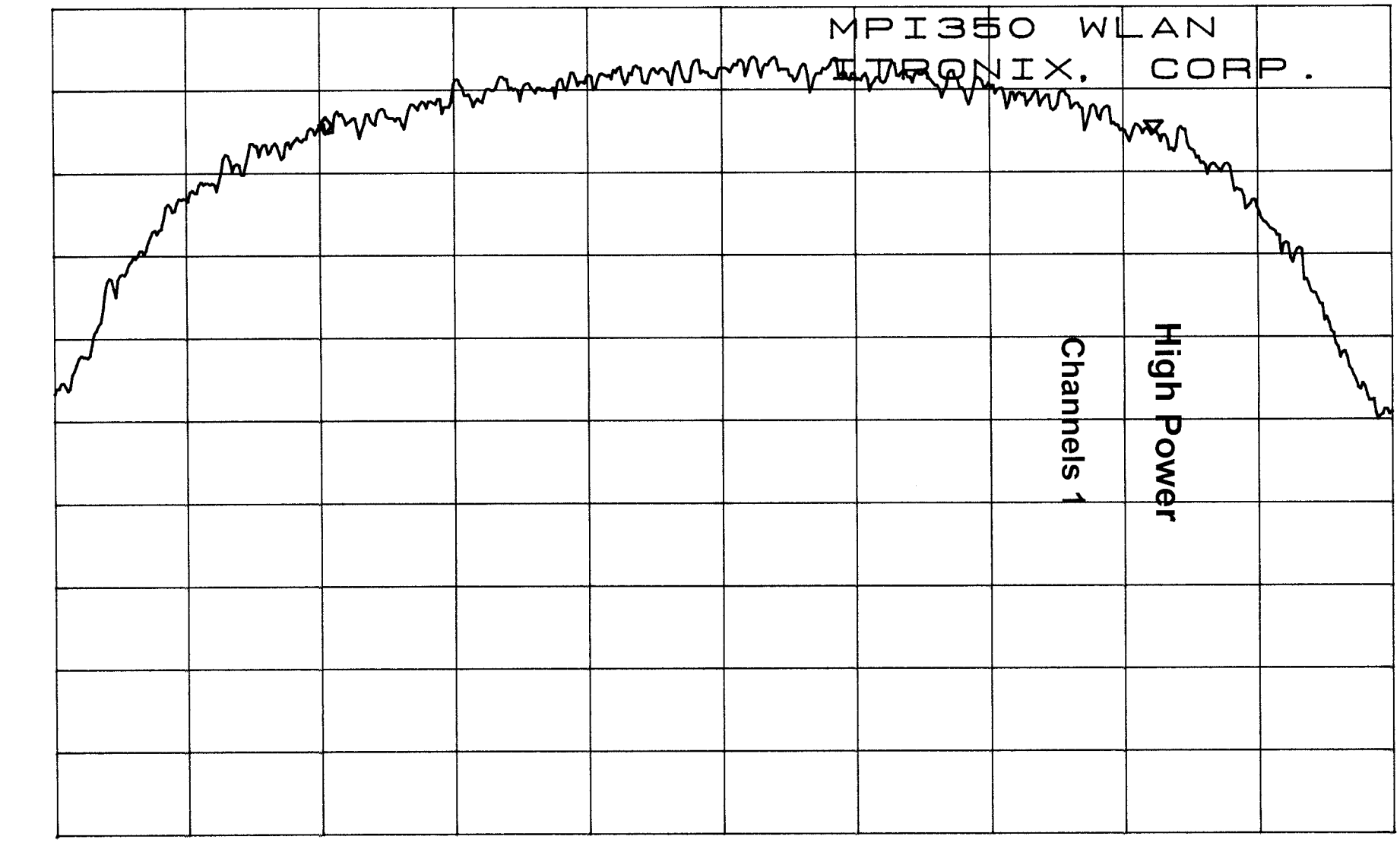
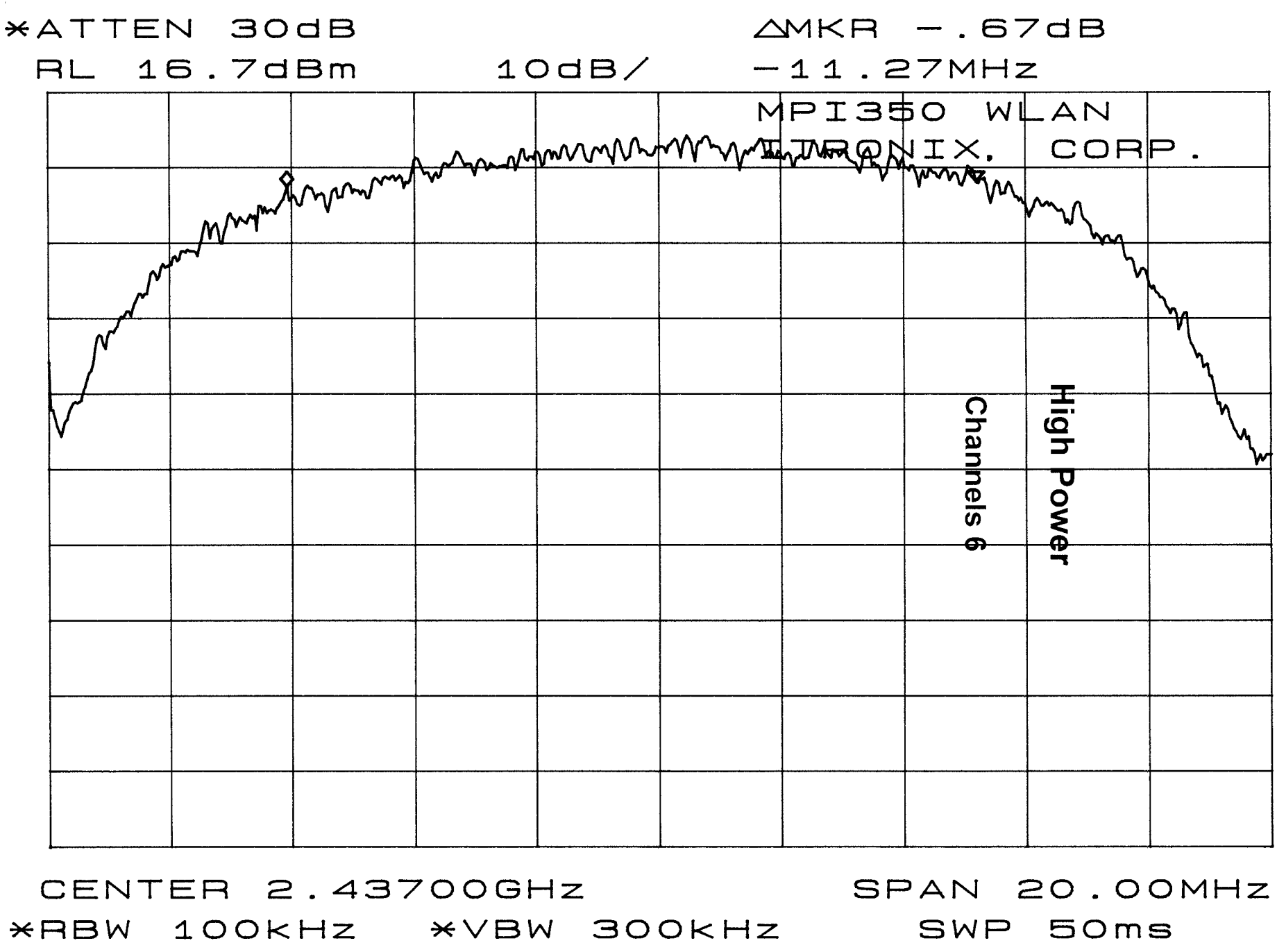
Reply to Items 4 and 5 of July 23 , 2003 correspondence.

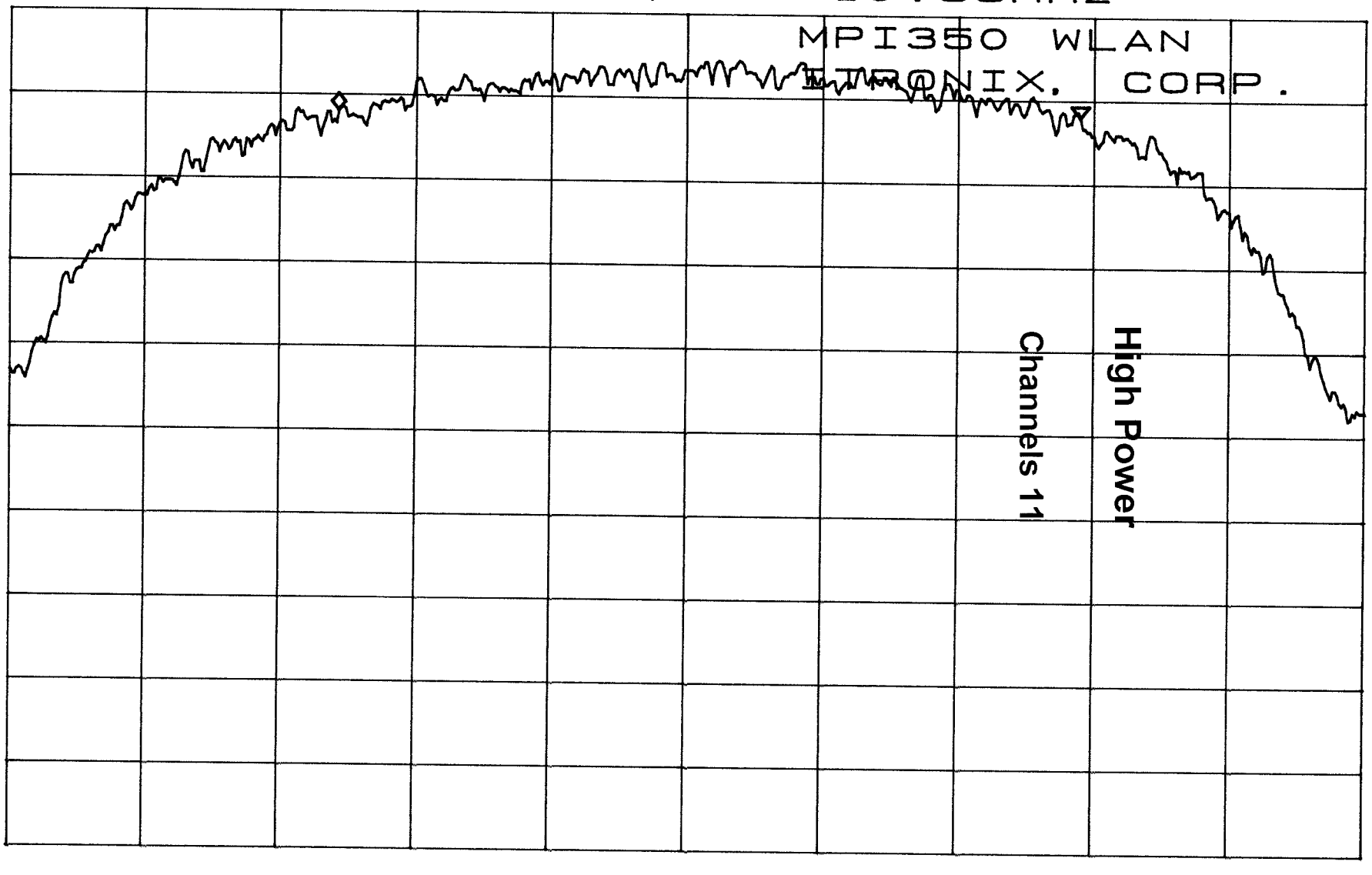

*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR 0dB
-9.97MHz
MPI350 WLAN
ITRONIX. CORP.
Channel 1
Low Power
CENTER 2.412000GHz
SPAN 20.00MHz
*RBW 100kHz
*VBW 300kHz
SWP 50ms

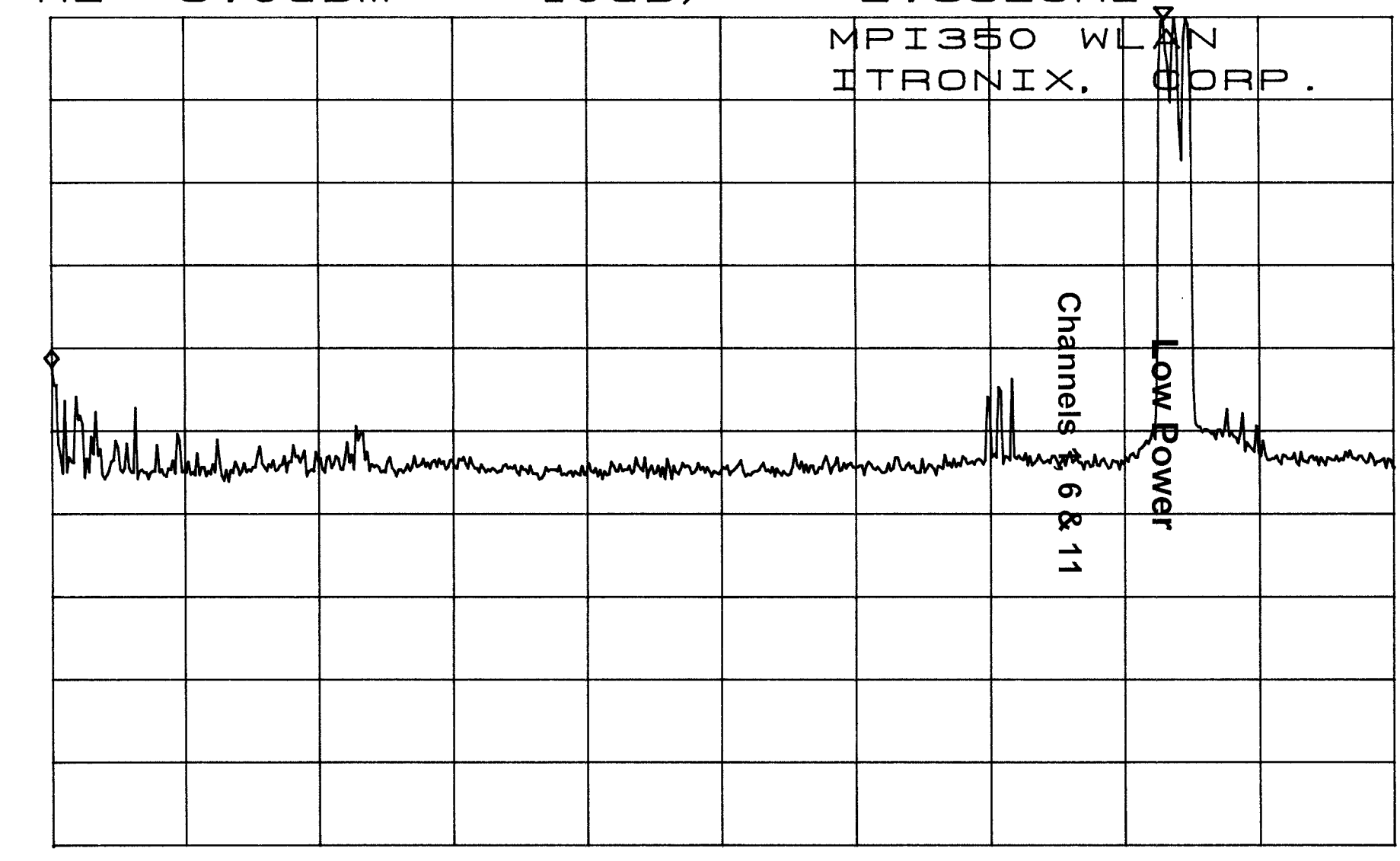

*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR 0dB
-9.67MHz
MPI350 WLAN
ITRONIX. CORP.
Channel 6
Low Power
CENTER 2.43700GHz
SPAN 20.00MHz
*RBW 100kHz
*VBW 300kHz
SWP 50ms

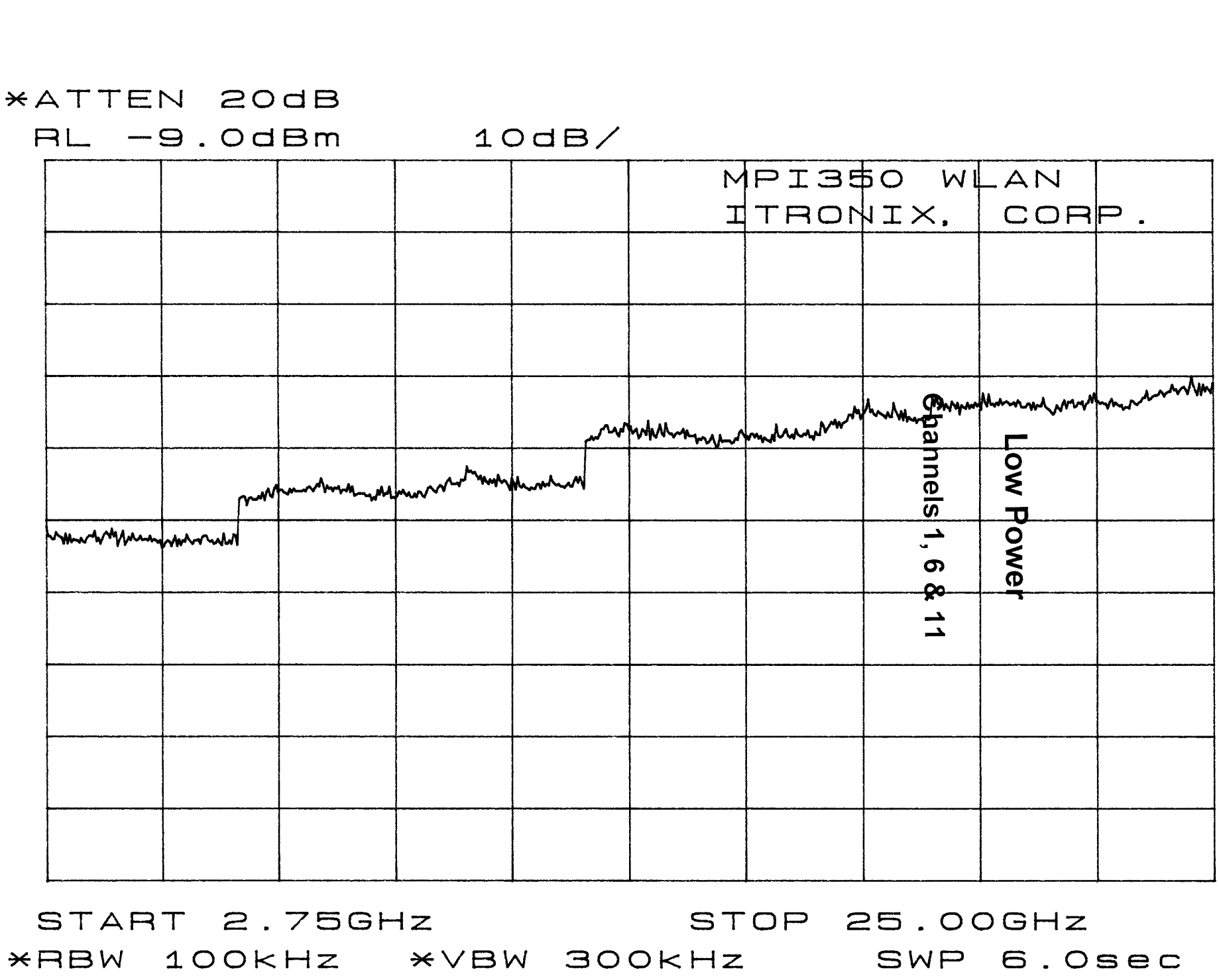

*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR .17dB
-9.27MHz
MPI350 WLAN
ITRONIX. CORP.
Channel 11
Low Power
CENTER 2.46200GHz
SPAN 20.00MHz
*RBW 100kHz
*VBW 300kHz
SWP 50ms

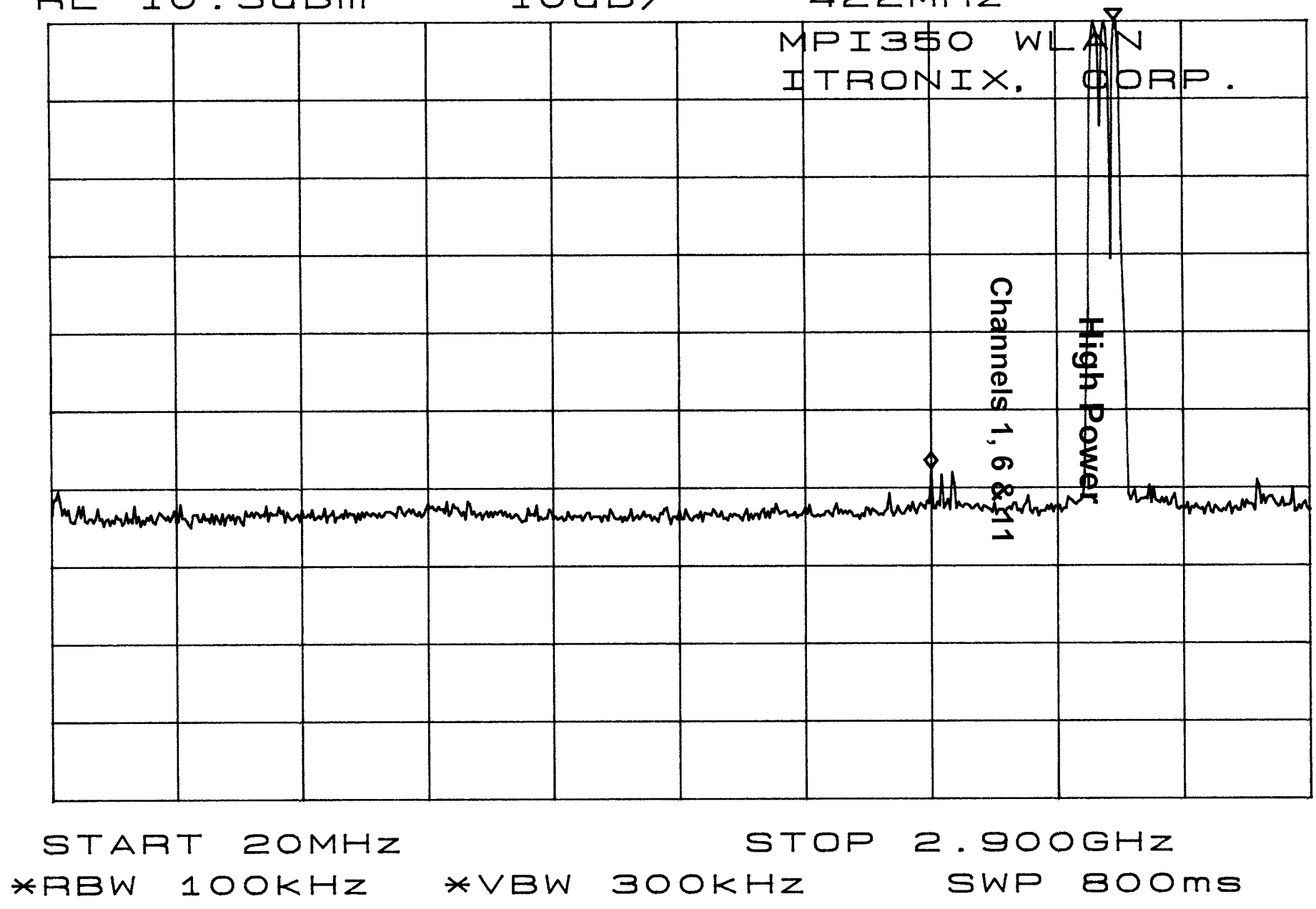

*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR 0dB
-12.37MHz
MPI350 WLAN
ITRONIX. CORP.
Channels 1
High Power
CENTER 2.412000GHz
SPAN 20.00MHz
*RBW 100KHz
*VBW 300KHz
SWP 50ms


*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR -.67dB
-11.27MHz
MPI350 WLAN
ITRONIX. CORP.
Channels 6
High Power
CENTER 2.437000GHz
SPAN 20.00MHz
*RBW 100kHz
*VBW 300kHz
SWP 50ms


*ATTEN 30dB
RL 16.7dBm
10dB/
ΔMKR .17dB
-10.93MHz
MPI350 WLAN
ITRONIX. CORP.
Channels 11
High Power
CENTER 2.46200GHz
SPAN 20.00MHz
*RBW 100KHz
*VBW 300KHz
SWP 50ms


*ATTEN 20dB
RL -9.0dBm
10dB/
ΔMKR -42.00dB
-2.382GHz
MPI350 WLAN
ITRONIX. CORP.
Channels 6 & 11
Low Power
START 30MHz
STOP 2.900GHz
*RBW 100kHz
*VBW 300kHz
SWP 800ms


*ATTEN 20dB
RL -9.0dBm
10dB/
MPI350 WLAN
ITRONIX. CORP.
Channels 1, 6 & 11
Low Power
START 2.75GHz
STOP 25.00GHz
*RBW 100kHz
*VBW 300kHz
SWP 6.0sec


*ATTEN 30dB
RL 10.3dBm
10dB/
ΔMKR -57.67dB
-422MHz
MPI350 WLAN
ITRONIX, CORP.
Channels 1, 6 & 11
High Power
START 20MHz
STOP 2.900GHz
*RBW 100kHz
*VBW 300kHz
SWP 800ms

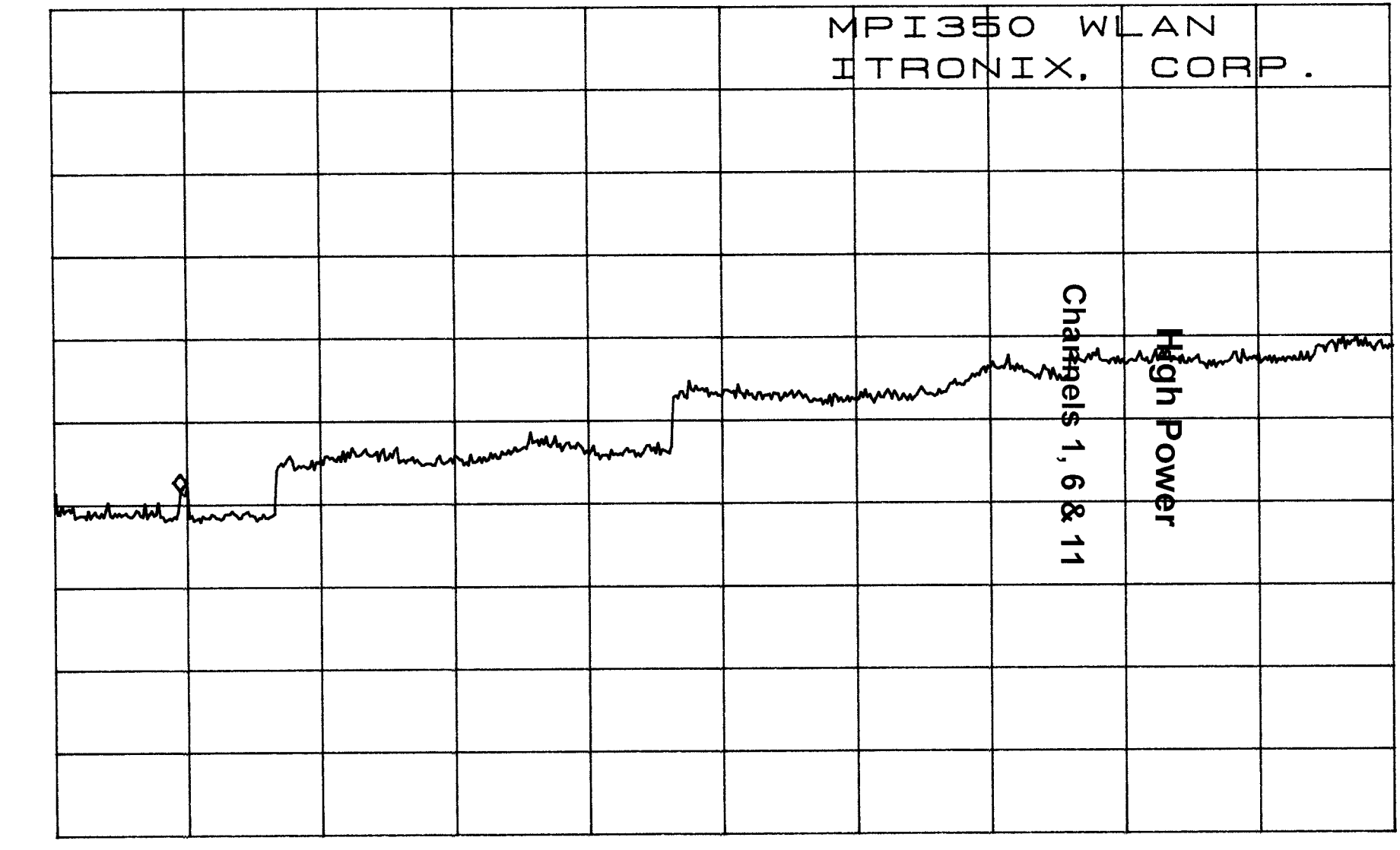

*ATTEN 30dB
RL 10.3dBm
10dB/
MKR -47.99dBm
4.86GHz
MPI350 WLAN
ITRONIX, CORP.
Channels 1, 6 & 11
High Power
START 2.75GHz
STOP 25.00GHz
*RBW 100kHz
*VBW 300kHz
SWP 6.0sec

EXHIBIT VI.

Supplemental Test Report # 2

New Certification of Previously Certified OEM Module

FCC ID: KBCIX260MPIA750BT

IX260 Rugged Laptop with Aircard 750 GPRS radio modem

co-located with

WLAN & Bluetooth Intentional Radiators

This report is for the WLAN for

Certification Under Title 47 CFR, Part 15.247

ITRONIX, Corporation
South 801 Stevens St.
Spokane, WA 99204

Prepared

By

Spectrum Technology, Inc.
209 Dayton Street, Suite 205
Edmonds, WA 98020
425 771-4482

Prepared August 8, 2003

Supplemental Test Report

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Note: Please refer to the original Certification exhibits for all of the original OEM test report data for the ITRONIX Corporation, Intentional Radiator referenced herein:

1.) FCC ID: LDK102042 which is the OEM filing for the WLAN Compact Flash Card, Model: MPI-352 Series

EXHIBIT 6A TEST: CONDUCTED RF POWER OUTPUT

Applicant:	ITRONIX, Corporation
Model:	IX260 Rugged Laptop with Aircard 750 GPRS radio modem co-located with WLAN & Bluetooth Intentional Radiators
Minimum Standard Specified:	Part 15.247(b)(1) is 1 Watt for DTS
Test Results:	The measured output power level shows compliance with the above limit and the power granted for the OEM module.
Authorization Procedure:	Part 2.1046
Maximum Conducted Power Output:	21.2 dBm

Method of Measurement:

1. The output power levels above had been preset during production for this model.
2. The peak output power was measured by Celltech with a Gigatronics 8652A Universal Power Meter (S/N: 1835272). The measured channels cover the low, middle and top of the operational frequency range previously approved for this Intentional Radiator of 2412 – 2462 MHz.
4. Both antenna ports were measured, the results below were the maximum level measured.

Tabular Results of Conducted RF Output Power and EIRP

WLAN Serial No: VMS06180144 Frequency GHz	Power dBm	Cable loss	Rangestar Antenna P/N 100929 Ant. Gain dBi	EIRP	
2.412	21.2	-inc-	4.5	**25.7**	****MAX***
2.437	21.1	-inc-	4.5	25.6	
2.462	21.1	-inc-	4.5	25.6	

The maximum WLAN EIRP is 25.7 dBm with the Rangestar Antenna, P/N 100929, peak antenna gain of 4.5 dBi.

EXHIBIT 6G TEST: FIELD STRENGTH OF THREE FUNDAMENTAL OPERATING FREQUENCIES

Applicant:	ITRONIX, Corporation
Model:	IX260 Rugged Laptop with Aircard 750 GPRS radio modem co-located with a WLAN & Bluetooth Intentional Radiators
Minimum Standard Specified:	Part 15.247(c), 15.205 & 15.209(a)
Test Results:	Equipment complies with standard
Authorization Procedure:	Part 2.1053
Test Equipment Set Up:	See Block Diagram in Exhibit 7
Test Frequencies WLAN:	2412, 2437, & 2462 MHz (2412 – 2462 MHz band)

Field Strength For Low Mid and High Channel

WLAN Frequency in GHz	Ant. Vert/ Horz	Spectrum Analyzer Reading dBuV	+ Ant Factor	- Amp Gain	+ Cable Loss	= dBuV/m @ 3 meters	or uV/m @ 3 meters
Ch. 1 Low 2.412	V	84.67	28.37	0	1.33	114.37	522997.96
Ch. 6 Mid 2.437	V	85.67	28.37	0	1.33	115.37	586813.36
Ch.11 High 2.462	V	86.33	28.37	0	1.33	116.03	633140.36

Measurements were made with the MPI350 feeding the left antenna in the PC display only, for this co-located model. The right antenna in the display is used by the Bluetooth Intentional radiator exclusively in this configuration and covered under a different test report.

EXHIBIT 6G TEST: RADIATED HARMONICS AND SPURIOUS EMISSIONS

Applicant: ITRONIX, Corporation

Model: IX260 Rugged Laptop with Aircard 750 GPRS radio modem co-located with a WLAN & Bluetooth Intentional Radiators

Minimum Standard Specified: Part 15.247(c), 15.205 & 15.209(a)

Authorization Procedure: Part 2.1053

Test Equipment Set Up: See Block Diagram in Exhibit 7

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**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Limit 74 Peak 54 Avg dBu/V**	**uV/m**
Fo - 2.412									
4.824	35.83	V	Peak	32.83	3.95	23.2	49.41	74	295.46
4.824	23.17	V	Average	32.83	3.95	23.2	36.75	54	68.78
Fo - 2.437									
4.874	37.00	V	Peak	33.33	3.95	23.2	51.00	74	358.09
4.874	23.50	V	Average	33.33	3.95	23.2	37.58	54	75.68
Fo - 2.462									
4.924	37.0	V	Peak	33.33	3.95	23.2	51.00	74	358.09
4.924	23.33	V	Average	33.33	3.95	23.2	37.41	54	74.21

Harmonic emissions on all three channels (low, mid & high) 3Fo – 10Fo at or below noise floor

Channel	**Frequency in GHz**	**Harmonics observed**	**Limit 74 dBuV/m Peak & 54 dBuV/m Average**
Ch. 1 - Low Fo	2.412		
3Fo - 10Fo	7.236 – 24.120	None, At or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
Ch. 6 - Mid Fo	2.437		
3Fo – 10Fo	7.311 – 24.370	None, At or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
Ch. 11 - High Fo	2.462		
3Fo - 10Fo	7.386 – 24.620	None, At or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m

All harmonic and spurious emissions were below the limit. 2Fo and 3Fo were measurable during preliminary measurements at less than 1.0 meter with 100 kHz RBW only. Only 2 Fo was measureable at three meters with 1 MHz RBW and VBW. A HP preamplifier with over 20 dB of gain was used during the measurements of the harmonics. A high pass filter was used to reduce the fundamental signal and avoid the possibility of overloading the front end of the analyzer when using the preamp.

Test Notes:
1.) All harmonics in the restricted bands listed in Part 15.205 are below the Part 15.209(a) limit.
2.) No peak emissions above 1 GHz are more than 20 dB above the average limit.
3.) Peak measurements made with 1 MHz RBW & VBW, Average made with 1MHz RBW & 10 Hz VBW.
4.) The maximum levels reported above were with the MPI350 connected to and radiating from the left antenna within the PC display.

EXHIBIT VI

Test Report # 3 - New Certification

FCC ID: KBCIX260MPIA750BT

IX260 Rugged Laptop with

Bluetooth Intentional Radiator

Co-located with an Aircard 750 GPRS radio modem

and a WLAN, DTS Intentional Radiator

This Report is For The Bluetooth Intentional Radiator

Under Part 15.247 FHSS

Prepared On Behalf Of

ITRONIX, Corporation
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Prepared

By

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425 771-4482

August 8, 2003

Exhibit VI

Bluetooth Test Report Table of Contents

Section 2.1033(b)6

Appendix 1 & 2 Table of Contents

* *Not applicable under the FHSS rules, applies to DTS modulation*

BLUETOOTH APPROVALS

The following exhibit indicates the FCC Spread Spectrum requirements in Section 15.247(only) for devices meeting the Bluetooth Specifications for devices operating in the USA. The purpose of this exhibit is to help expedite the approval process for Bluetooth devices. This exhibit provides items that vary for each device and also provides a list of items that are common to Bluetooth devices that explains the remaining requirements. The list of common items can be submitted for each application for equipment authorization. This Bluetooth transmitter is a Frequency Hopping Spread Spectrum(FHSS) transmitter in the data mode and a Hybrid transmitter in the acquisition mode.

For each individual device, the following items, 1-6, will vary from one device to another and must be submitted.

1) The occupied bandwidth in Section 15.247(a)1ii .
2) Conducted output power specified in Section 15.247(b)1.
3) EIRP limit in Section 15.247(b)3.
4) RF safety requirement in Section 15.247(b)4
5) Spurious emission limits in Section 15.247(c).
6) Power spectral density in the **acquisition mode**.

For all devices, the following items, 1-12, are common to all Bluetooth devices and will not vary from one device to another. The list can be copied and pasted into the filing.

1 Output power and channel separation of a Bluetooth device in the different operating modes:

The different operating modes (data-mode, acquisition-mode) of a Bluetooth device don't influence the output power and the channel spacing. There is only one transmitter which is driven by identical input parameters concerning these two parameters.
Only a different hopping sequence will be used. For this reason the check of these RF parameters in one op-mode is sufficient.

2 Frequency range of a Bluetooth device:

Hereby we declare that the maximum frequency of this device is: **2402 – 2480 M**Hz.
This is according the Bluetooth Core Specification V 1.0B (+ critical errata) for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E). Other frequency ranges (e.g. for Spain, France, Japan) which are allowed according the Core Specification are **not** supported by this device.

3 Co-ordination of the hopping sequence in data mode to avoid simultaneous occupancy by multiple transmitters:

Bluetooth units which want to communicate with other units must be organized in a structure called piconet. This piconet consist of max. 8 Bluetooth units. One unit is the master the other seven are the slaves. The master co-ordinates frequency occupation in this piconet for all units. As the master hop sequence is derived from it's BD address which is unique for every Bluetooth device, additional masters intending to establish new piconets will always use different hop sequences.

4 Example of a hopping sequence in data mode:

Example of a 79 hopping sequence in data mode:
40, 21, 44, 23, 42, 53, 46, 55, 48, 33, 52, 35, 50, 65, 54, 67,
56, 37, 60, 39, 58, 69, 62, 71, 64, 25, 68, 27, 66, 57, 70, 59,
72, 29, 76, 31, 74, 61, 78, 63, 01, 41, 05, 43, 03, 73, 07, 75,

09, 45, 13, 47, 11, 77, 15, 00, 64, 49, 66, 53, 68, 02, 70, 06,
01, 51, 03, 55, 05, 04

5 Equally average use of frequencies in data mode and behaviour for short transmissions:

The generation of the hopping sequence in connection mode depends essentially on two input values:
1. LAP/UAP of the master of the connection
2. Internal master clock

The LAP (lower address part) are the 24 LSB's of the 48 BD_ADDRESS. The BD_ADDRESS is an unambiguous number of every Bluetooth unit. The UAP (upper address part) are the 24 MSB's of the 48 BD_ADDRESS. The internal clock of a Bluetooth unit is derived from a free running clock which is never adjusted and is never turned off. For synchronisation with other units only offset are used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5 µs. The clock has a cycle of about one day (23h30). In most case it is implemented as 28 bit counter. For the deriving of the hopping sequence the entire LAP (24 bits), 4 LSB's (4 bits) (Input 1) and the 27 MSB's of the clock (Input 2) are used. With this input values different mathematical procedures (permutations, additions, XOR-operations) are performed to generate the sequence. This will be done at the beginning of every new transmission.

Regarding short transmissions the Bluetooth system has the following behaviour:
The first connection between the two devices is established, a hopping sequence was generated. For transmitting the wanted data the complete hopping sequence was not used. The connection ended. The second connection will be established. A new hopping sequence is generated. Due to the fact that the Bluetooth clock has a different value, because the period between the two transmission is longer (and it cannot be shorter) than the minimum resolution of the clock (312.5 µs). The hopping sequence will always differ from the first one.

6 Receiver input bandwidth and behaviour for repeated single or multiple packets:

The input bandwidth of the receiver is 1 MHz.
In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence (see chapter 5). The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection (e.g. single or multislot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence

7 Dwell time in data mode

The dwell time of 0.3797s within a 30 second period in data mode is independent from the packet type (packet length). The calculation for a 30 second period is a follows:
Dwell time = time slot length * hop rate / number of hopping channels *30s
Example for a DH1 packet (with a maximum length of one time slot)
Dwell time = 625 µs * 1600 1/s / 79 * 30s = 0.3797s (in a 30s period)
For multislot packet the hopping is reduced according to the length of the packet.
Example for a DH5 packet (with a maximum length of five time slots)
Dwell time = 5 * 625 µs * 1600 * 1/5 *1/s / 79 * 30s = 0.3797s (in a 30s period)
This is according the Bluetooth Core Specification V 1.0B (+ critical errata) for all Bluetooth devices. Therefore all Bluetooth devices **comply** with the FCC dwell time

requirement in data mode.
This was checked during the Bluetooth Qualification tests.
The Dwell time in hybrid mode is approximately 2.6 mS (in a 12.8s period)

8 Channel Separation in hybrid mode

The nominal channel spacing of the Bluetooth system is 1Mhz independent of the operating mode.
The maximum “initial carrier frequency tolerance” which is allowed for Bluetooth is fcenter = 75 kHz.
This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/07-E) for three frequencies (2402, 2441, 2480 MHz).

9 Derivation and examples for a hopping sequence in hybrid mode

For the generation of the inquiry and page hop sequences the same procedures as described for the data mode are used (see item 5), but this time with different input vectors:
**For the inquiry hop sequence, a predefined fixed address is always used. This results in the same 32 frequencies used by all devices doing an inquiry but every time with a different start frequency and phase in this sequence.
**For the page hop sequence, the device address of the paged unit is used as input vector. This results in the use of a subset of 32 frequencies which is specific for that initial state of the connection establishment between the two units. A page to different devices would result in a different subset of 32 frequencies.
So it is ensured that also in hybrid mode the frequency use equally averaged.
Example of a hopping sequence in inquiry mode:
48, 50, 09, 13, 52, 54,41, 45, 56, 58, 11, 15, 60, 62, 43, 47, 00, 02, 64, 68, 04, 06, 17, 21, 08, 10, 66, 70, 12, 14, 19, 23
Example of a hopping sequence in paging mode:
08, 57, 68, 70, 51, 02, 42, 40, 04, 61, 44, 46, 63, 14, 50, 48, 16, 65, 52, 54, 67, 18, 58, 56, 20, 53, 60, 62, 55, 06, 66, 64

10 Receiver input bandwidth and synchronization in hybrid mode:

The receiver input bandwidth is the same as in the data mode (1 MHz). When two Bluetooth devices establish contact for the first time, one device sends an inquiry access code, the other device is scanning for this inquiry access code. If two devices have been connected previously and want to start a new transmission, a similar procedure takes place. The only difference is, instead of the inquiry access code, a special access code, derived from the BD_ADDRESS of the paged device will be, will be sent by the master of this connection. Due to the fact that both units have been connected before (in the inquiry procedure) the paging unit has timing and frequency information about the page scan of the paged unit. For this reason the time to establish the connection is reduced considerable.

11 Spread rate / data rate of the direct sequence signal

The Spread rate / Data rate in inquiry and paging mode can be defined via the access code. The access code is the only criterion for the system to check if there is a valid transmission or not. If you regard the presence of a valid access code as one bit of information, and compare it with the length of the access code of 68 bits, the Spread rate / Data rate will be 68/1.

12 Spurious emission in hybrid mode

The Dwell in hybrid mode is shorter than in data mode. For this reason the spurious emissions average level in data mode is worst case. The spurious emissions peak level is the same for both modes.

EXHIBIT 6A TEST: 20 dB BANDWIDTH

FCC ID:	KBCIX260MPIA750BT
Applicant:	ITRONIX Corp.
Model:	IX260 with MPI350, Aircard750 & Bluetooth
Minimum Standard Specified:	FCC reply to TCB council 10/08/02, Frequency hoppers in the 2.4 GHz band are required to use a minimum of 15 non-overlapping channels. The hopping channel bandwidth can be wider than 1 MHz as long as the channels do not over lap and all emissions stay within the 2400- 2483.5 MHz band. For example a system that uses the minimum 15 channels can have hopping channel bandwidth that are up to 5 MHz wide.
Test Results:	The measured 20 dB bandwidth complies with the non-over lapping channel requirements of the FCC interpretation referenced above.
Authorization Procedure:	Part 2.1049

HIGH POWER

Method of Measurement:

1. The output power level had been preset during production.
2. The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer. The setting were RBW of 10 kHz & VBW of 30 kHz.
3. The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator.
4. The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data.
5. Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Measurement Results of Modulated Occupied Bandwidth

Channel	Channel Frequency GHz	Measured Maximum 20 dB BW EUT modulated	Limit Non-overlapping channels, all emissions within band
Plot 1 Low	2.402	617 kHz	complies
Plot 2 Middle	2.441	617 kHz	complies
Plot 3 High	2.480	617 kHz	complies

Plots 1, 2 & 3 of the 20 dB Bandwidth, supporting the above data, are located in Appendix 1 at the end of this report.

EXHIBIT 6A TEST: CONDUCTED PEAK OUTPUT POWER

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(b)1 is 1 Watt Maximum

Test Results: The measured output power level of the sample shows compliance with the maximum permissible 1 Watt limit.

Authorization Procedure: Part 2.1046

Manufacturers Rated Output Power: 14 dBm typical, - Class I **Bluetooth**

Measured Maximum Output Power: 14.46 dBm or 27.92 mWatt conducted **HIGH POWER**

Method of Measurement:

1.) The output power levels referenced above, had been preset during production.
2.) The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer.
3.) The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator. The EUT was *modulated* and hopping during this measurement. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data.
4.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Channel	Frequency (GHz)	Measured Peak Output Power (mW)	Measured Peak Output Power (dBm)	Internal EUT Cable loss dB	Corrected Peak Output Power (dBm))	Corrected Peak Output Power (mW))
Low	**2.402**	**26.12**	**14.17**	**.29**	**14.46**	**27.92**
Middle	2.441	25.11	14.00	.29	14.29	26.85
High	2.480	22.38	13.50	.29	13.79	23.93

Plots 5, 6 & 7 supporting the above data are located in Appendix 1 at the end of this report.

Equivalent Isotropic Radiated Power

14.46 max. conducted power)
+ 4.50 dBi (Rangestar Antenna, P/N 100929, 4.5 dBi peak antenna gain)
= 18.96 **dBm EIRP**

This Bluetooth Intentional Radiator complies with the maximum de-facto EIRP limit with the only antenna that can be used with this device, with the Rangestar Antenna, P/N 100929, peak antenna gain of 4.5 dBi.

EXHIBIT 6G TEST: SPURIOUS RF CONDUCTED EMISSIONS

FCC ID:	KBCIX260MPIA750BT
Applicant:	ITRONIX Corp.
Model:	IX260 with MPI350, Aircard750 & Bluetooth
Minimum Standard Specified:	Part 15.247(c) In any 100 kHz bandwidth outside the 2.412 – 2.485 band RF power shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest power.
Test Results:	Equipment complies with standard
Authorization Procedure:	Part 2.1051
Frequency Range Observed:	0 to 25 GHz
Operating Frequencies:	2.402, 2.441, & 2.480 GHz (2.402 – 2.480 GHz band)
Measured Output Power:	14.46 dBm or 27.92 mWatt conducted **HIGH POWER**

Method of Measurement:

1) The output power level had been preset during production.
2) The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer. The setting were 1 MHz for both RBW & VBW.
3) The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator.
4) The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data
5.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Highest Conducted Spurious Emission Measured For Each Channel				
Channel	Frequency GHz	Emission level dBm	Limit in dBm 20 dBc	dB below limit
Plot 9 - 2Fo, Low	4.804	-46.00	-20.0	31.83
Plot 9 - 2Fo, Middle	4.882	-47.50	-20.0	41.67
Plot 9 - 2Fo, High	4.960	-48.17	-20.0	42.34

Note: All three channels displayed max hold collectively on 2 plots to cover the wide frequency range.
Plot 9, covering 10 – 2900 MHz, (1 MHz RBW & VBW) &
Plot 10, covering 2.750 – 25 GHz (1 MHz RBW & VBW) are located in Appendix 1.

BAND-EDGE COMPLIANCE Of RF CONDUCTED EMISSIONS

Please refer to Plots 11 and 12 for the lower and upper band-edge measurements, located in Appendix 1.

Trace A - Band-edge channel modulated, hopping disabled
Trace B - All channels modulated, hopping enabled (indication of spreading function evident)

EXHIBIT 6G TEST: FIELD STRENGTH OF SPURIOUS RADIATION EMISSIONS

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp.
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(c)
Test Results: Equipment complies with standard
Authorization Procedure: Part 2.1053
Test Equipment Set Up: See Block Diagram in Exhibit 7 07/26/03
Frequency Range Observed: 0 to 25 GHz **HIGH POWER**

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**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Limit 74 Peak 54 Avg dBu/V**	**Margin in dB below LIMIT**
Fo - 2.402									
4.804	55.00	H	Peak	32.83	3.95	23.2	68.58	74	5.42
4.804	33.17	H	Average	32.83	3.95	23.2	46.75	54	7.25
7.260	49.00	H	Peak	36.77	4.55	25.9	64.42	74	9.58
7.260	33.00	H	Average	36.77	4.55	25.9	48.42	54	5.58
9.608	42.50	V	Peak	37.55	5.0	24.5	60.55	74	13.45
9.608	28.00	V	Average	37.55	5.0	24.5	46.05	54	7.95
Fo – 2.441									
4.882	52.17	H	Peak	33.33	3.95	23.2	66.25	74	7.75
4.882	32.00	H	Average	33.33	3.95	23.2	46.08	54	7.92
7.323	47.67	H	Peak	36.77	4.55	25.9	63.09	74	10.91
7.323	32.67	H	Average	36.77	4.55	25.9	48.09	54	5.91
9.764	44.00	V	Peak	38.33	5.0	24.7	62.63	74	11.37
9.764	30.00	V	Average	38.33	5.0	24.7	48.67	54	5.37
Fo – 2.480									
4.960	54.17	H	Peak	33.33	3.95	23.2	68.25	74	5.75
4.960	32.83	H	Average	33.33	3.95	23.2	46.91	54	7.09
7.440	48.33	H	Peak	36.77	4.55	25.9	63.75	74	10.25
7.440	33.00	H	Average	36.77	4.55	25.9	48.42	54	5.58
9.920	45.00	V	Peak	38.33	5.0	24.7	63.63	74	10.37
9.920	30.33	V	Average	38.33	5.0	24.7	48.96	54	5.04

Harmonic emissions on all three channels (low, mid & high) 5Fo – 10Fo at or below noise floor

Channel	**Frequency in GHz**	**Harmonics Observed**	**Limit 74 dBuV/m Peak & 54 dBuV/m Average**
Low Ch.	2.402		
5Fo – 10Fo	12.101 – 24.020	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
Mid Ch.	2.441		
5Fo – 10Fo	12.205 – 24.410	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
High Ch.	2.480		
5Fo - 10Fo	12.400 – 24.800	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m

EXHIBIT 6G TEST: FIELD STRENGTH OF SPURIOUS RADIATION AT UPPER BAND EDGE

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp.
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(c)

Test Results: Equipment complies with standard

Authorization Procedure: Part 2.1053

Test Equipment Set Up: See Block Diagram in Exhibit 7

Frequency Range Observed: 2.480 – 2.5GHz

07/26/03
HIGH POWER

Note: No significant emissions were observed in the restricted band 2.835 – 2.5 GHz so a band-edge measurement was made.

RADIATED EMISSIONS MEASUREMENT AT UPPER BAND EDGE										
Frequency GHz	**SA Rdg. dBu/V**	**Ant. Vert. or Horz.**	**Peak or Average Reading**	**Antenna Factor dB**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Corrected Reading uV/m**	**Peak Limit dBuV**	**Avg Limit dBuV**
2.4835	35.50	V	Peak	28.37	3.35	22.3	54.92	557.18	74	---
2.4835	34.67	H	Peak	28.37	3.35	22.3	44.09	160.14	74	---
2.4835	24.67	V	Average	28.37	3.35	22.3	34.09	50.64	---	54
2.4835	22.83	H	Average	28.37	3.35	22.3	32.35	40.97	---	54

Radiated Test Notes

1.) All spurious and harmonics in the *restricted bands* listed in Part 15.205 are below the Part 15.209 limit.
2.) No peak emissions above 1 GHz are more than 20 dB above the average limit.
3.) Peak measurements made with 1 MHz RBW & VBW, Average made with 1MHz RBW & 10 Hz VBW.
4.) During preliminary measurements the EUT was measured in 3 mutually orthogonal planes. The highest level for Fo was found with the EUT standing Upright. So this position was used during final measurements at 3 meters.
5.) The EUT was AC powered during the testing.
6.) The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data.
7.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems
8.) A HP preamplifier and a high pass filter was used during the measurements of the harmonics to reduce the fundamental signal and avoid overloading the front end of the analyzer.

EXHIBIT 6A TEST: 20 dB BANDWIDTH

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp.
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: FCC reply to TCB council 10/08/02, Frequency hoppers in the 2.4 GHz band are required to use a minimum of 15 non-overlapping channels. The hopping channel bandwidth can be wider than 1 MHz as long as the channels do not over lap and all emissions stay within the 2400- 2483.5 MHz band. For example a system that uses the minimum 15 channels can have hopping channel bandwidth that are up to 5 MHz wide.

Test Results: The measured 20 dB bandwidth complies with the non-over lapping channel requirements of the FCC interpretation referenced above.

Authorization Procedure: Part 2.1049

LOW POWER

Method of Measurement:

6. The output power level had been preset during production.
7. The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer. The setting were RBW of 10 kHz & VBW of 30 kHz.
8. The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator.
9. The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data. Power level set to 30 low power.
10. Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Measurement Results of Modulated Occupied Bandwidth

Channel	Channel Frequency GHz	Measured Maximum 20 dB BW EUT modulated	Limit Non-overlapping channels, all emissions within band
Plot 1 Low	2.402	707 kHz	complies
Plot 2 Middle	2.441	683 kHz	complies
Plot 3 High	2.480	687 kHz	complies

Plots 1, 2 & 3 of the 20 dB Bandwidth, supporting the above data, are located in Appendix 2 at the end of this report.

EXHIBIT 6A TEST: CONDUCTED PEAK OUTPUT POWER

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(b)1 is 1 Watt Maximum

Test Results: The measured output power level of the sample shows compliance with the maximum permissible 1 Watt limit.

Authorization Procedure: Part 2.1046

Manufacturers Rated Output Power: 11 dBm typical minimum low power, - Class I **Bluetooth**

Measured Maximum Output Power: 9.12 dBm or 8.16 mWatt conducted **LOW POWER**

Method of Measurement:

5.) The output power levels referenced above, had been preset during production.
6.) The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer.
7.) The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator. The EUT was *modulated* and hopping during this measurement. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data. Power level set to 30 low power.
8.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Channel	Frequency (GHz)	Measured Peak Output Power (mW)	Measured Peak Output Power (dBm)	Internal EUT Cable loss dB	Corrected Peak Output Power (dBm))	Corrected Peak Output Power (mW))
Low	**2.402**	**7.63**	**8.83**	**.29**	**9.12**	**8.16**
Middle	2.441	7.36	8.67	.29	8.96	7.87
High	2.480	6.80	8.33	.29	8.62	7.27

Plots 5, 6 & 7 supporting the above data are located in Appendix 2 at the end of this report.

Equivalent Isotropic Radiated Power

9.12 max. conducted power)
+ 4.50 dBi (Rangestar Antenna, P/N 100929, 4.5 dBi peak antenna gain)
= 13.62 **dBm EIRP**

This Bluetooth Intentional Radiator complies with the maximum de-facto EIRP limit with the only antenna that can be used with this device, with the Rangestar Antenna, P/N 100929, peak antenna gain of 4.5 dBi.

EXHIBIT 6G TEST: SPURIOUS RF CONDUCTED EMISSIONS

FCC ID:	KBCIX260MPIA750BT
Applicant:	ITRONIX Corp.
Model:	IX260 with MPI350, Aircard750 & Bluetooth
Minimum Standard Specified:	Part 15.247(c) In any 100 kHz bandwidth outside the 2.412 – 2.485 band RF power shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest power.
Test Results:	Equipment complies with standard
Authorization Procedure:	Part 2.1051
Frequency Range Observed:	0 to 25 GHz
Operating Frequencies:	2.402, 2.441, & 2.480 GHz (2.402 – 2.480 GHz band)
Measured Output Power:	9.12 dBm or 8.16 mWatt conducted **LOW POWER**

Method of Measurement:

5) The output power level had been preset during production.
6) The output of the EUT was connected directly via an adapter to the input of the HP8562A spectrum analyzer. The setting were 1 MHz for both RBW & VBW.
7) The measured channels cover the low, middle and high channels of the operational frequency range requested for this intentional radiator.
8) The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data. Power level set to 30 low power.

5.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems.

Highest Conducted Spurious Emission Measured For Each Channel				
Channel		Emission level in dBm	Limit in dBm 20 dBc	dB below limit
Low	2FO to 10FO	All harmonics at or below noise floor	-20.0	> 20 dB below limit
Mid	2FO to 10FO	All harmonics at or below noise floor	-20.0	> 20 dB below limit
High	2FO to 10FO	All harmonics at or below noise floor	-20.0	> 20 dB below limit

Note: All three channels displayed max hold collectively on 2 plots to cover the wide frequency range.
Plot 9, covering 10 – 2900 MHz, (1 MHz RBW & VBW) &
Plot 10, covering 2.750 – 25 GHz (1 MHz RBW & VBW) are located in Appendix 2.

BAND-EDGE COMPLIANCE Of RF CONDUCTED EMISSIONS

Please refer to Plots 11 and 12 for the lower and upper band-edge measurements, located in Appendix 1.

Trace A - Band-edge channel modulated, hopping disabled
Trace B - All channels modulated, hopping enabled (indication of spreading function evident)

EXHIBIT 6G TEST: FIELD STRENGTH OF SPURIOUS RADIATION EMISSIONS

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp.
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(c)
Test Results: Equipment complies with standard
Authorization Procedure: Part 2.1053
Test Equipment Set Up: See Block Diagram in Exhibit 7 07/26/03
Frequency Range Observed: 0 to 25 GHz **LOW POWER**

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**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Limit 74 Peak 54 Avg dBu/V**	**Margin in dB below LIMIT**
Fo - 2.402									
4.804	44.50	H	Peak	32.83	3.95	23.2	58.08	74	15.92
4.804	28.67	H	Average	32.83	3.95	23.2	42.25	54	11.75
7.260	40.50	H	Peak	36.77	4.55	25.9	55.92	74	18.08
7.260	28.50	H	Average	36.77	4.55	25.9	42.08	54	11.92
Fo – 2.441									
4.882	41.33	H	Peak	33.33	3.95	23.2	55.08	74	18.92
4.882	24.17	H	Average	33.33	3.95	23.2	38.25	54	15.75
7.323	42.00	H	Peak	36.77	4.55	25.9	57.42	74	16.58
7.323	28.00	H	Average	36.77	4.55	25.9	45.42	54	10.58
Fo – 2.480									
4.960	43.83	H	Peak	33.33	3.95	23.2	57.91	74	16.09
4.960	28.50	H	Average	33.33	3.95	23.2	42.58	54	11.42
7.440	43.00	H	Peak	36.77	4.55	25.9	58.42	74	15.52
7.440	29.33	H	Average	36.77	4.55	25.9	44.75	54	9.25

Harmonic emissions on all three channels (low, mid & high) 4Fo – 10Fo at or below noise floor			
Channel	**Frequency in GHz**	**Harmonics Observed**	**Limit 74 dBuV/m Peak & 54 dBuV/m Average**
Low Ch.	2.402		
5Fo – 10Fo	12.101 – 24.020	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
Mid Ch.	2.441		
5Fo – 10Fo	12.205 – 24.410	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m
High Ch.	2.480		
5Fo - 10Fo	12.400 – 24.800	None -at or < noise floor @3m	All emissions < 54 dBuV/m or 500 uV/m

EXHIBIT 6G TEST: FIELD STRENGTH OF SPURIOUS RADIATION AT UPPER BAND EDGE

FCC ID: KBCIX260MPIA750BT
Applicant: ITRONIX Corp.
Model: IX260 with MPI350, Aircard750 & Bluetooth

Minimum Standard Specified: Part 15.247(c)

Test Results: Equipment complies with standard

Authorization Procedure: Part 2.1053

Test Equipment Set Up: See Block Diagram in Exhibit 7

07/26/03

Frequency Range Observed: 2.480 – 2.5GHz **LOW POWER**

Note: No significant emissions were observed in the restricted band 2.835 – 2.5 GHz so a band-edge measurement was made.

RADIATED EMISSIONS MEASUREMENT AT UPPER BAND EDGE										
Frequency GHz	**SA Rdg. dBu/V**	**Ant. Vert. or Horz.**	**Peak or Average Reading**	**Antenna Factor dB**	**Cable & filter loss dB**	**Amp Gain**	**Corrected Reading dBuV/m**	**Corrected Reading uV/m**	**Peak Limit dBuV**	**Avg Limit dBuV**
2.4835	35.83	V	Peak	28.37	3.35	22.3	45.25	183.02	74	---
2.4835	34.83	H	Peak	28.37	3.35	22.3	44.25	163.11	74	---
2.4835	23.50	V	Average	28.37	3.35	22.3	32.92	44.25	---	54
2.4835	22.50	H	Average	28.37	3.35	22.3	31.92	163.28	---	54

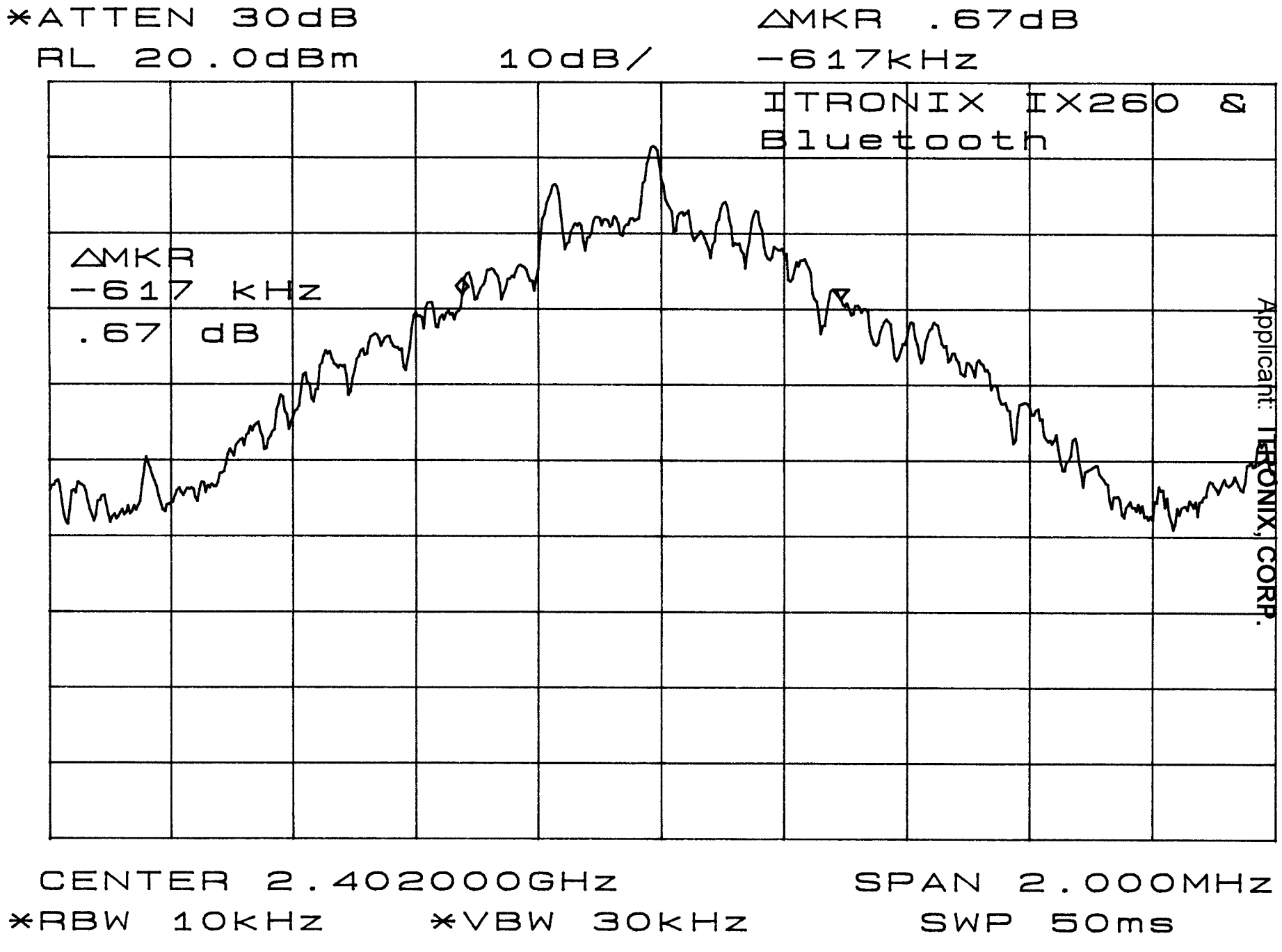
Radiated Test Notes

9.) All spurious and harmonics in the *restricted bands* listed in Part 15.205 are below the Part 15.209 limit.
10.) No peak emissions above 1 GHz are more than 20 dB above the average limit.
11.) Peak measurements made with 1 MHz RBW & VBW, Average made with 1MHz RBW & 10 Hz VBW.
12.) During preliminary measurements the EUT was measured in 3 mutually orthogonal planes. The highest level for Fo was found with the EUT standing Upright. So this position was used during final measurements at 3 meters.
13.) The EUT was AC powered during the testing.
14.) The EUT was *modulated but not hopping* channels during this test. The data rate is 1mbps per the Bluetooth standard. The Payload is PRBS9 data. Power level set to 30 low power.
15.) Measurements done according to DA 00-705 Filing and Measurement Guide for FHSS Systems
16.) A HP preamplifier and a high pass filter was used during the measurements of the harmonics to reduce the fundamental signal and avoid overloading the front end of the analyzer.

Appendix 1 - HIGH POWER

Plots 1 to 12 are located on the following pages.

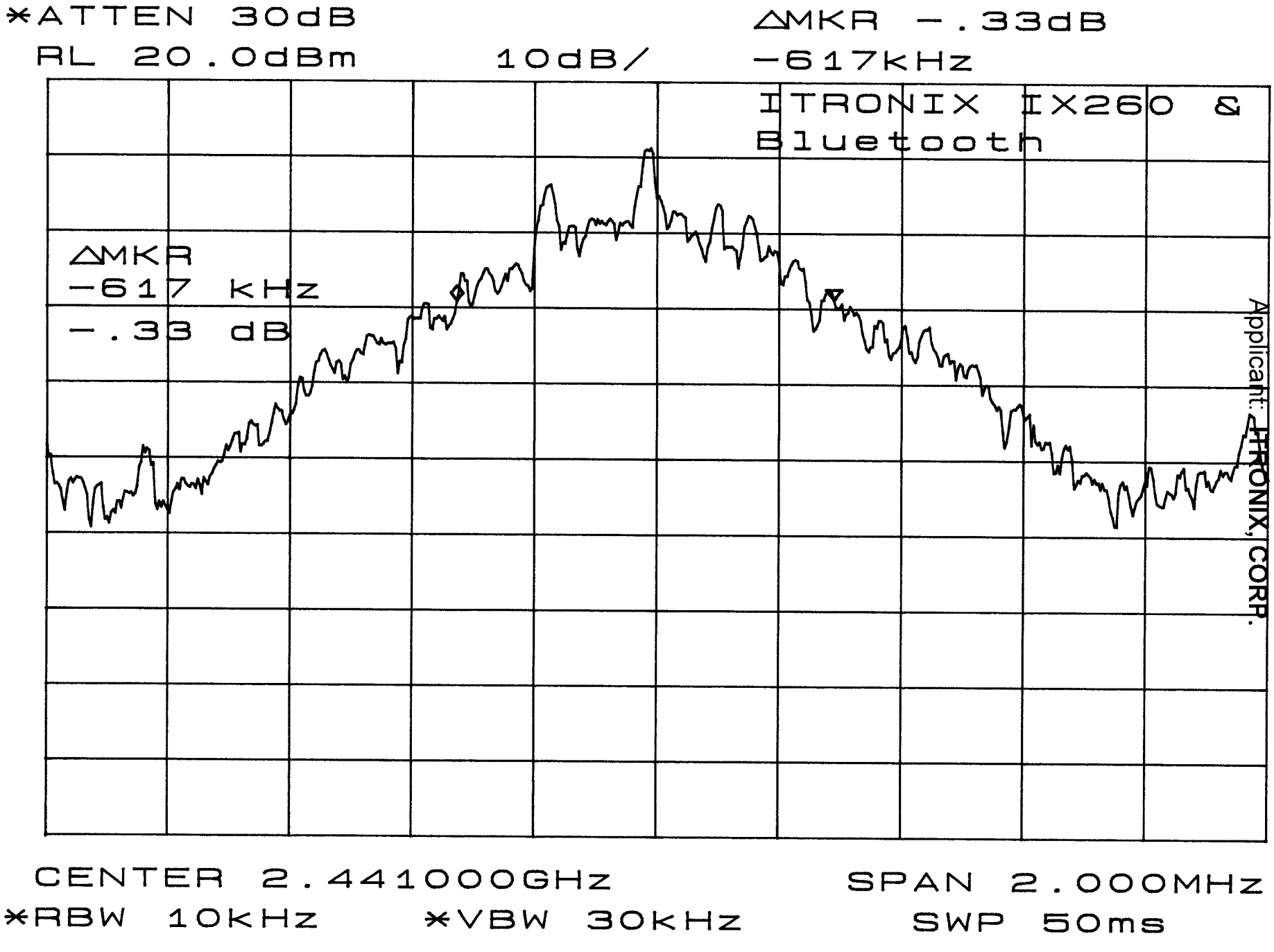
Plots 1 to 4	**20 dB Bandwidth**
Plot 4	**79 Hopping Frequencies Occupied Band**
Plots 5 to 7	**Conducted Output Power**
Plot 8	**240 MHz Span (high, mid & low channel transmit)**
Plots 9 to 10	**Spurious RF Conducted Emissions**
Plot 11	**Lower Band-edge Compliance of RF Conducted Emissions**
Plot 12	**Upper Band-edge Compliance of RF Conducted Emissions**



FCC ID: KBCIX260MPIA750BT

HIGH POWER PLOT - 1

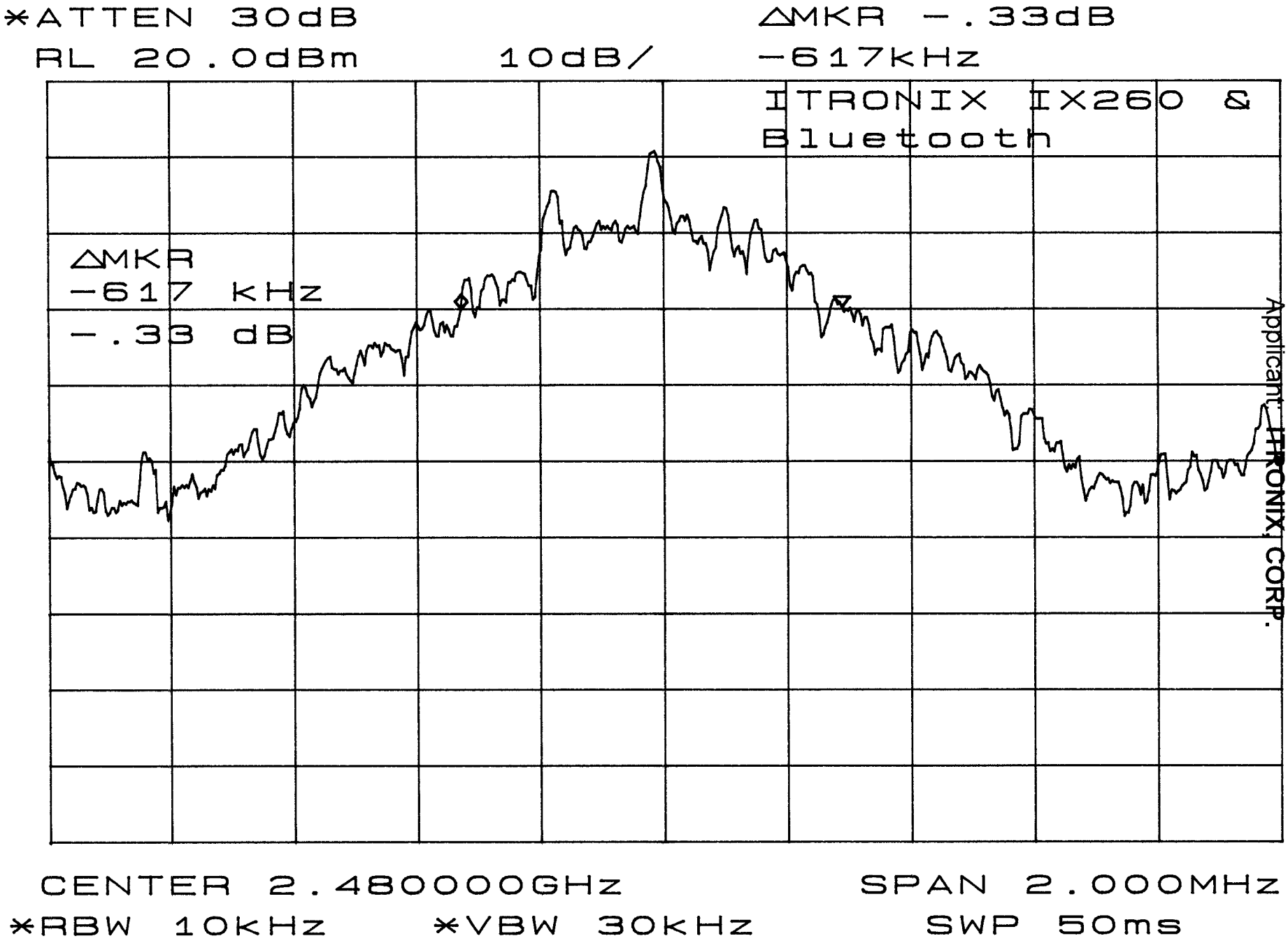
Applicant: ITRONIX CORP.



FCC ID: KBCIX260MPIA750BT

HIGH POWER PLOT - 2

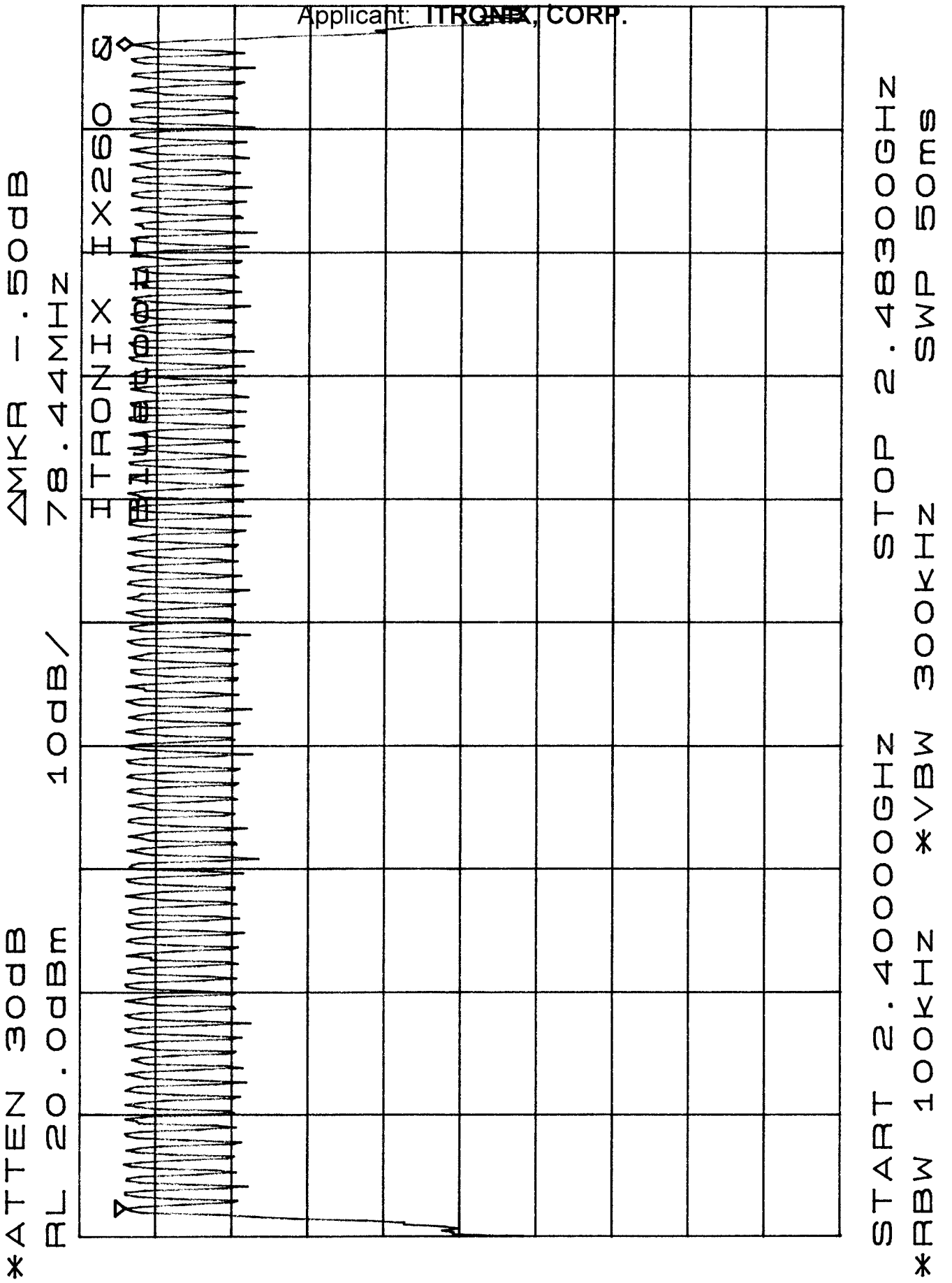
Applicant: ITRONIX CORP.

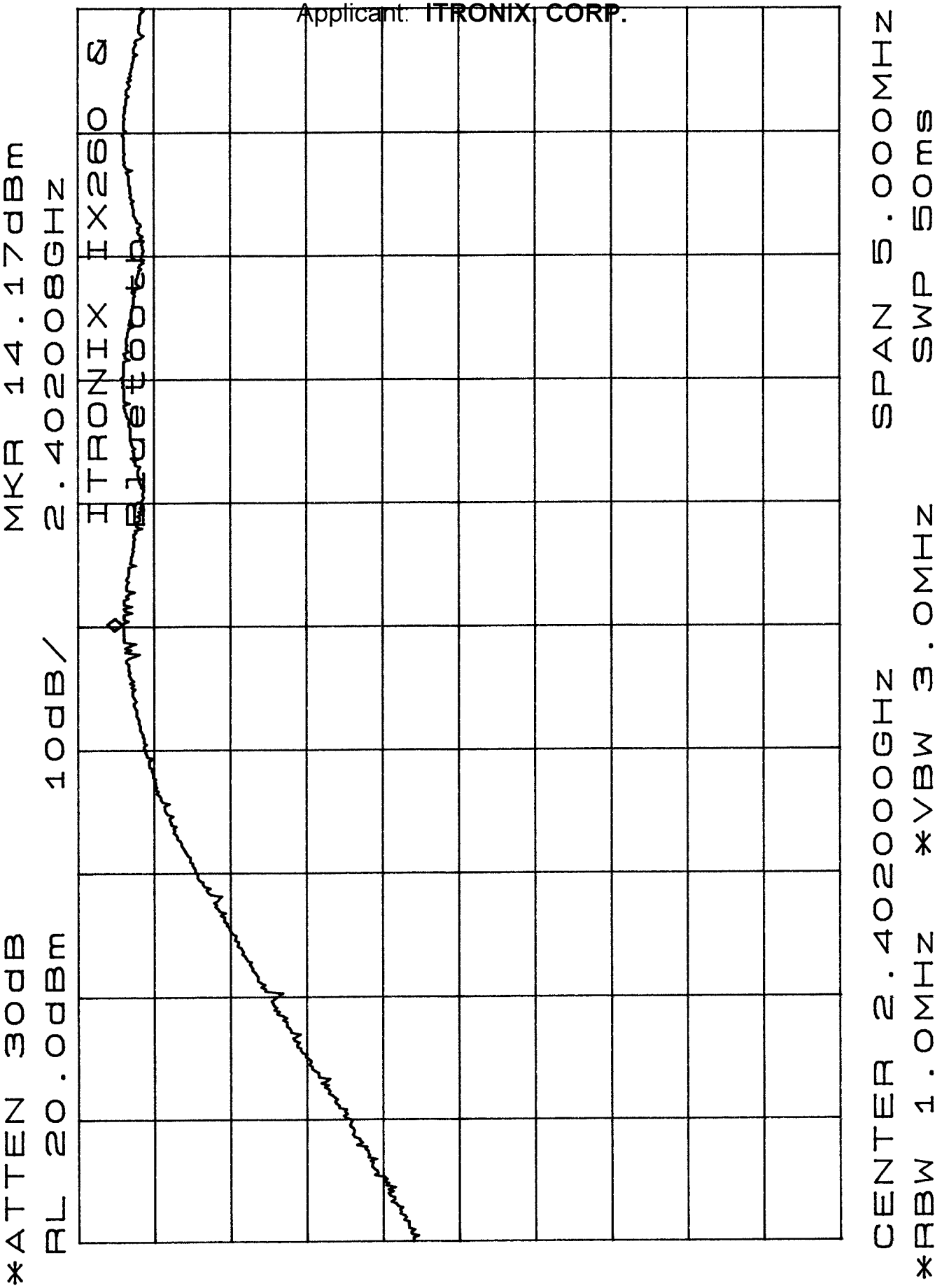


FCC ID: KBCIX260MPIA750BT

HIGH POWER PLOT - 3

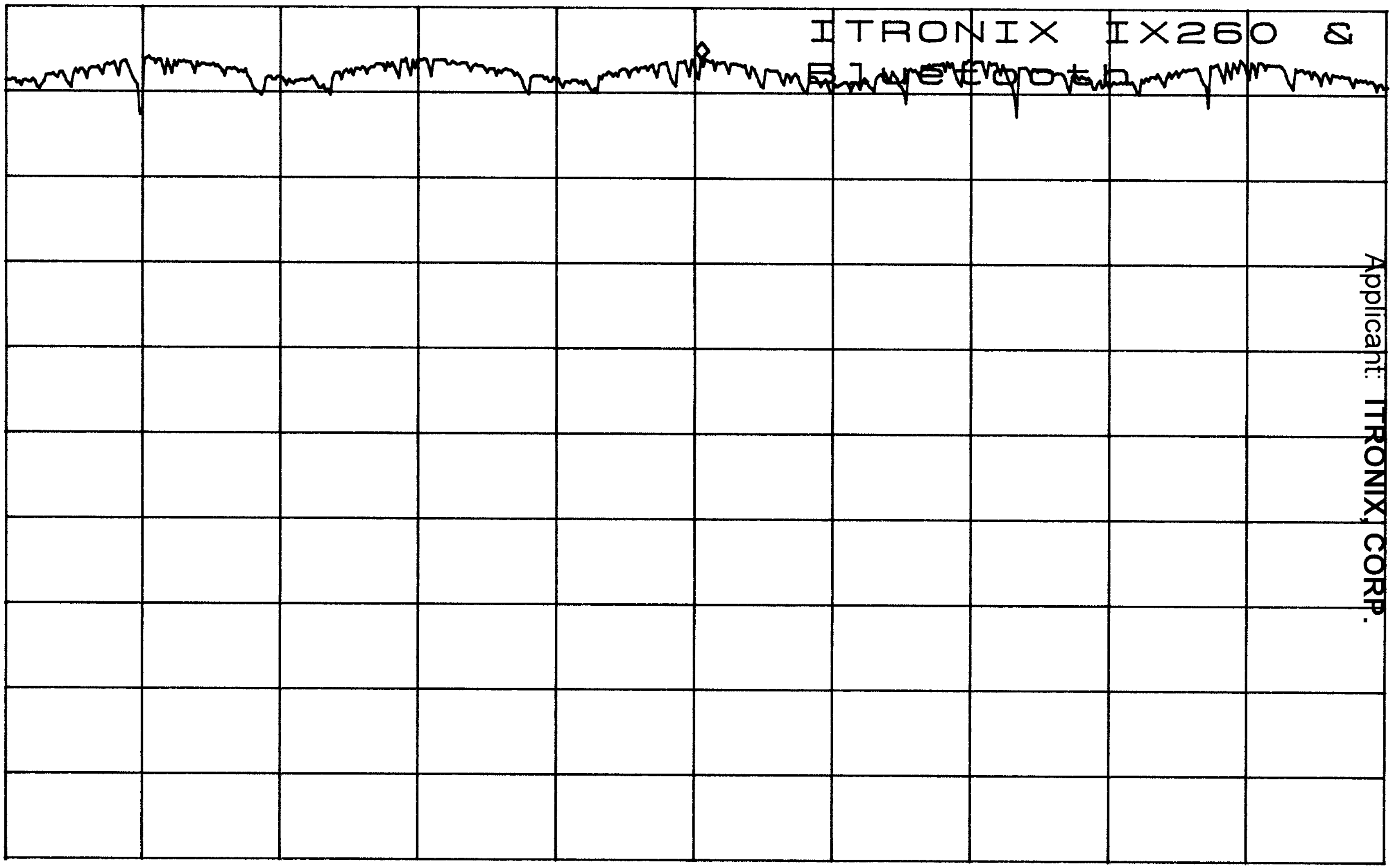
Applicant: ITRONIX CORP.


*ATTEN 30dB
RL 20.0dBm
10dB/
ΔMKR -.50dB
78.44MHz
ITRONIX IX260
START 2.40000GHz
*RBW 100KHz
STOP 2.48300GHz
*VBW 300KHz
SWP 50ms


*ATTEN 30dB
RL 20.0dBm
10dB/
MKR 14.17dBm
2.402008GHz
ITRONIX IX260 G
Blue#60tooth
CENTER 2.402000GHz
*RBW 1.0MHz
*VBW 3.0MHz
SPAN 5.000MHz
SWP 50ms

FCC ID: KBCIX260MPIA750BT

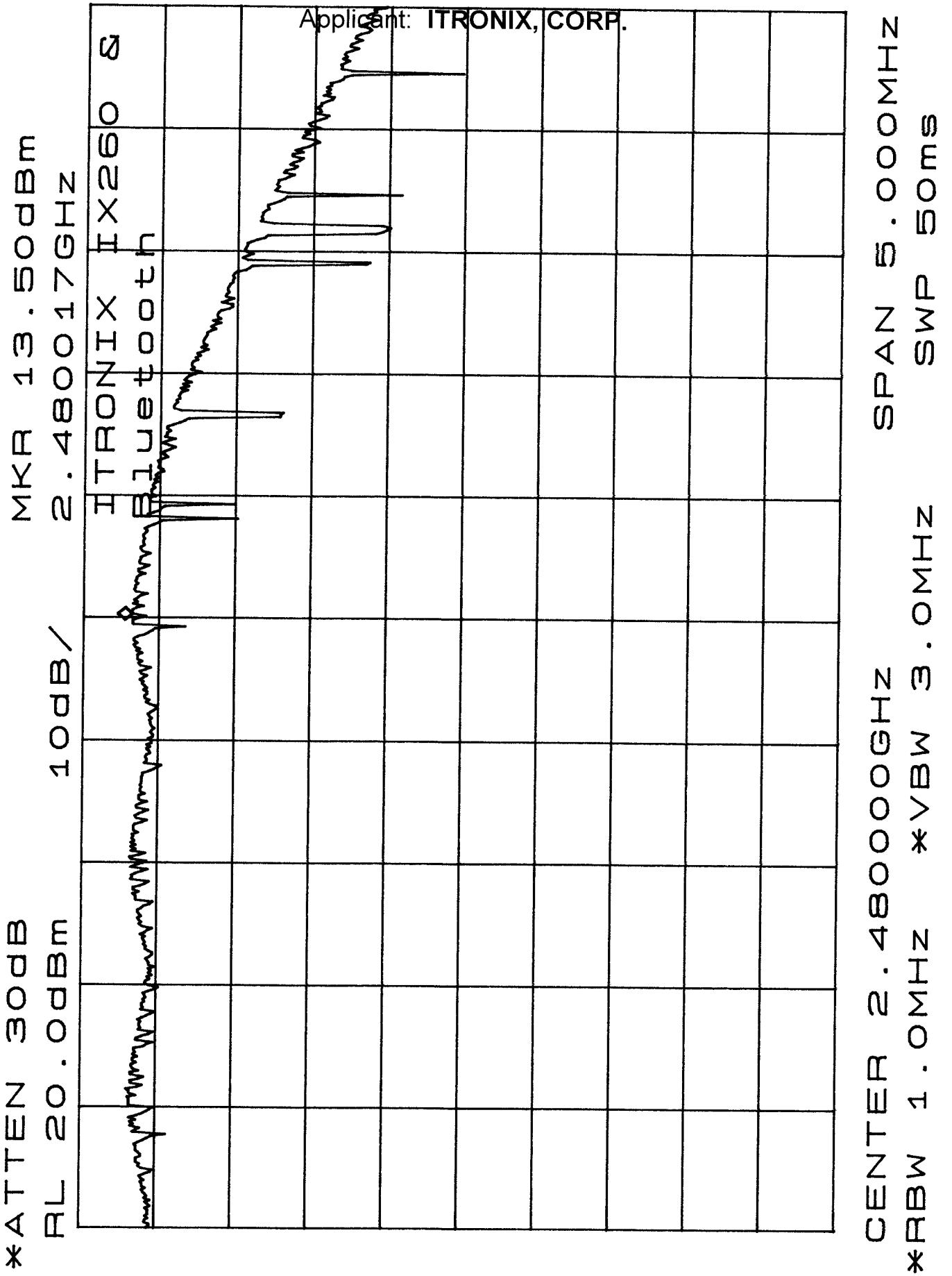
*ATTEN 30dB MKR 14.00dBm
RL 20.0dBm 10dB/ 2.441025GHz

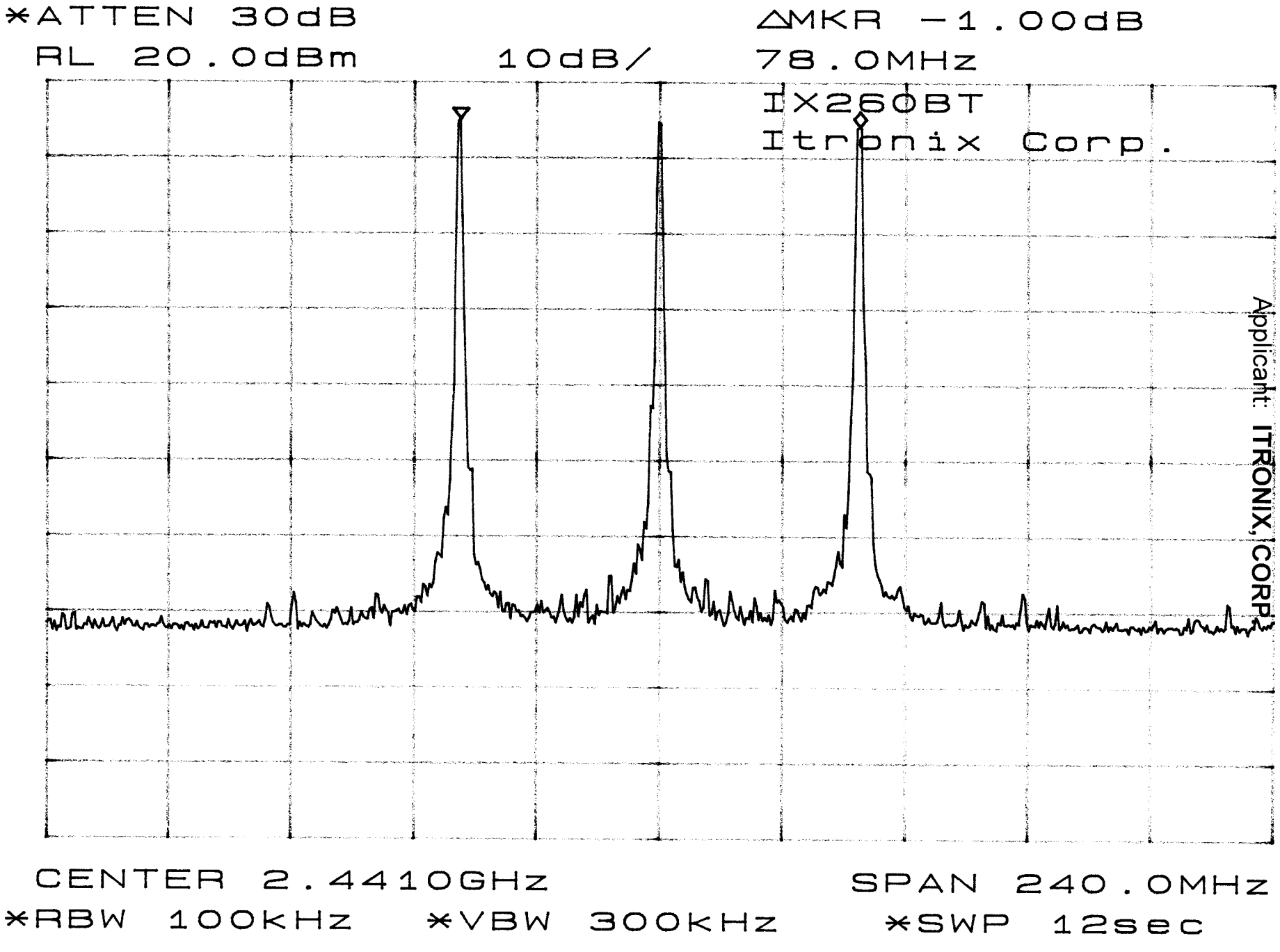


CENTER 2.441000GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 3.0MHz SWP 50ms

HIGH POWER PLOT - 6

Applicant: ITRONIX, CORP.

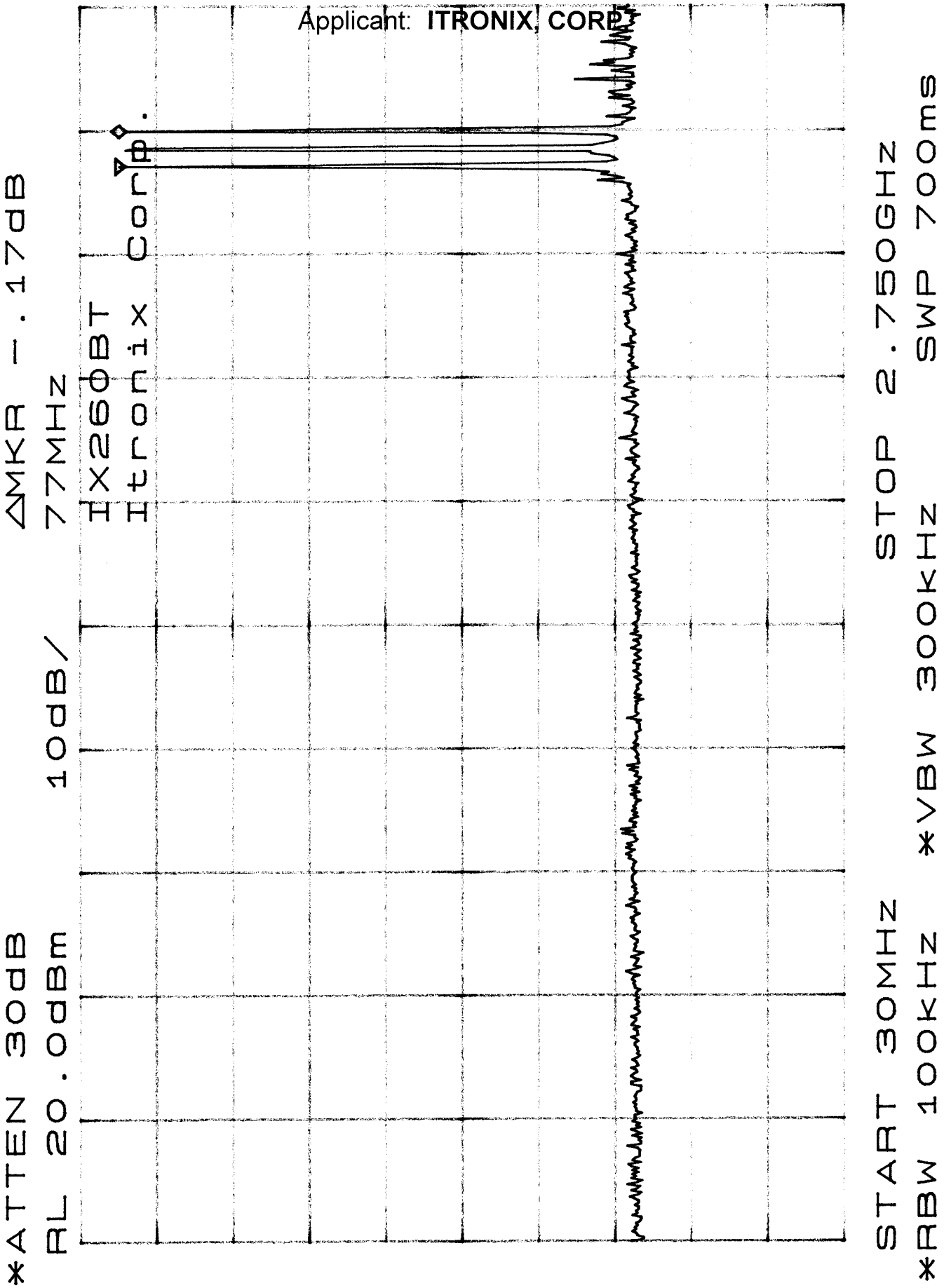

*ATTEN 30dB
RL 20.0dBm
10dB/
MKR 13.50dBm
2.480017GHz
ITRONIX IX260 @
Bluetooth
CENTER 2.480000GHz
*RBW 1.0MHz
*VBW 3.0MHz
SPAN 5.000MHz
SWP 50ms

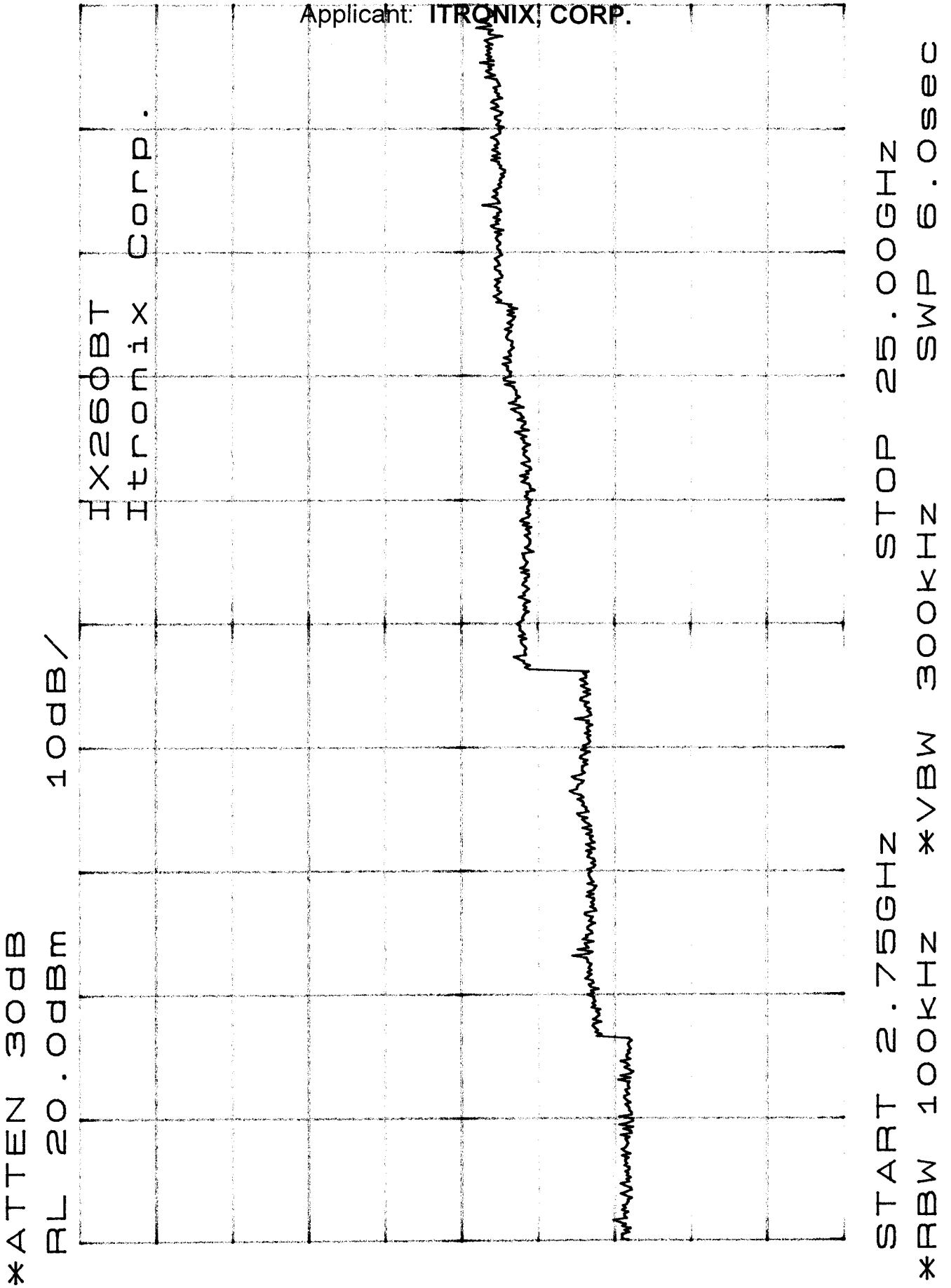


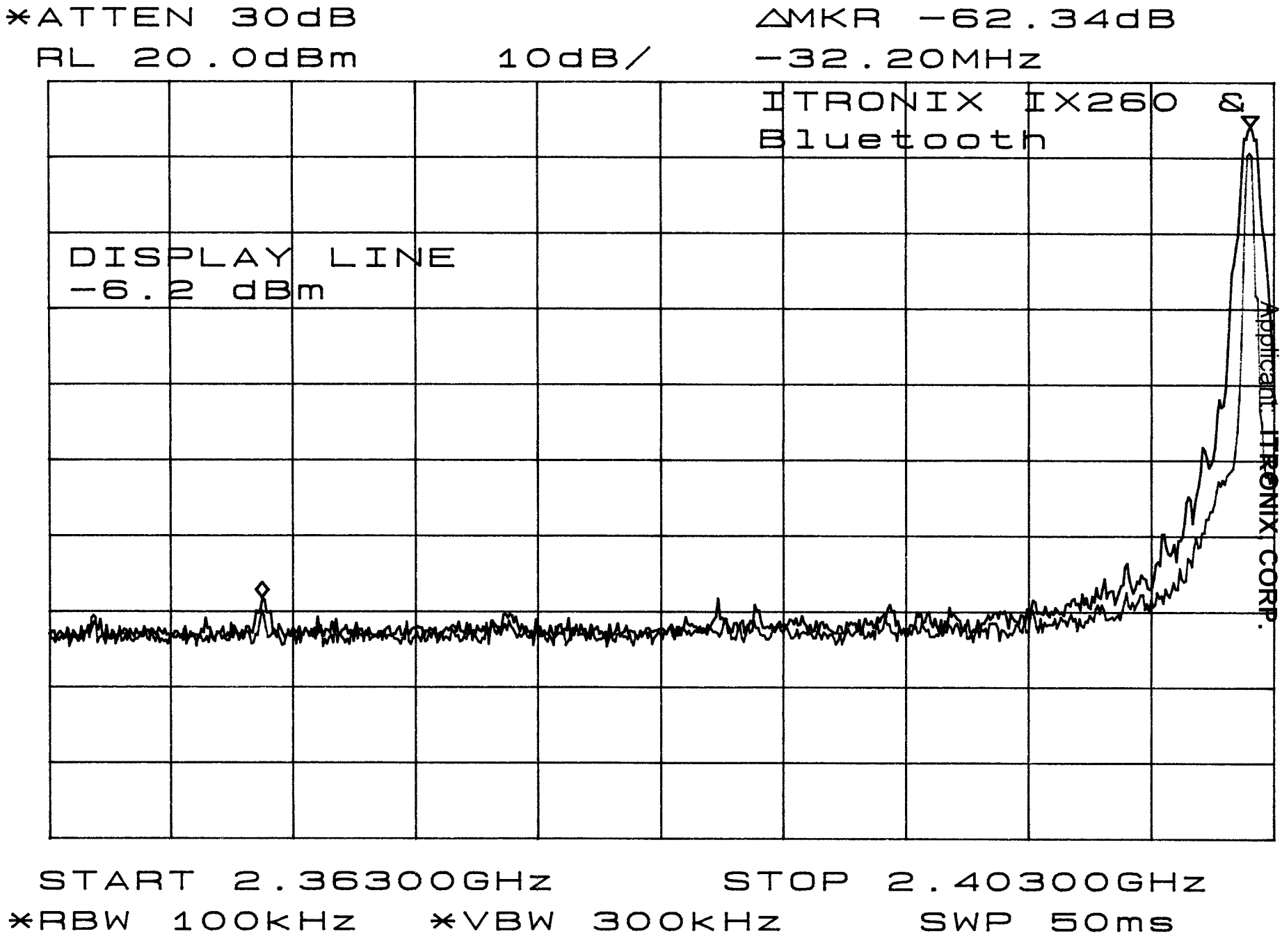
FCC ID: KBCIX260MPIA750BT

HIGH POWER PLOT - 8

Applicant: ITRONIX, CORP.

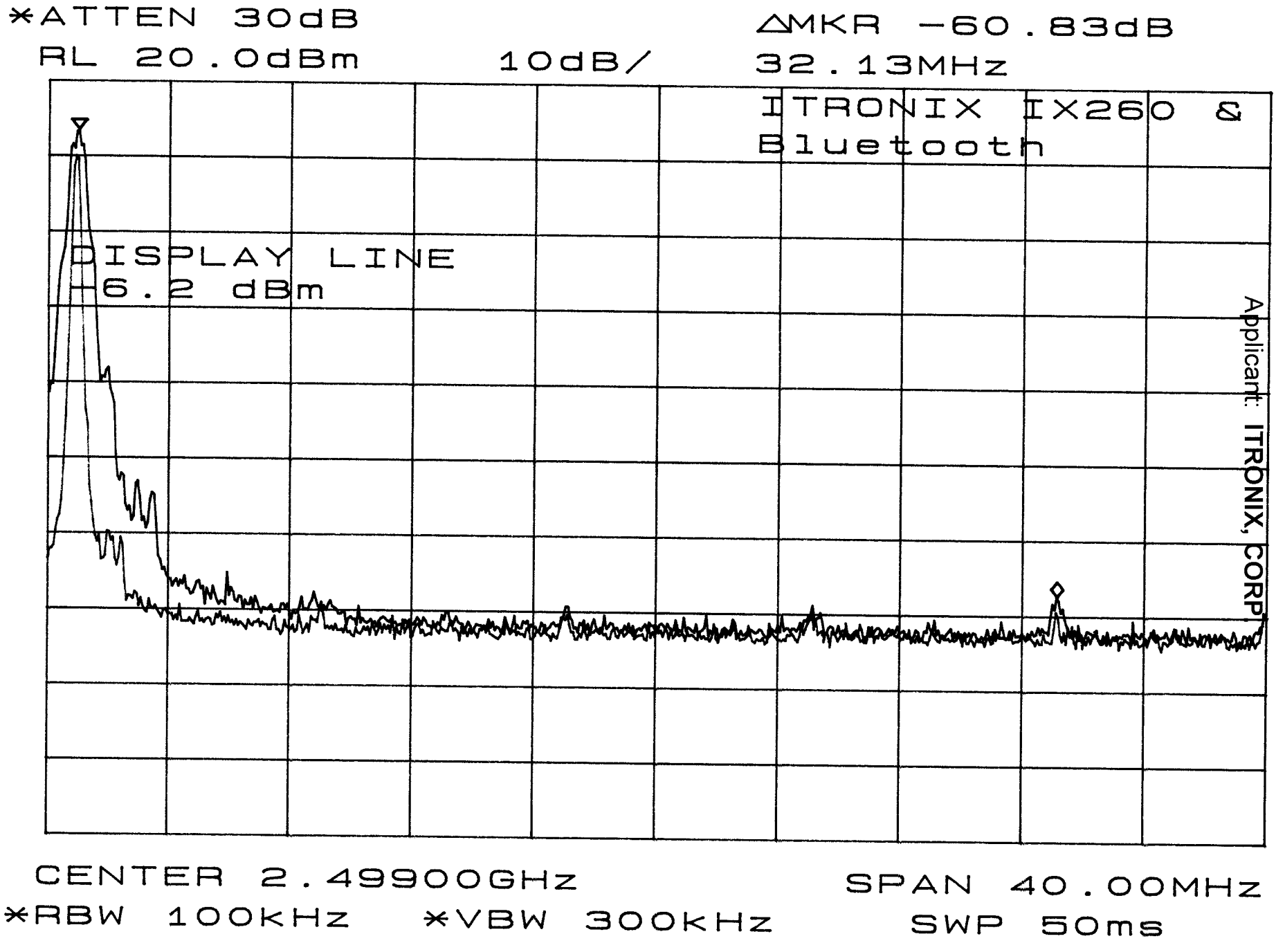

Applicant: ITRONIX CORP.
*ATTEN 30dB
RL 20.0dBm
10dB/
ΔMKR -.17dB
77MHz
HX260BT
Itronix Corp.
*RBW 100KHz
START 30MHz
*VBW 300KHz
STOP 2.750GHz
SWP 700ms


*ATTEN 30dB
RL 20.0dBm
10dB/
HX260BT
Itronix Corp.
START 2.75GHz
*RBW 100KHz
*VBW 300KHz
STOP 25.00GHz
SWP 6.0sec



FCC ID: KBCIX260MPIA750BT

HIGH POWER PLOT - 11



FCC ID: KBCIX260MPIA750BT

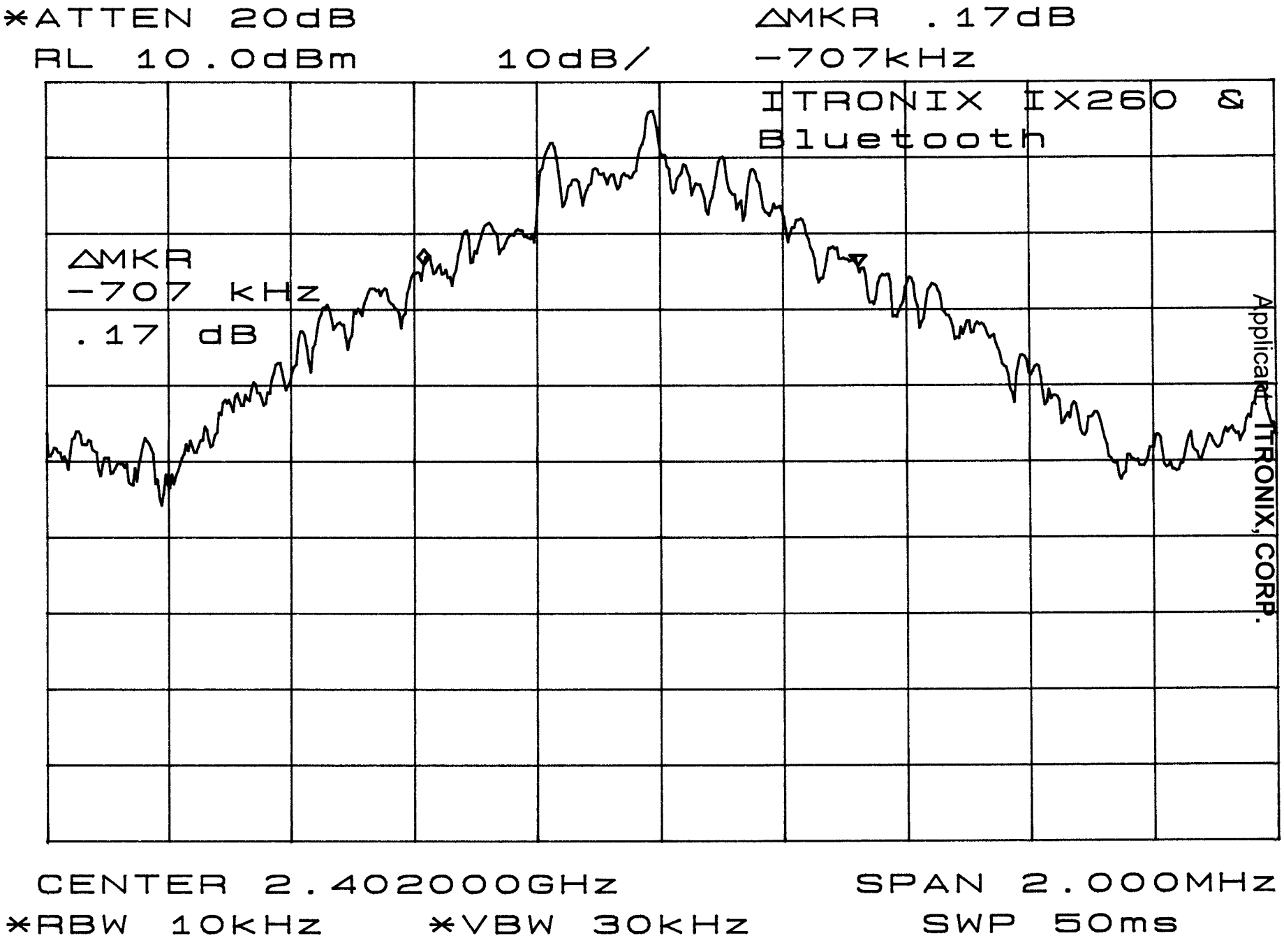
HIGH POWER PLOT - 12

Applicant: ITRONIX, CORP.

Appendix 2 – LOW POWER

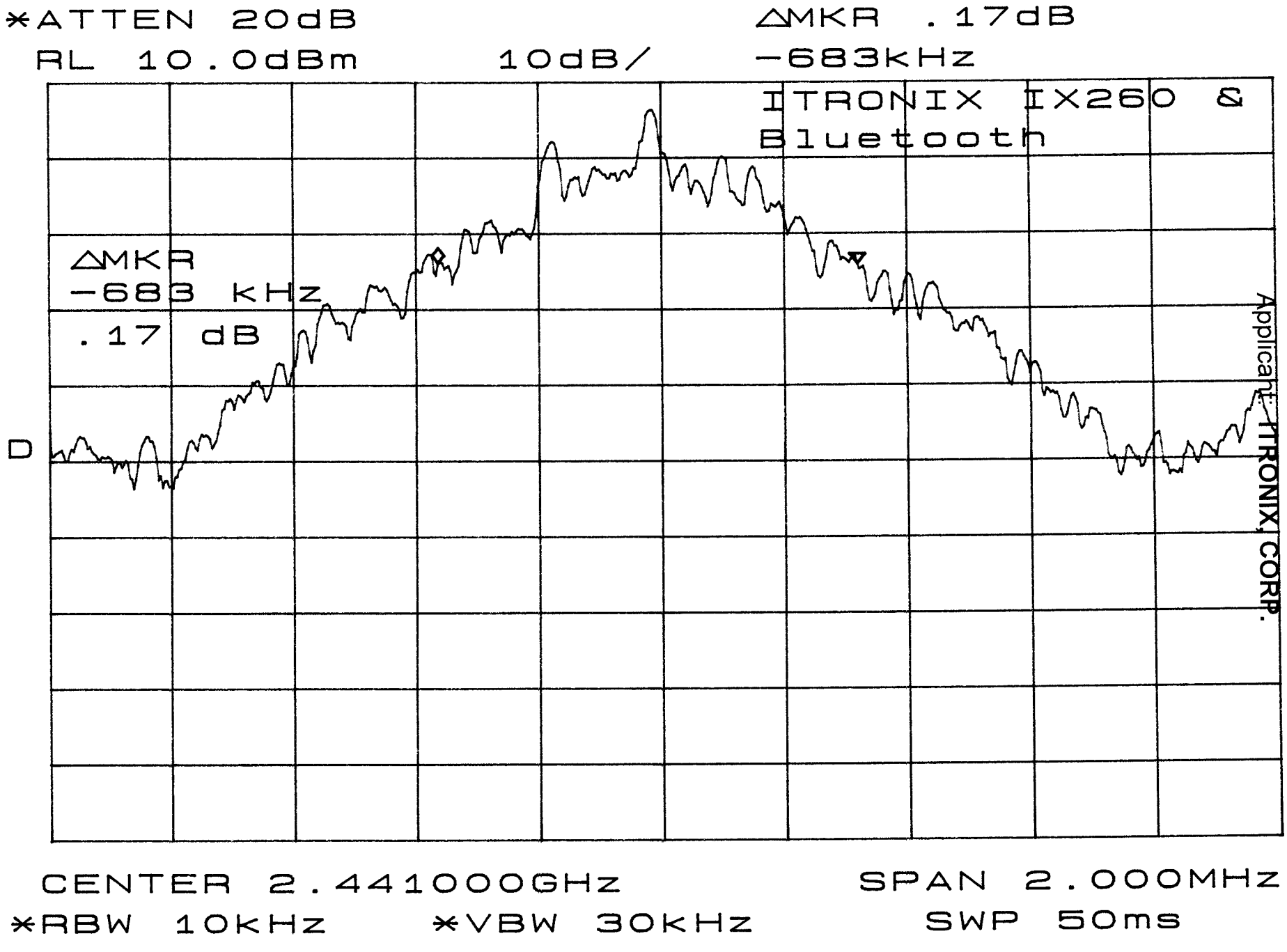
Plots 1 to 12 are located on the following pages.

Plots 1 to 4	**20 dB Bandwidth**
Plot 4	**79 Hopping Frequencies Occupied Band**
Plots 5 to 7	**Conducted Output Power**
Plot 8	**240 MHz Span (high, mid & low channel transmit)**
Plots 9 to 10	**Spurious RF Conducted Emissions**
Plot 11	**Lower Band-edge Compliance of RF Conducted Emissions**
Plot 12	**Upper Band-edge Compliance of RF Conducted Emissions**



FCC ID: KBCIX260MPIA750BT

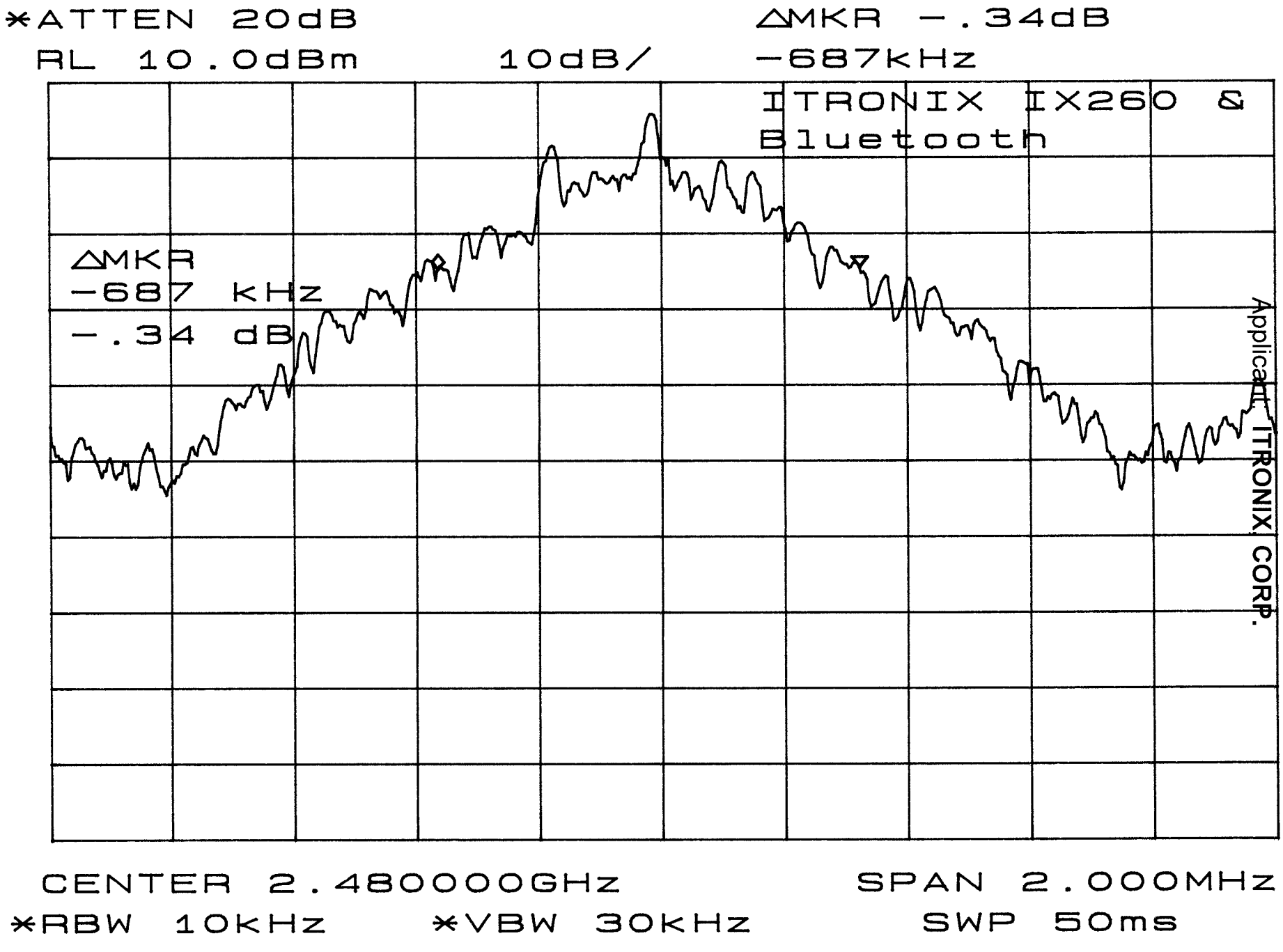
LOW POWER PLOT - 1



FCC ID: KBCIX260MPIA750BT

LOW POWER PLOT - 2

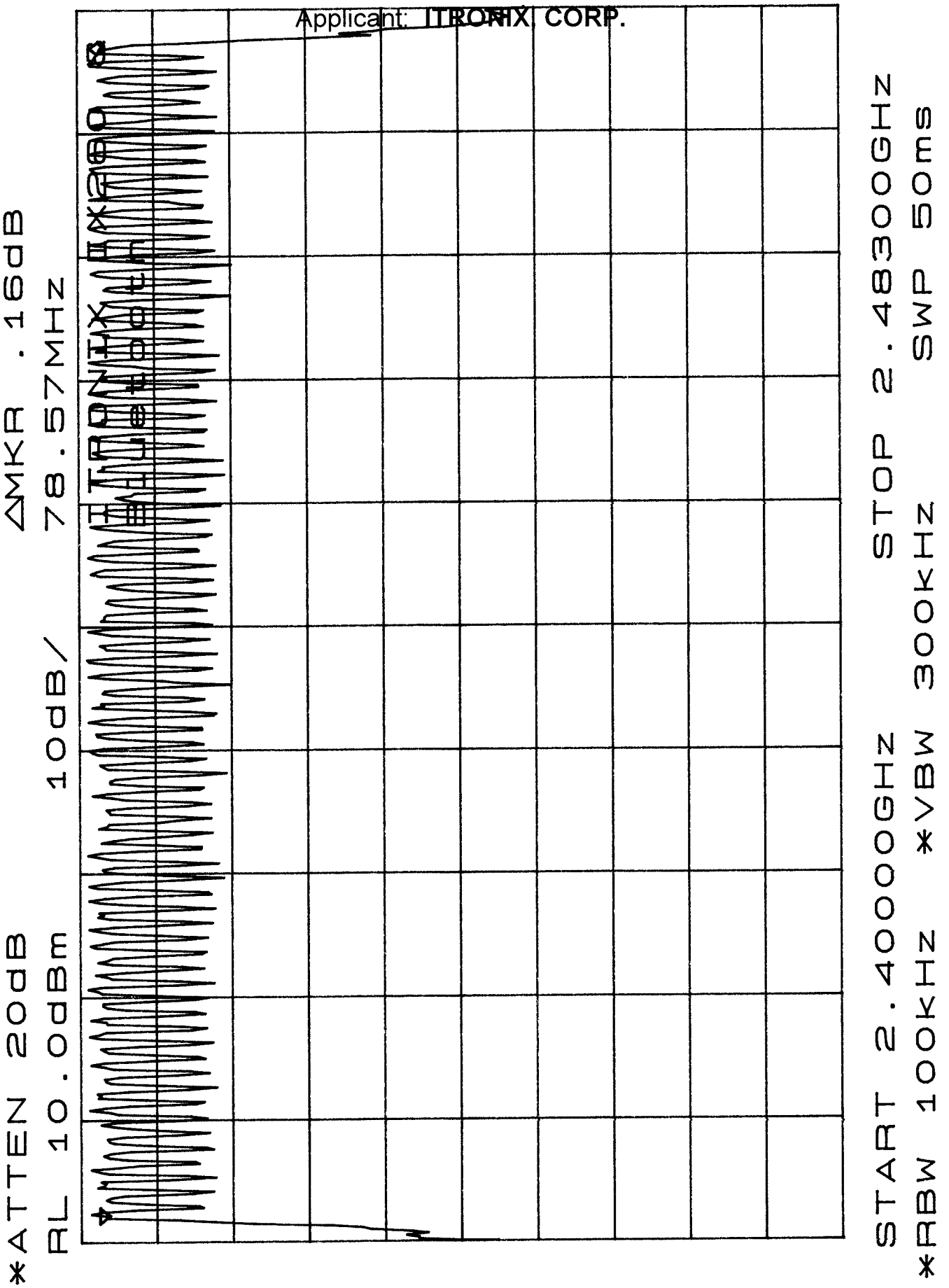
Applicant: ITRONIX CORP.

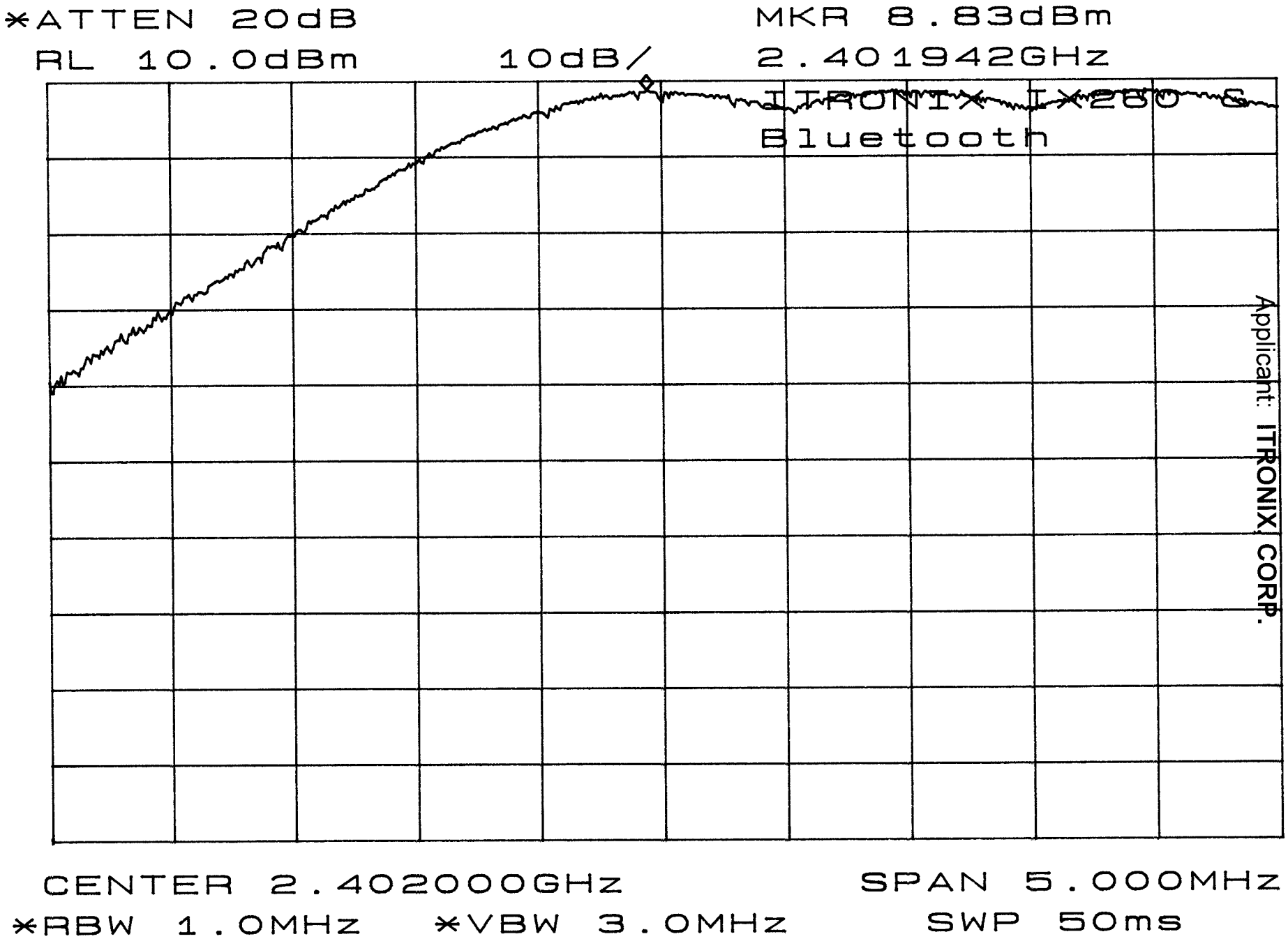


FCC ID: KBCIX260MPIA750BT

LOW POWER PLOT - 3

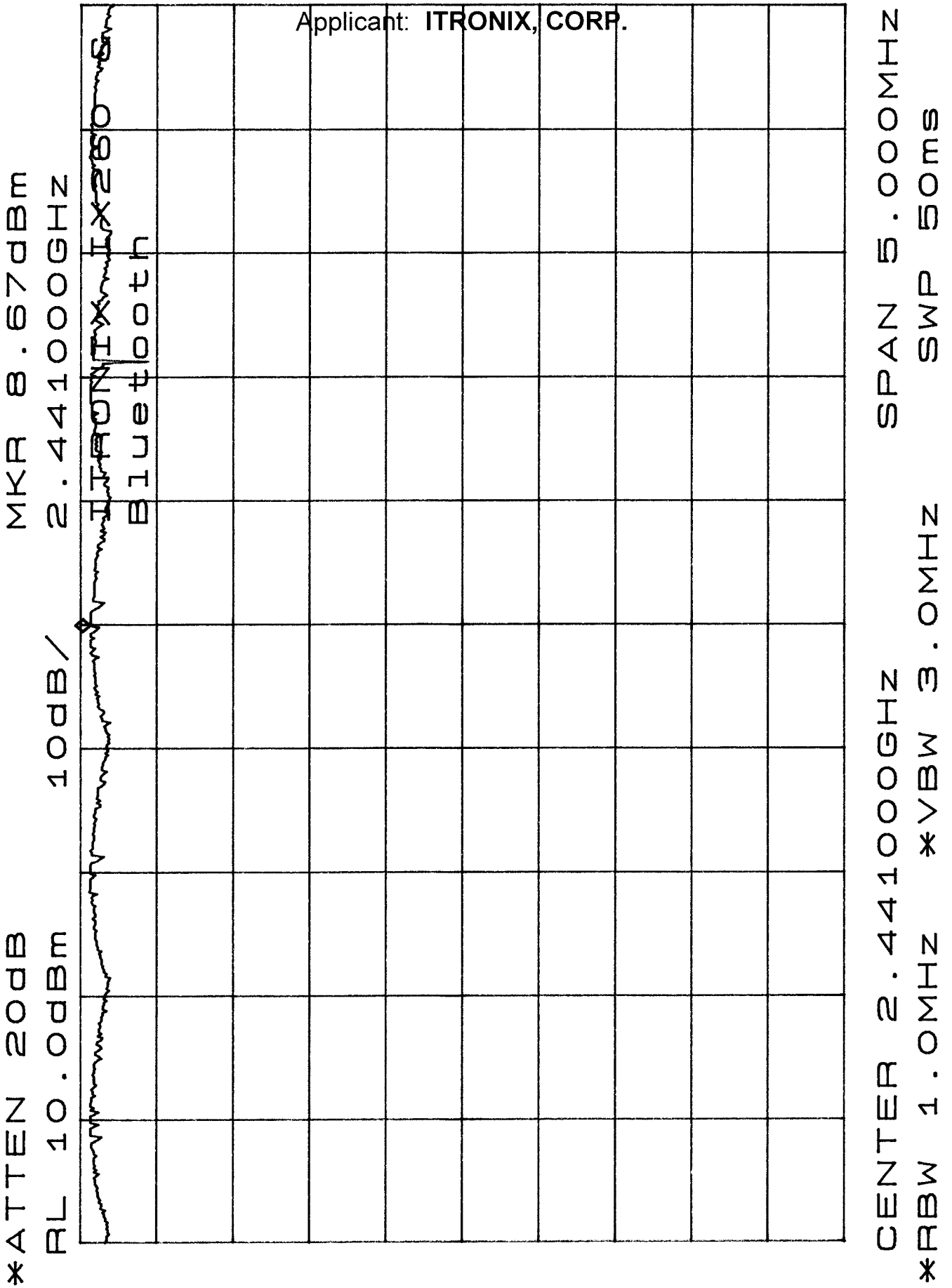
Applicant: ITRONIX CORP.



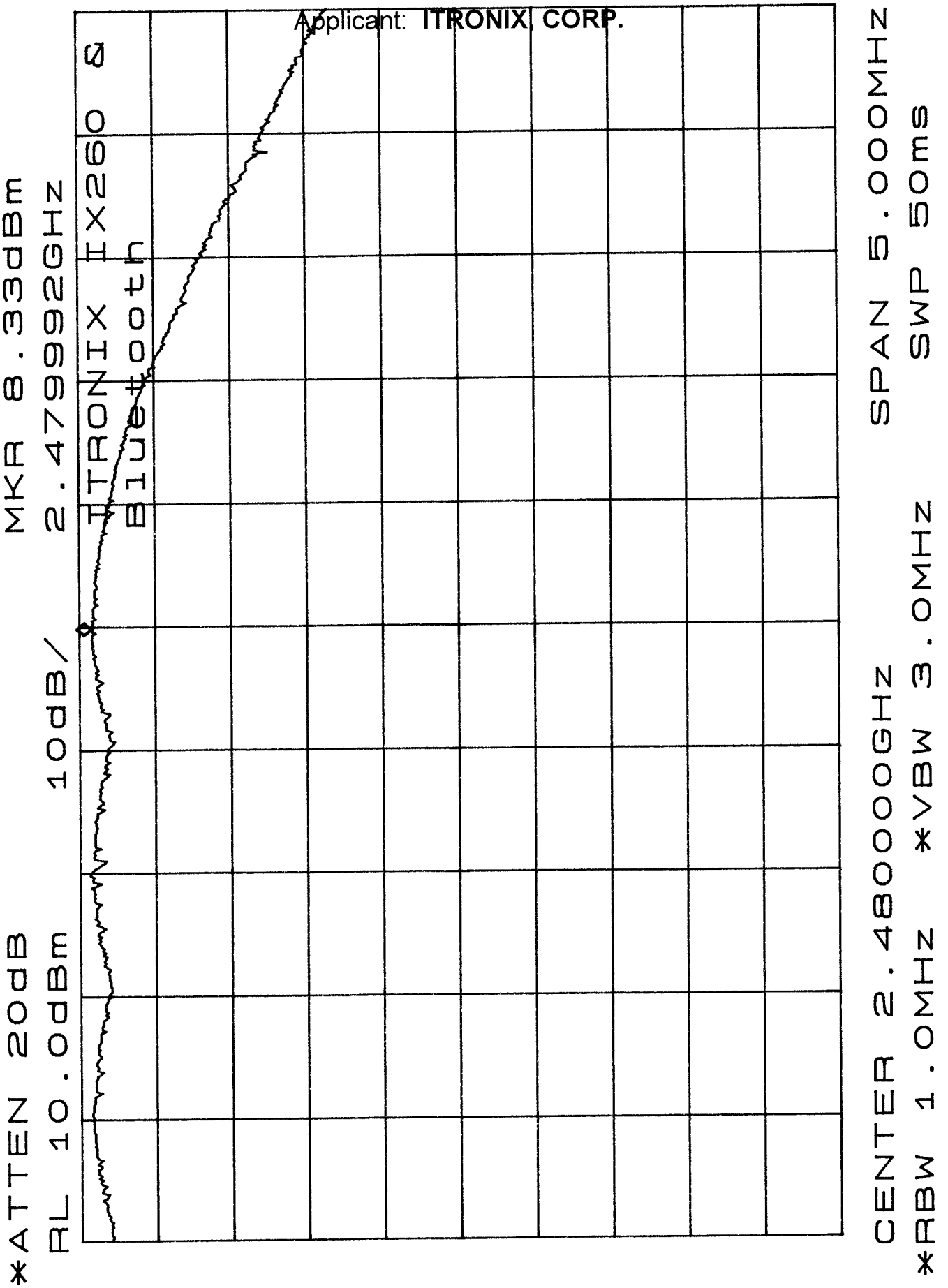


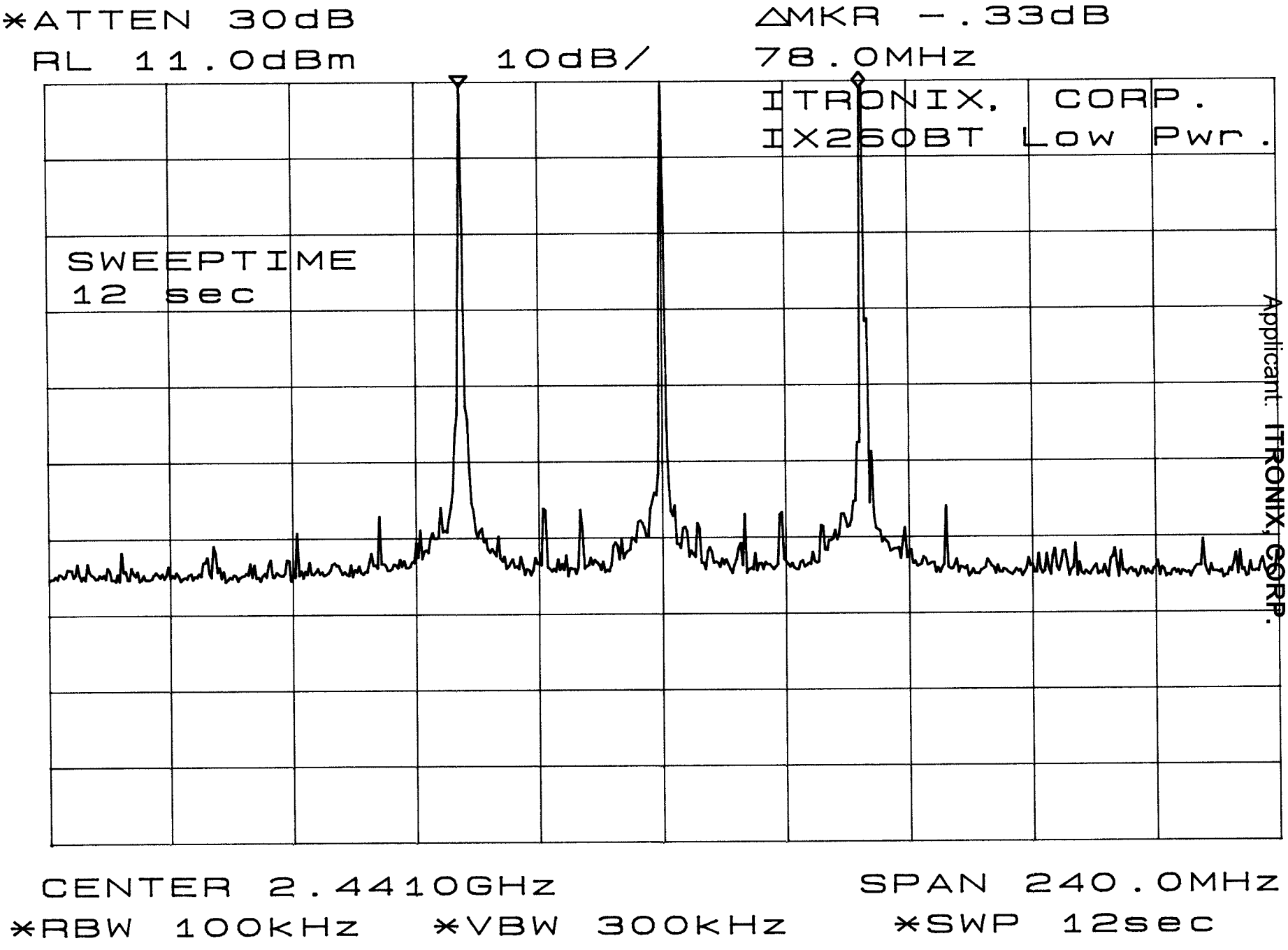
FCC ID: KBCIX260MPIA750BT

LOW POWER PLOT - 5


*ATTEN 20dB
RL 10.0dBm
10dB/
MKR 8.67dBm
2.441000GHz
ITRONIX IX260
Bluetooth
CENTER 2.441000GHz
*RBW 1.0MHz
*VBW 3.0MHz
SPAN 5.000MHz
SWP 50ms

Applicant: **ITRONIX CORP.**

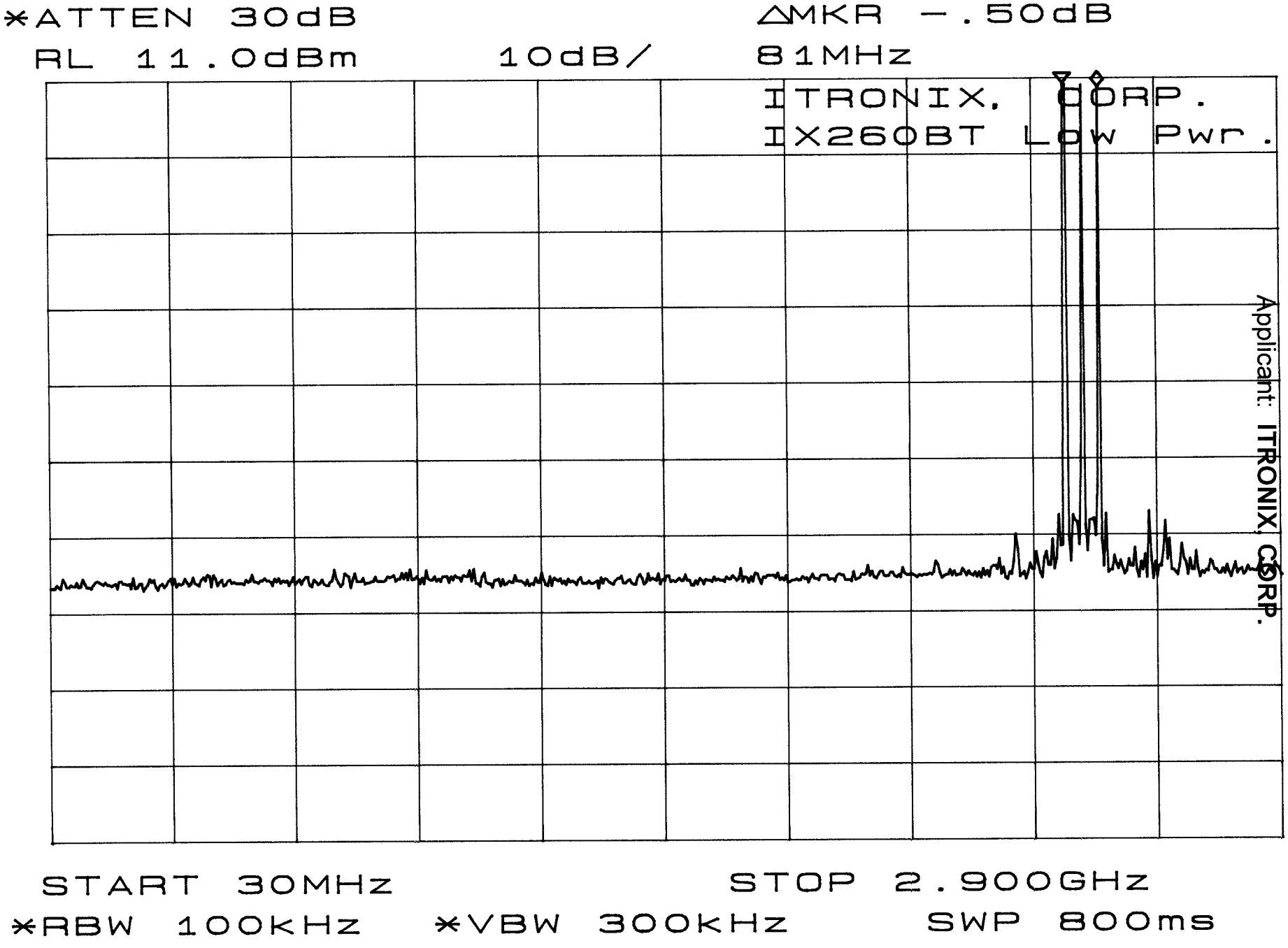




FCC ID: KBCIX260MPIA750BT

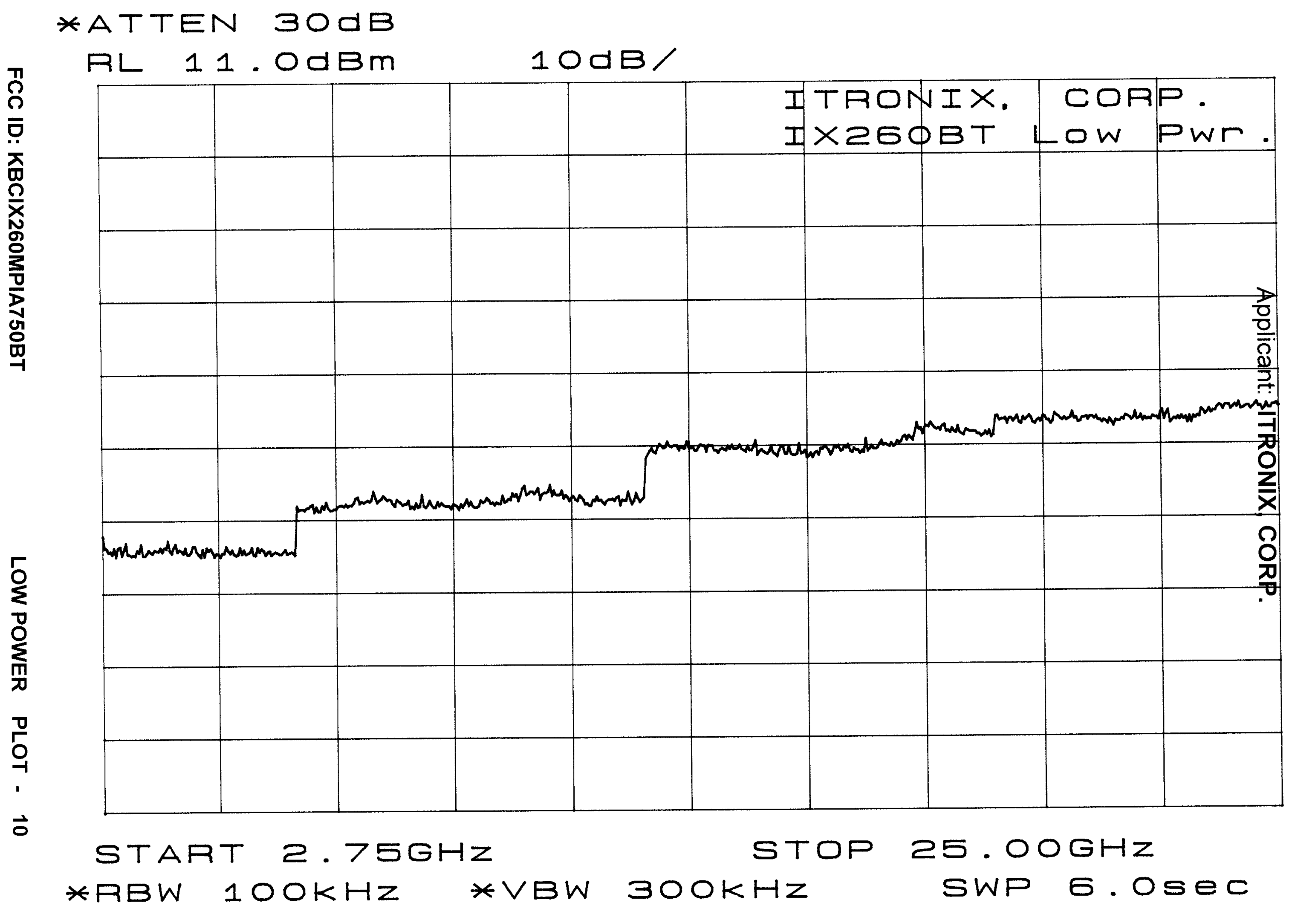
LOW POWER PLOT - 8

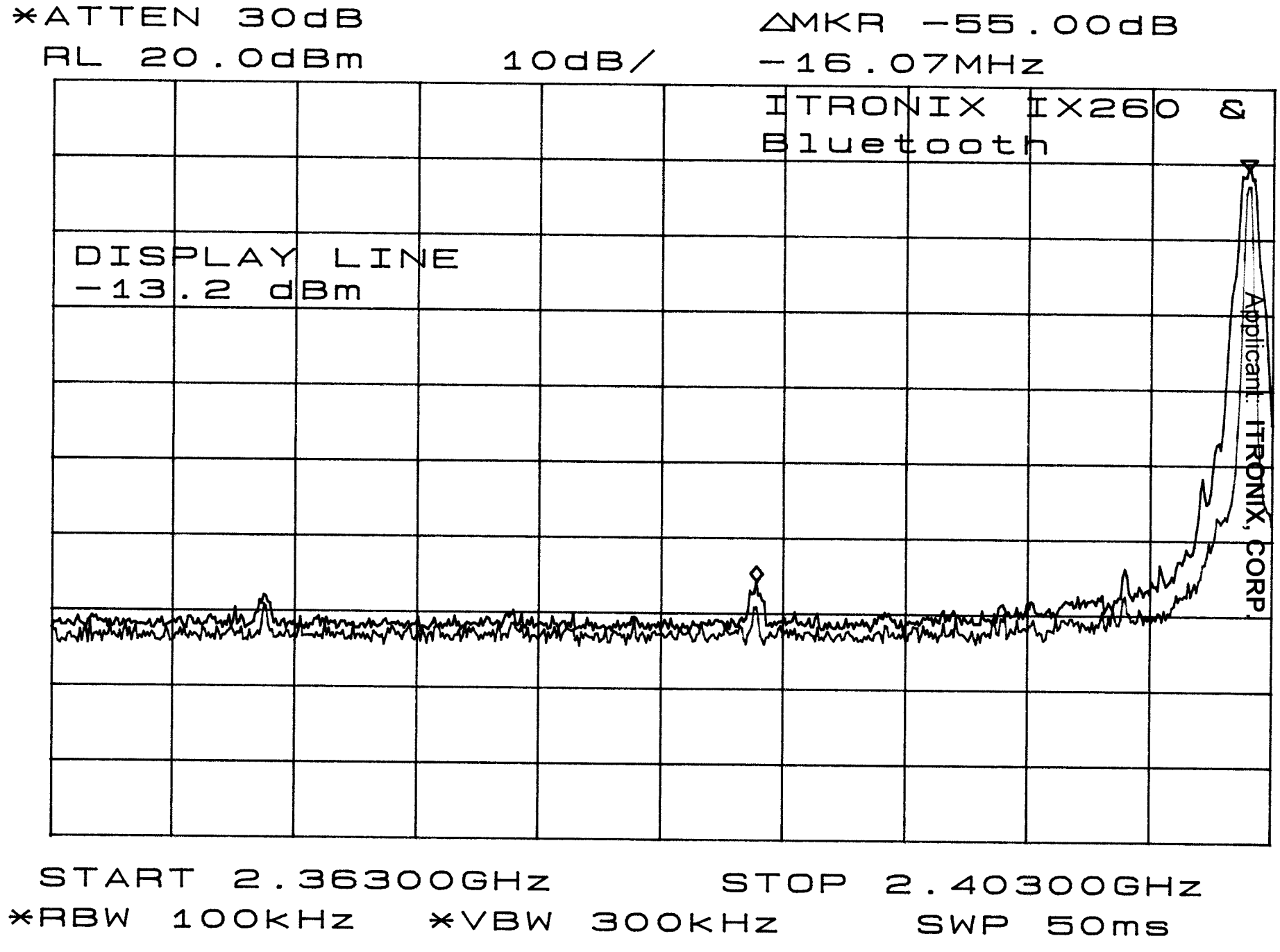
Applicant: ITRONIX, CORP.



FCC ID: KBCIX260MPIA750BT

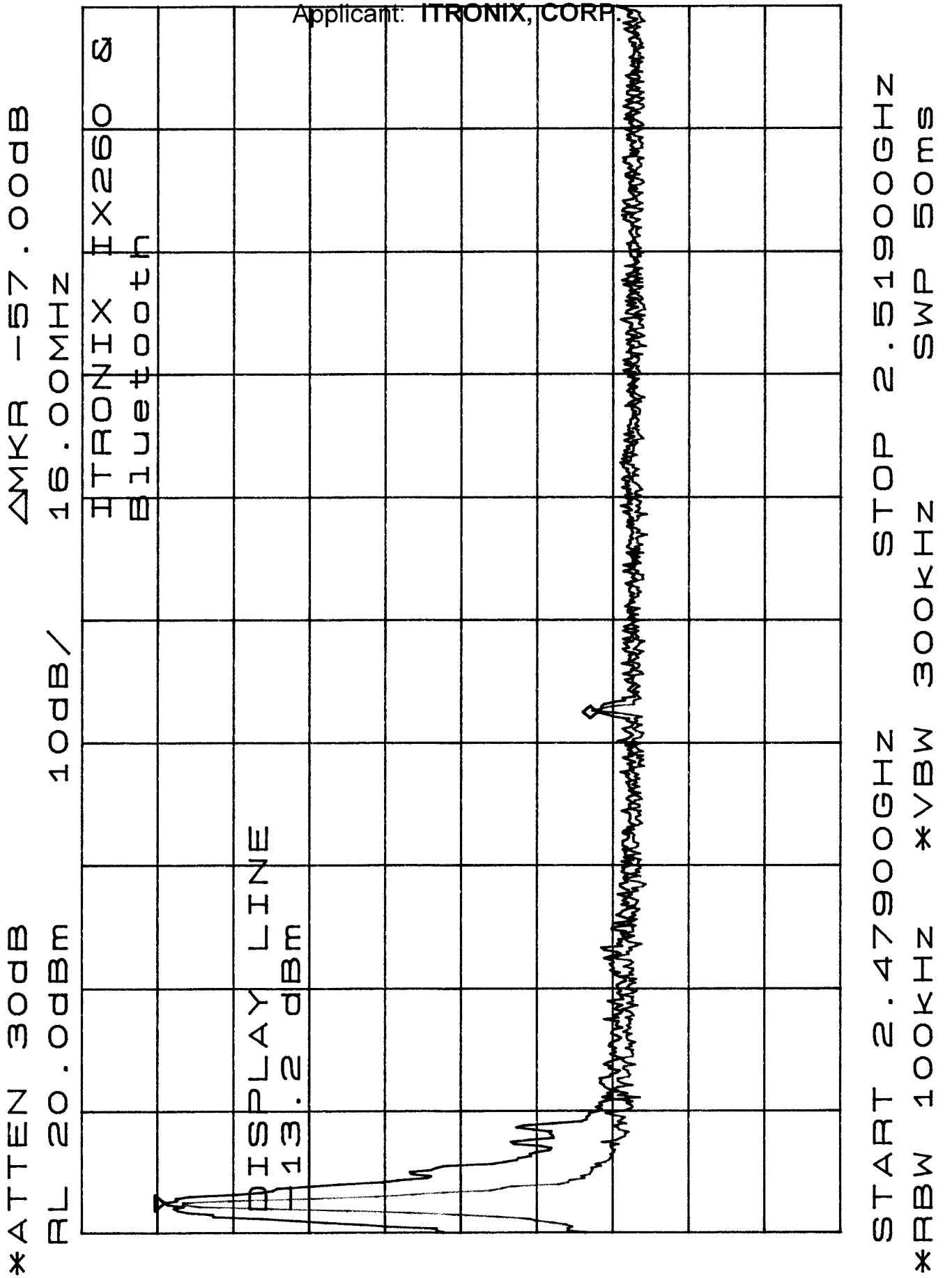
LOW POWER PLOT - 9


*ATTEN 30dB
RL 11.0dBm 10dB/
ITRONIX, CORP.
IX260BT Low Pwr.
START 2.75GHz
STOP 25.00GHz
*RBW 100kHz
*VBW 300kHz
SWP 6.0sec
FCC ID: KBCIX260MPIA750BT
LOW POWER PLOT - 10
Applicant: ITRONIX, CORP.



FCC ID: KBCIX260MPIA750BT

LOW POWER PLOT - 11


*ATTEN 30dB
RL 20.0dBm
10dB/
ΔMKR -57.00dB
16.00MHz
ITRONIX IX260 &
Bluetooth
DISPLAY LINE
13.2 dBm
START 2.47900GHz
*RBW 100KHz
*VBW 300KHz
STOP 2.51900GHz
SWP 50ms

11 POWER SPECTRAL DENSITY TEST DATA

The Power spectral density per FCC 15.247(d) was measured from the antenna port of the EUT using a 50 ohm spectrum analyzer with the resolution bandwidth set at 3kHz, the video bandwidth set at 3kHz, and the sweep time set at 17 second. The spectral lines were resolved for the modulated carriers at 2.412GHz, 2.442GHz and 2.462GHz respectively. These levels are well below the +8 dBm limit. See power spectral density table below and the plots in Section 16 of this report.

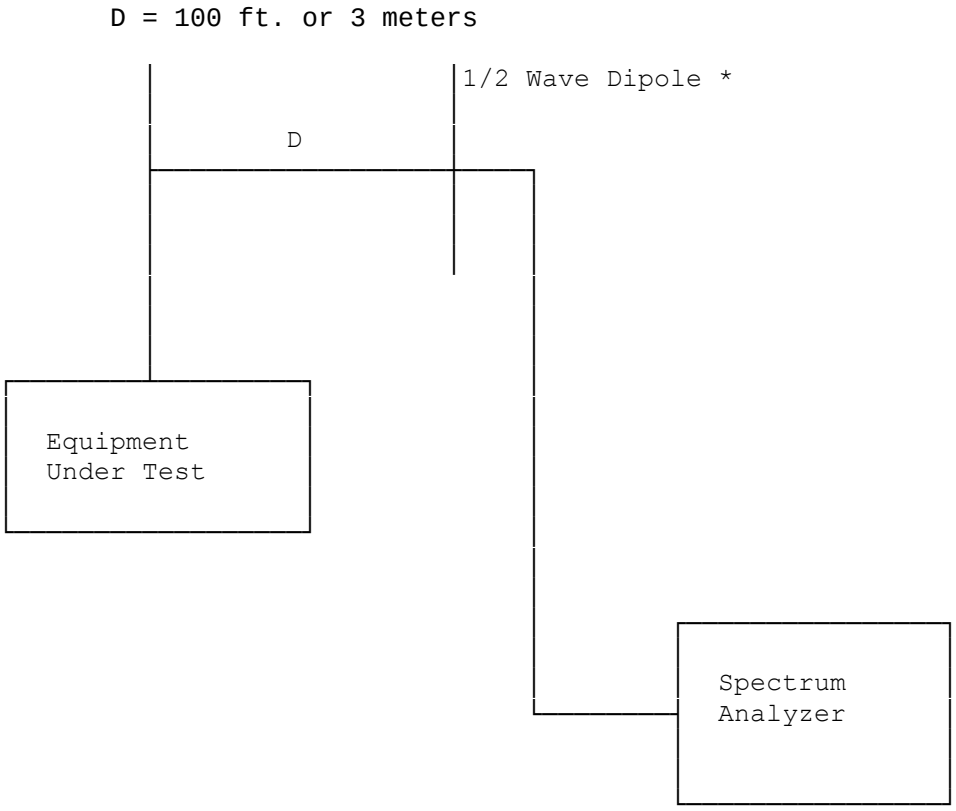
TABLE 27: POWER SPECTRAL DENSITY

Channel	Power Spectral Density limit = +8dBm
1	-12.3
6	-11.6
11	-13.9

Exhibit VII. Test Set-Up Procedures

BLOCK DIAGRAM #1

Transmitter Radiated Spurious Emissions Test Set Up



See Equipment List for Equipment Specifications

* 1/2 Wave Dipole 30-1000 MHz
Dual Ridged Guide Antenna or Broadband Log Periodic 1-10 GHz

Test Equipment List A

SPECTRUM TECHNOLOGY, INC.

Equipment	Manufacturer/Model	Serial Number	Cal Date/Due Date	
Spectrum Analyzer .01 to 22 GHz	Hewlett-Packard 8562A	08562-60062	12/17/02	12/17/03
Amplifier 9 kHz-1300 MHz OPT H64	Hewlett-Packard 8447F	2727A02208	12/17/02	12/17/03
Amplifier .01 –26.5 GHz	Hewlett-Packard 83006A	3104A00167	12/18/02	12/18/03
Service Monitor	IFR FM/AM 500A 4103		---	
Oscilloscope	Kikusui C055060	6132295		---
Power Supply	Astron VS35	8601266		---
Voltmeter	Fluke 8020A	N2420658		---
Multimeter	Fluke 25	3710310		---
Wattmeter	Bird 43	56227		---
High pass filter 2-18 GHz	E/M, Inc.#FH-2/18	SN95-11		
Notch filter 2-18 GHz	Custom notch 2.4 – 2.485 GHz	S002		
RF Termination	Bird 8135	10004		---
Dual Phase LISN	STI per MP-4 50 ohm/50 uH	02	1/15/02	1/15/03
Dual Phase LISN	Compliance Design 50 ohm/50 uH	8012-50R-24-BNC	1/15/02	1/15/03
Audio Generator	Hewlett-Packard 205-AG	8689	---	
Thermometer	Fluke 52	3965185	---	
Test Line	Simulator, Teltone TLS-2	none	---	
Turn Table, RC	EMCO 1060-2M	8912-1415	---	
Antenna Mast, RC	Compliance Design, Inc.	M100	---	

Antennas:

Dipole Set 30 – 1000 MHz	EMCO Model: 3121C	1335	03/26/00	09/26/04
Dipole Set 30 – 1000 MHz	EMCO Model: 3121C	1336	03/26/00	09/26/04
Bi-Conical 20 – 200 MHz	EMCO 3104	3763	reference only	
Bi-Conical 30 – 200 MHz	EMCO 3104C	9401-4635	01/31/03	01/31/04
Log-Periodic 200 – 1000 MHz	EMCO 3146	1754	02/03/03	02/03/04
Bi-ConiLog 28 – 5000 MHz	EMCO 3141	1125	05/20/02	11/20/03
Active Loop .1 - 30 MHz	EMCO 6502	9107-2645	reference only	
Dual Ridged Guide Ant. 1 – 18 GHz	Electro-metrics RGA-60	6225	1/16/03	1/10/04
Standard Gain Horn 18 – 26.5 GHz	EMCO 3160-09	21138	1/21/03	1/21/04

Rev. 02/03

Photographs of EUT set up at OATS facility July 26, 2003

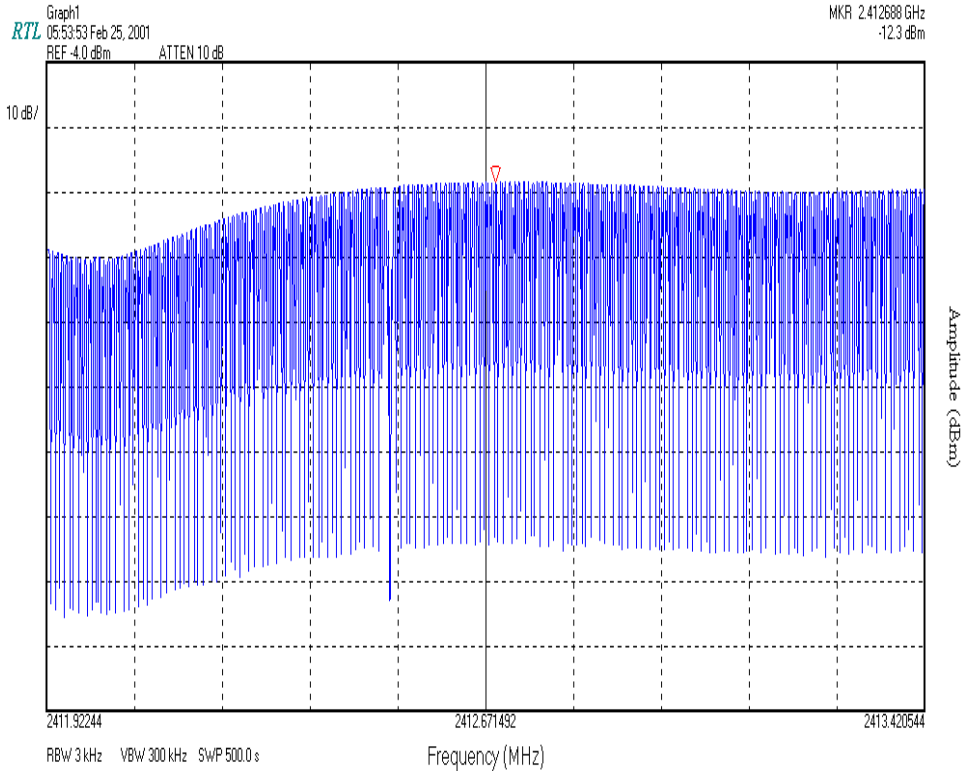
Front View of IX260 PC – WLAN Antenna located internally in the upper left side of display. Bluetooth antenna located internally in the upper right side of the display. External blade antenna on the right side of display is for AIRCARD750.
Photo 1 and 2 of 4

Rear View of IX260 PC

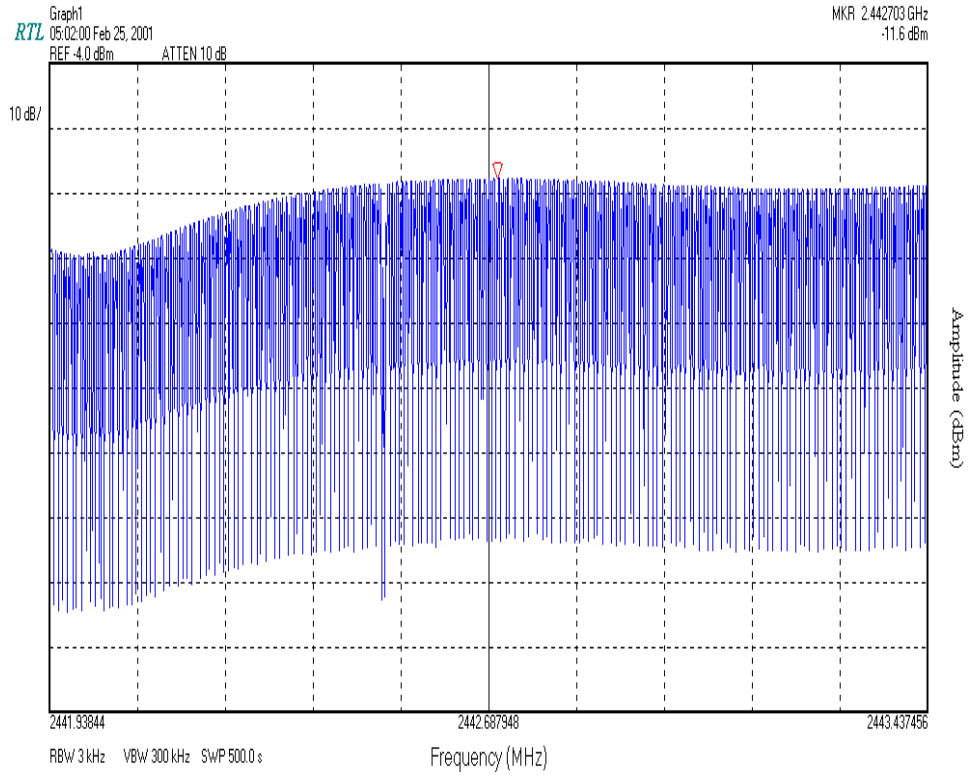
Front View of IX260 PC – AC power line conducted emissions
Photos 3 & 4 of 4

16 SPECTRAL DENSITY PLOTS

PLOT 21: CHANNEL 1



PLOT 22: CHANNEL 6



PLOT 23: CHANNEL 11