

**Application for Certification  
For an RF amplifier**

**Janizary Holdings, Inc.  
2282 Townsgate Road, Suite 100  
Westlake Village, CA 91361**

**RF amplifier**

**FCC ID: RFK-IVWA819  
IC ID: 5252A-IVWA819**

**REPORT # RV68119A-008**

This report was prepared in accordance with the requirements of the FCC Rules and Regulations Part 2, Subpart J, 2.1031 through 2.1057, and Parts 22, and 24 and in accordance with Industry Canada Radio Standards Specification RSS-131 for Zone Enhancers and any other applicable sections of the rules as indicated herein.


Prepared By:

**DNB Engineering, Inc.  
5969 Robinson Avenue  
Riverside, Ca 92503-8620**


**Industry Canada Lab Code: IC 4738**

12 Feb 2007

**TEST LAB PERSONNEL**

Test Performed by:	Date	Signature
Les Payne	12 Feb 2007	

**APPROVALS**

Quality Approval	Date	Signature
Tom Elders Quality Check	12 Feb 2007	

<b>Prelim report RV68119A-001</b>	<b>Dated 30 Aug 2006</b>	
<b>Original report RV68119A-002</b>	<b>Dated 07 Sep 2006</b>	
<b>Revised report RV68119A-003</b>	<b>Dated 07 Sep 2006</b>	<b>-Correct typos</b>
<b>Revised report RV68119A-006</b>	<b>Dated 12 Feb 2007</b>	<b>-Correct typos</b>
<b>Revised report RV68119A-007</b>	<b>Dated 30 Mar 2007</b>	<b>-Correct plots</b>
<b>Revised report RV68119A-008</b>	<b>Dated 30 Mar 2007</b>	<b>-Add intermod</b>

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## 1.0 ADMINISTRATIVE DATA

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### 1.1 Certifications and Qualifications

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I certify that DNB Engineering, Inc conducted the tests performed in order to obtain the technical data presented in this application. Also, based on the results of the enclosed data, I have concluded that the equipment tested meets or exceeds the requirements of the Rules and Regulations governing this application.

### 1.2 Measurement Repeatability Information

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The test data presented in this report has been acquired using the guidelines set forth in FCC Part 2.1031 through 2.1057, and Parts 22, 24, and 90. Also included in this report is compliancy data for Industry Canada RS-131 for Zone Enhancers. The test results presented in this document are valid only for the equipment identified herein under the test conditions described. Repeatability of these test results will only be achieved with identical measurement conditions. These conditions include: The same test distance, EUT Height, Measurement Site Characteristics, and the same EUT System Components. The system must have the same Interconnecting Cables arranged in identical placement to that in the test set-up, with the system and/or EUT functioning in the identical mode of operation (i.e. software and so on) as on the date of the test. Any deviation from the test conditions and the environment on the date of the test may result in measurement repeatability difficulties.

All changes made to the EUT during the course of testing as identified in this test report must be incorporated into the EUT or identical models to ensure compliance with the FCC regulations.



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E-mail [Les@dnbenginc.com](mailto:Les@dnbenginc.com)

### 1.3 Test Methodology

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The tests were performed in accordance with FCC Part 2 Subpart J, 2.1031 through 2.1057, 15, and 22, 24, Industry Canada RSS-131 on a sample of the production model.

### 1.4 Test Equipment

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FIGURE 1: TEST EQUIPMENT

Description	Manufacturer	M/N	S/N	Cal Date	Test Used On
Signal Generator	Agilent	E4432B	GB40051213	09/24/06	RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE
Signal Generator	Marconi	2024	112231/034	02/02/07	RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE
Spectrum Analyzer Display	H/P	85662A	259101-1	01/10/07	RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE
Spectrum Analyzer	H/P	8566B	259101-2	01/10/07	RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE
Spec Analyzer Display	H/P	85662A	2318A05282	08/14/07	RE
Spectrum Analyzer	H/P	85680B	2049A01403	06/02/07	RE
Quasi-Peak Adapter	H/P	85650A	2043A00184	06/02/07	RE
Bicon Antenna	H/P	85650A	2043A00184	06/02/07	RE
Logarithmic Antenna	AH Systems	SAS-200/540	524	12/26/06	RE
DRG Antenna	EMCO	3146	1284	01/02/07	RE

### 1.5 DEVIATIONS

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#### Deviations/Modifications to the EUT

None.

#### Deviations/Modifications from test standard.

None

## 1.6 TEST DESCRIPTION

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**1.6.1 RF Power Output**  
For RF amplifier.

**1.6.2 Emissions Limitation and Occupied Bandwidth**  
Occupied Bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are equal to 0.5 percent of the total mean power radiated by a given emission. (also known as the 99% bandwidth)

**1.6.3 Conducted Spurious Emissions at Antenna Terminals**  
Conducted Spurious Emissions are emissions at the antenna terminals on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communication desired. The reduction in the level of these spurious emissions will not affect the quality of the information being transmitted.

**1.6.4 Radiated Field Strength of Spurious Emissions**  
Emissions from the equipment when connected into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communication desired. The reduction in the level of these spurious emissions will not affect the quality of the information being transmitted.

**1.6.5 Conducted Emissions**  
Emissions which are conducted onto the AC power mains.

**1.6.6 Radiated Emissions**  
Emissions which emanate from the EUT.

2.1033 (C) (1) Application for Certification

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Name of Applicant:	Janizary Holdings, Inc. 2282 Townsgate Road, Suite 100 Westlake Village, CA 91361		
FRN:	0009486226		
Applicant is:	X	Manufacturer Vendor Licensee Prospective Licensee Other	
Name of Manufacturer	Janizary Holdings, Inc.		
Description:	RF amplifier		
Part Number:	IVWA819		
Anticipated Production Quantity:	Multiple Units		
Applicable FCC Parts:	22, and 24		
Applicable IC Standard:	RSS-131		
FCC ID No:	RFK-IVWA819		
IC ID No:	5252A-IVWA819		
FCC Emissions Designator:	22H	F1D and F8W	
	22H	GXW	
	22.901(d)	DXW	
	24E	F1D and F8W	
	24E	GXW	
	24E	DXW	
	24E	F9W	
Frequency Range:	Uplink	824.020-848.980	MHz
	Uplink	1850.020-1909.980	MHz
	Downlink	869.020-893.980	MHz
	Downlink	1930.020-1989.980	MHz
Rated Conducted Output:	0.785W	(28.95dBm)	824.020-848.980 MHz
	0.272W	(24.35dBm)	1850.020-1909.980 MHz
	0.042W	(16.28dBm)	869.020-893.980 MHz
	0.0174W	(12.40dBm)	1930.020-1989.980 MHz



**2.1033 (C) (2) FCC Identifier**

FCC ID: RFK-IVWA819

**2.1033 (C) (4) Type of Emission**

824.020 – 848.980 MHz	22H	F1D and F8W 40K0F1D
824.200 – 848.800 MHz	22H	GXW 300KGXW
824.020 – 848.980 MHz	22.901(d)	DXW 30K0DXW
1850.020 – 1909.980 MHz	24E	F1D and F8W 40K0F1D
1850.200 – 1909.800 MHz	24E	GXW 300KGXW
1850.020 – 1909.980 MHz	24E	DXW 30K0DXW
1851.000 – 1909.000 MHz	24E	F9W 1M25F9W

**2.1033 (C) (5) Frequency Range**

Uplink	824.020 – 848.980 MHz	Downlink	869.020 – 893.980 MHz
Uplink	1850.020 – 1909.980 MHz	Downlink	1930.020 – 1989.980 MHz

**2.1033 (C) (6) Operating Power (Conducted)**

Uplink	824.040 – 848.960 MHz	0.785W	(28.95dBm)
Downlink	869.040 – 893.960 MHz	0.272W	(24.35dBm)
Uplink	1850.040 – 1909.960 MHz	0.042W	(16.28dBm)
Downlink	1930.040 – 1989.960 MHz	0.0174W	(12.40dBm)

**2.1033 (C) (7) Maximum Power Allowed in Applicable Part(s) of the Rules**

<u>RULES PART</u>	<u>MAXIMUM POWER (WATTS)</u>
Part 22	7
Part 24	2

**2.1033 (C) (8) Input Power Characteristics** .006 mW Maximum

**2.1033 (C) (9) Tune Up Procedure** Customer will provide.

**2.1033 (C) (10) Schematic Diagram and Circuit Description**

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Customer will provide.

**2.1033 (C) (11) Equipment Identification Plate**

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Customer will provide.

**2.1033 (C) (12) Equipment Photographs - Internal**

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Customer will provide.

**2.1033 (C) (12) Equipment Photographs - External**

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Customer will provide.

**2.1033 (C) (13) Digital Modulation Techniques**

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AMPS / CDMA / TDMA /GSM

**2.1033 (c) (14) Test Data**

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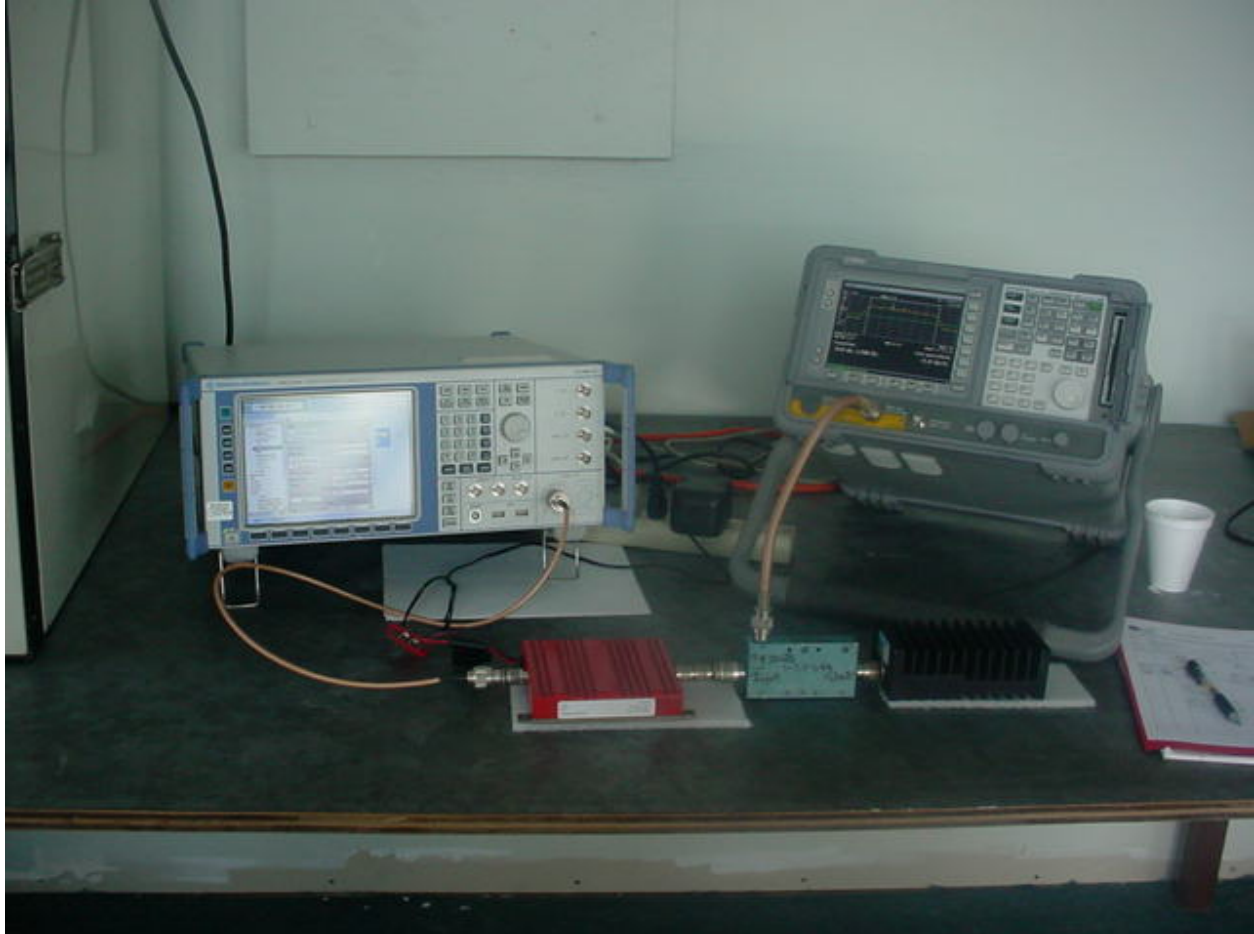
See 2.1046-2.1053 and Radiated Emissions

FIGURE 2: TEST RESULT SUMMARY

<b>NAME OF TEST</b>	<b>FCC PARA. NO.</b>	<b>Industry Canada No. (RSS-131)</b>	<b>RESULTS</b>
RF Power Output	2.1046	RSS-131 Cl 4.3	Complies
Emissions Limitations: TDMA	2.1049	RSS-131 Cl 4.2	Complies
Emissions Limitations: GSM	2.1049	RSS-131 Cl 4.2	Complies
Occupied Bandwidth: TDMA/GSM	2.1049	RSS-131 Cl 4.2	Complies
Conducted Spurious Emissions at Antenna Terminals	2.1051	RSS-131 Cl 4.4	Complies
Radiated Field Strength of Spurious Emissions	2.1053	RSS-131 Cl 4.4	Complies
Radiated Emissions	15 Class B	CIPSR 22 Class B	Complies
Intermodulation		RSS-131 Cl 4.3 RSS-131 Cl 4.4	Complies

2.1033 (c) (14) Photograph of Test Set Up

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2.1033 (c) (14)

FIGURE 3: TEST SET UP BLOCK DIAGRAM FOR RF POWER OUTPUT, EMISSIONS LIMITATIONS GSM/TDMA, OCCUPIED BANDWIDTH GSM/TDMA, CONDUCTED SPURIOUS EMISSIONS AT ANTENNA TERMINALS.

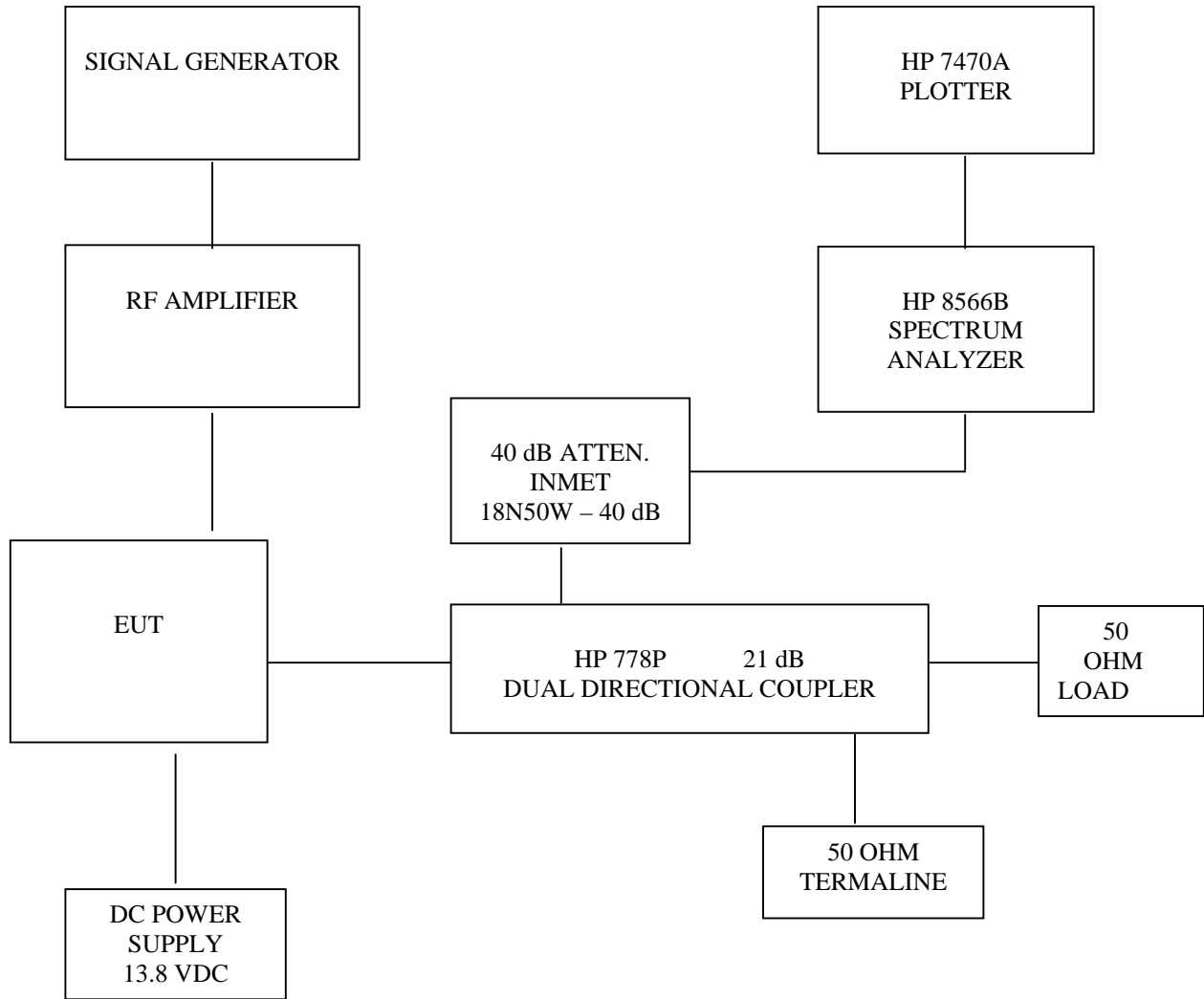
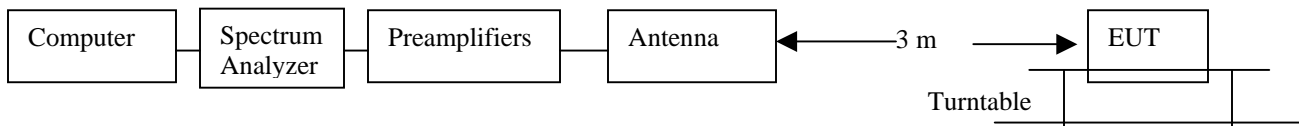


FIGURE 4: TEST SET UP BLOCK DIAGRAM FOR RADIATED EMISSIONS



## 2.1046

## Measurement of RF Power Output (IC RSS-131 CI 4.3)

Definition: For RF amplifier

Test Method: See FIGURE 1.

Output Power is measured across a precision 50 ohm load with a Spectrum Analyzer. For all measurements the maximum signal was determined by input the signal until the unit would no longer amplify the signal. This signal has been plotted in the section as modulation characteristics as input (EUT removed form circuit) and output (EUT inserted in circuit). For the power measurement, typical signal is used. (GSM / TDMA )

Test Results: Frequency Range 824 - 894

### Uplink

<u>Signal Type</u>	<u>Freq (MHz)</u>	<u>Power (dBm)</u>	<u>Power (W)</u>
GSM	824.180	25.13	0.326
GSM	836.500	28.95	0.785
GSM	848.820	22.92	0.196
TDMA	824.020	25.16	0.328
TDMA	836.500	28.64	0.731
TDMA	848.980	22.72	0.187

### Downlink

<u>Signal Type</u>	<u>Freq (MHz)</u>	<u>Power (dBm)</u>	<u>Power (W)</u>
GSM	869.180	11.55	0.014
GSM	881.500	15.89	0.039
GSM	893.820	14.52	0.028
TDMA	869.020	11.17	0.013
TDMA	881.500	16.28	0.042
TDMA	893.980	13.25	0.021

## 2.1046

## Measurement of RF Power Output (IC RSS-131 CI 4.3)

Definition: For RF amplifier

Test Method: See FIGURE 1.

Output Power is measured across a precision 50 ohm load with a Spectrum Analyzer. For all measurements the maximum signal was determined by input the signal until the unit would no longer amplify the signal. This signal has been plotted in the section as modulation characteristics as input (EUT removed form circuit) and output (EUT inserted in circuit). For the power measurement, typical signal is used. (GSM / TDMA / CDMA)

Test Results: Frequency Range 1850 - 1990:

### Uplink


<u>Signal Type</u>	<u>Freq (MHz)</u>	<u>Power (dBm)</u>	<u>Power (W)</u>
GSM	1850.200	20.80	0.120
GSM	1880.000	24.06	0.255
GSM	1909.800	18.80	0.076
TDMA	1850.020	20.87	0.122
TDMA	1880.000	23.28	0.213
TDMA	1909.980	18.44	0.070
CDMA	1851.000	21.43	0.139
CDMA	1880.000	24.35	0.272
CDMA	1909.000	19.58	0.091

### Downlink

<u>Signal Type</u>	<u>Freq (MHz)</u>	<u>Power (dBm)</u>	<u>Power (W)</u>
GSM	1930.200	5.10	.0019
GSM	1960.000	10.51	.0112
GSM	1989.800	11.95	.0157
TDMA	1930.020	5.65	.0038
TDMA	1960.000	10.51	.0112
TDMA	1989.980	11.89	.0155
CDMA	1931.000	5.90	.0039
CDMA	1960.000	10.12	.0103
CDMA	1989.000	12.40	.0174



FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink GSM 836.500 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

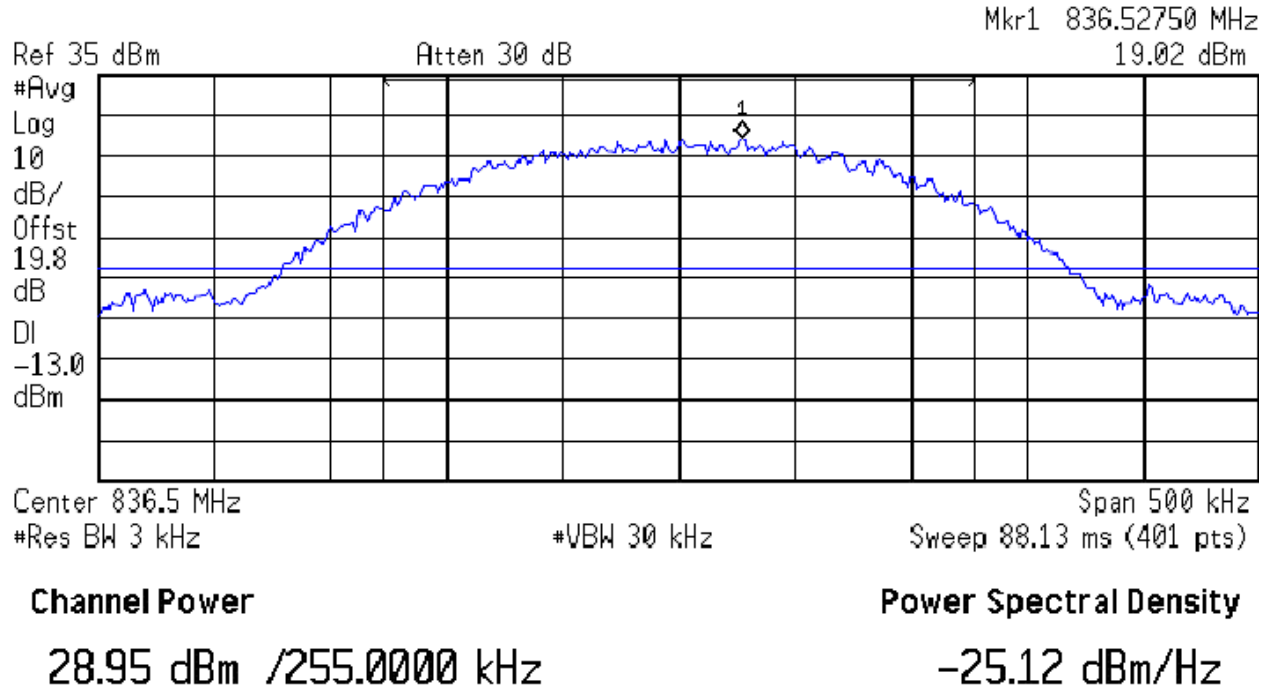





FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Output Power</b>	
	DNB Job Number:	68119	Date:	15 Aug 2006
	Customer:	Janizary Holdings, Inc.		
	Model Number:	IVWA819		
	Description:	RF amplifier		
	Uplink GSM 848.820 MHz			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24

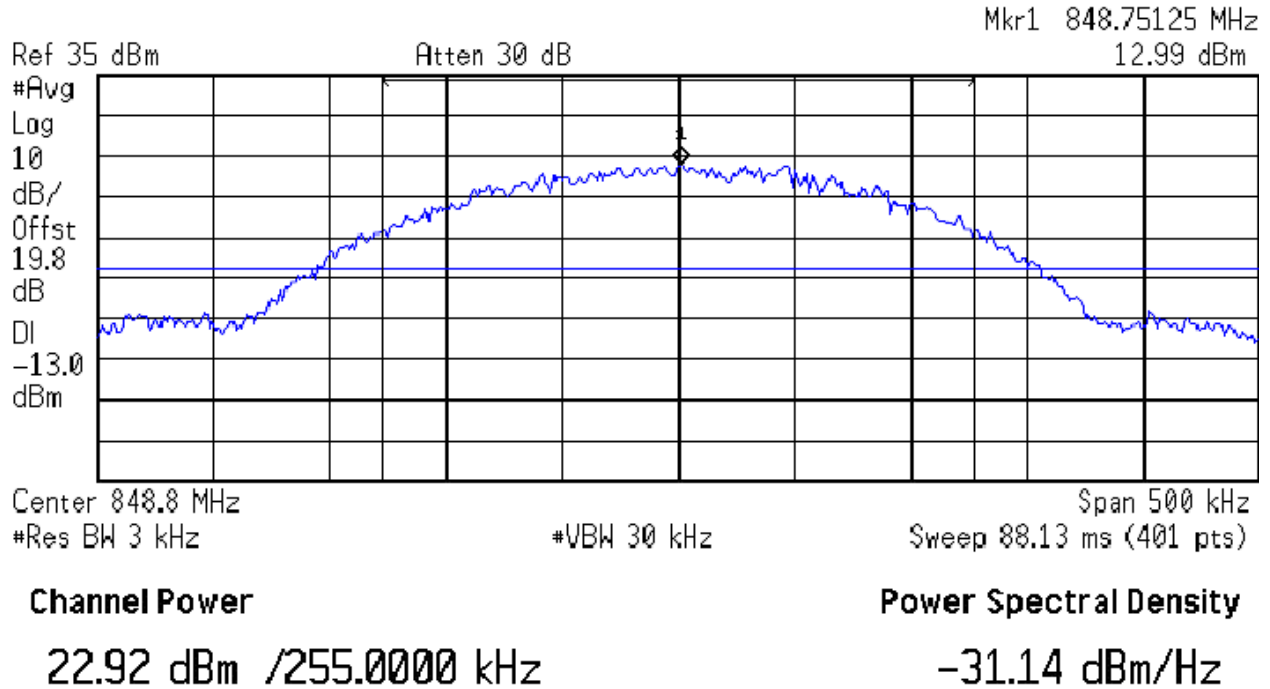



FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink GSM 1850.275 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

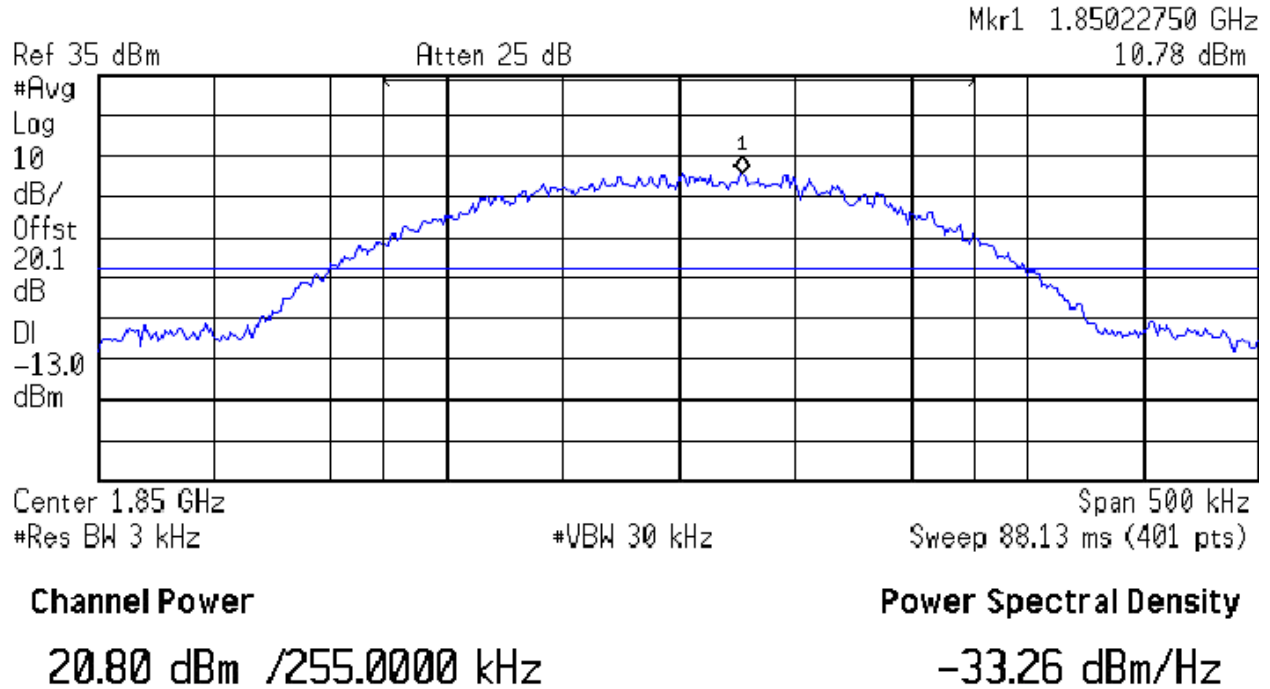





FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Output Power</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 1909.725 MHz			

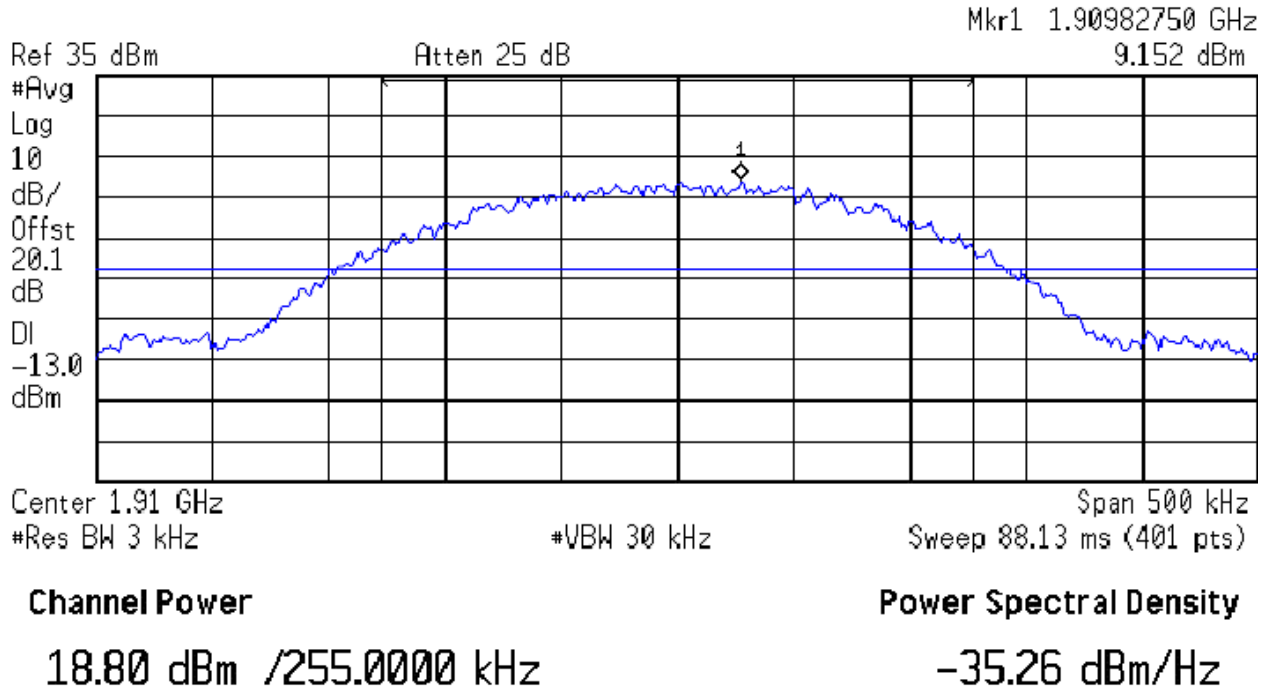


FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink TDMA 824.040 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

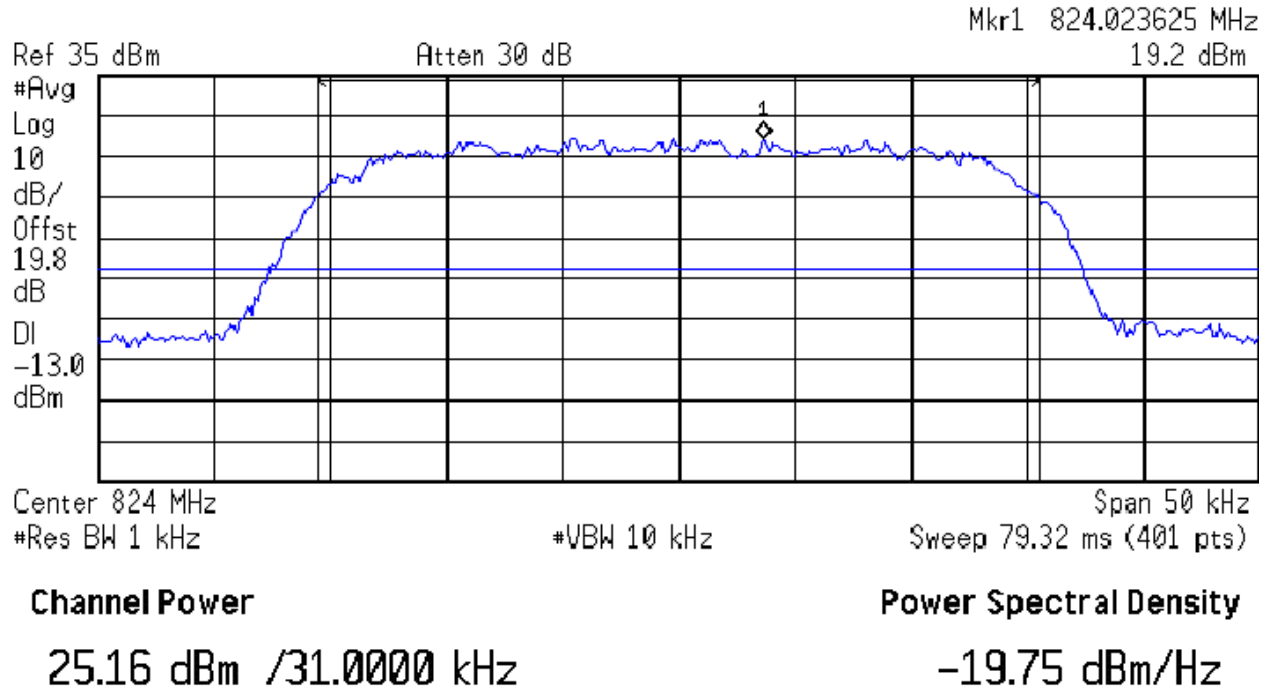



FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink TDMA 836.5 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

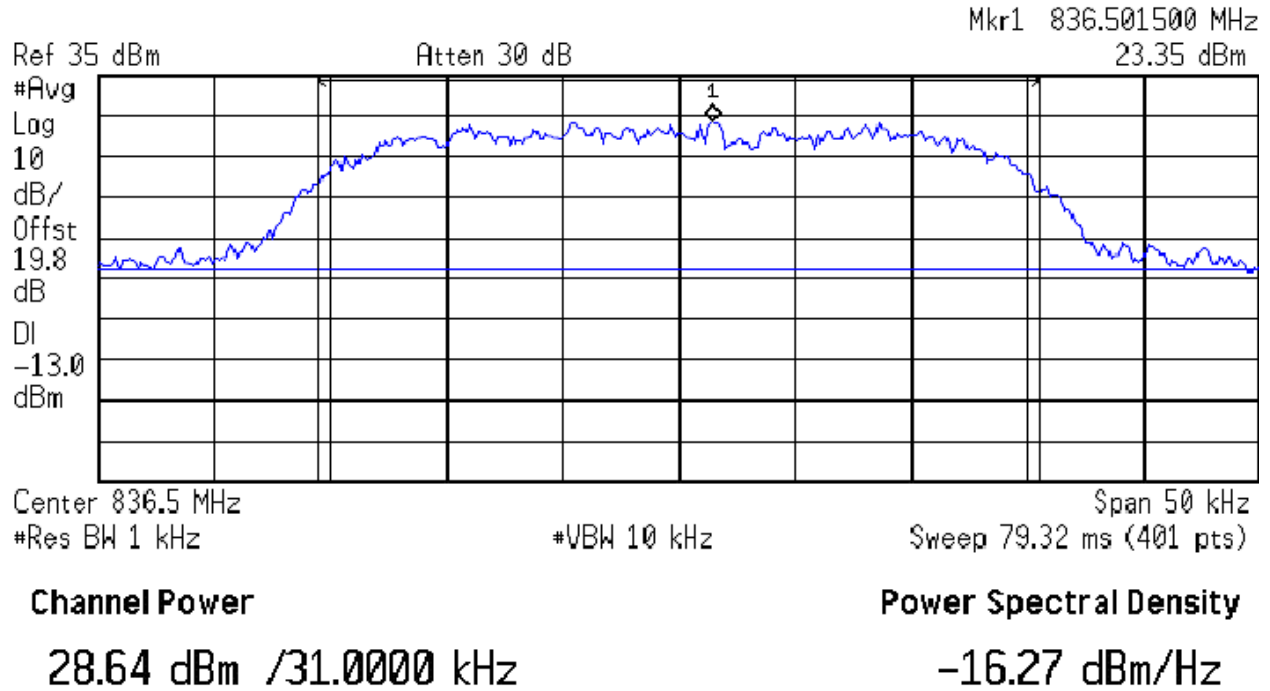





FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Output Power</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 1850.040 MHz			

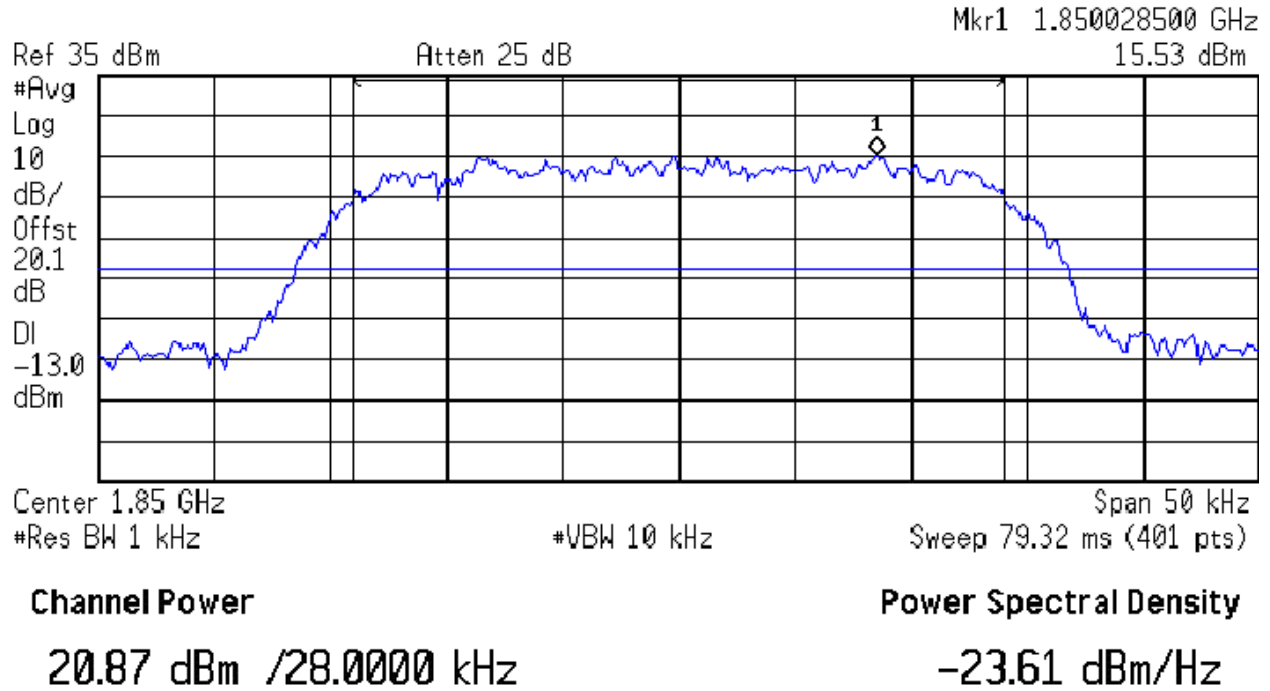







FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink TDMA 1909.960 MHz	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

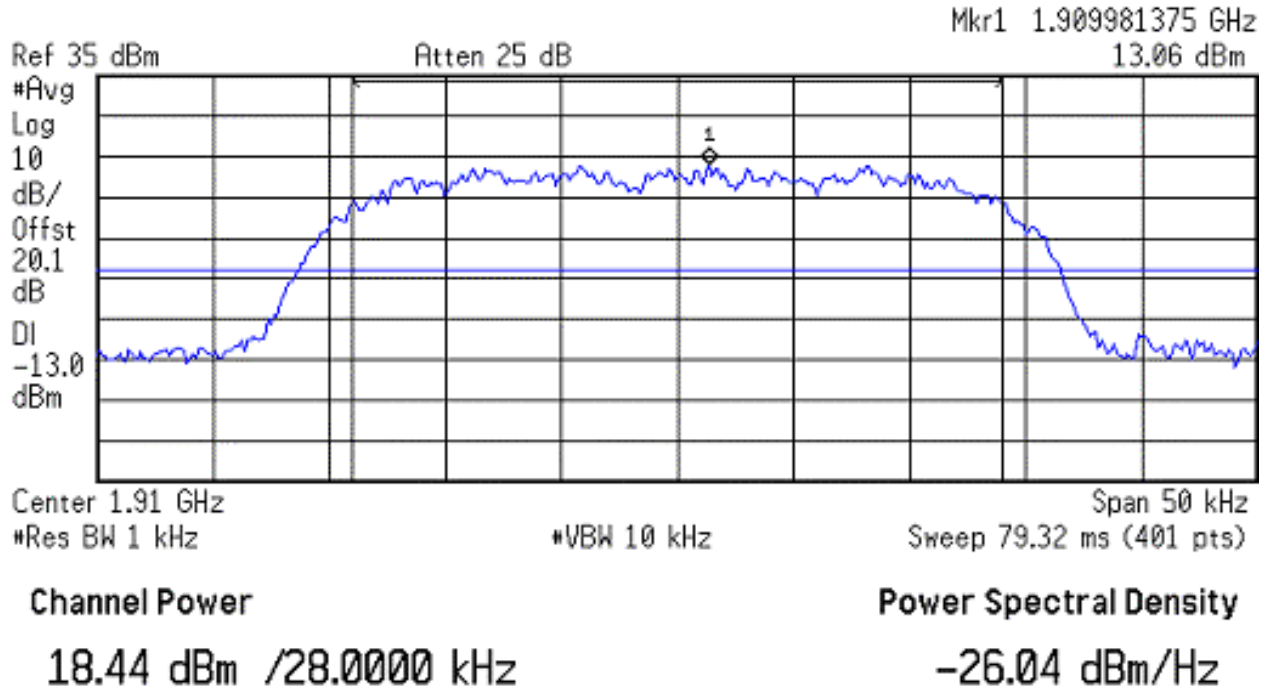





FIGURE 5: OUTPUT POWER PLOTS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Uplink CDMA 1880 MHz				

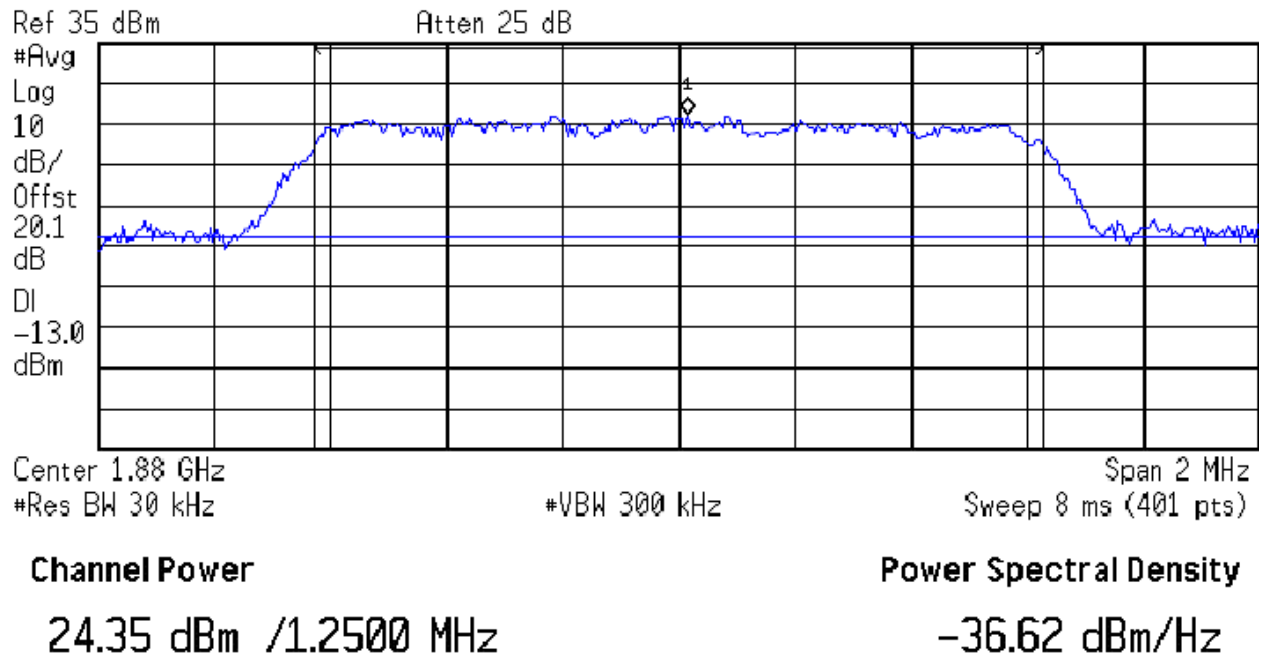







FIGURE 5: OUTPUT POWER PLOTS, DOWNLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Output Power</b>		
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24		
Customer: Janizary Holdings, Inc.					
Model Number: IVWA819					
Description: RF amplifier					
	Downlink GSM 881.5 MHz				

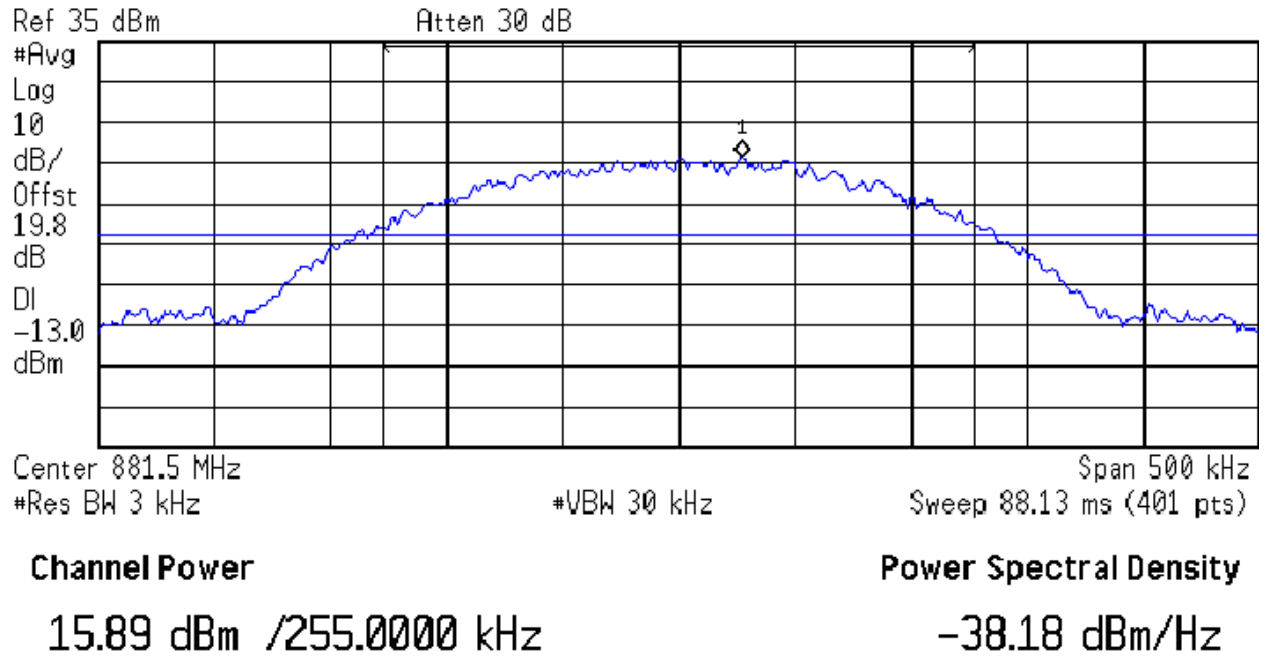







FIGURE 5: OUTPUT POWER PLOTS, DOWNLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Output Power</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Downlink GSM 1930.275 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

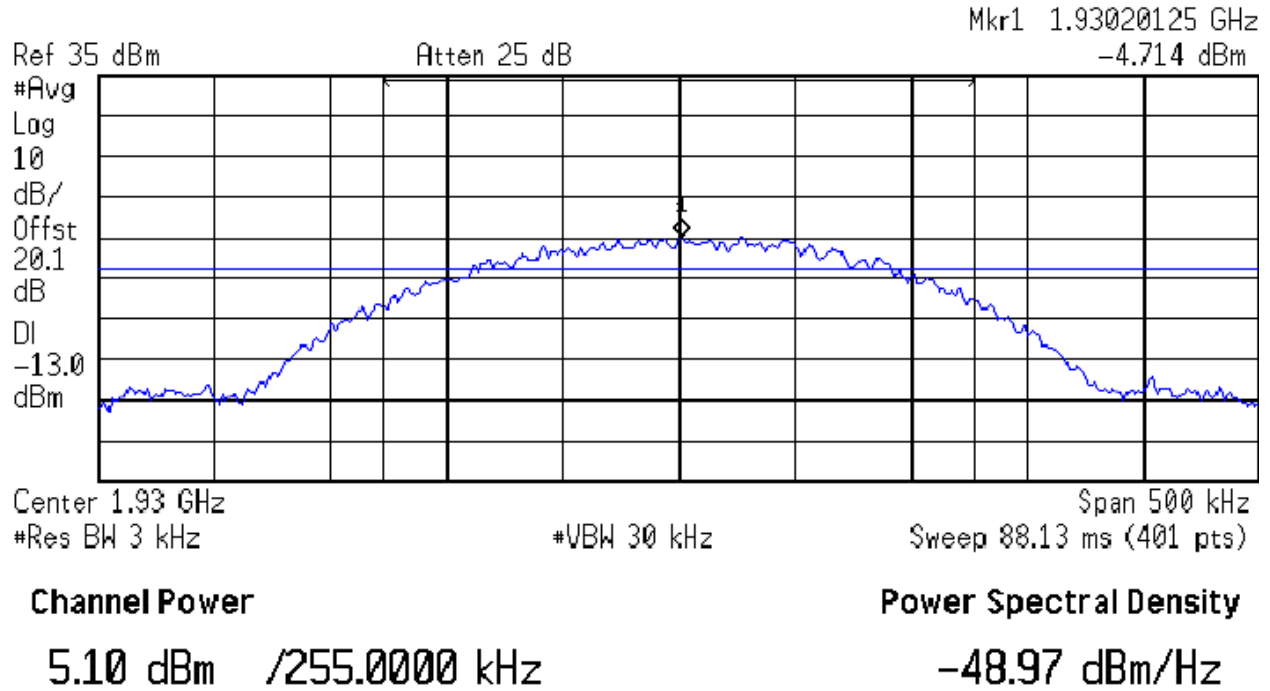







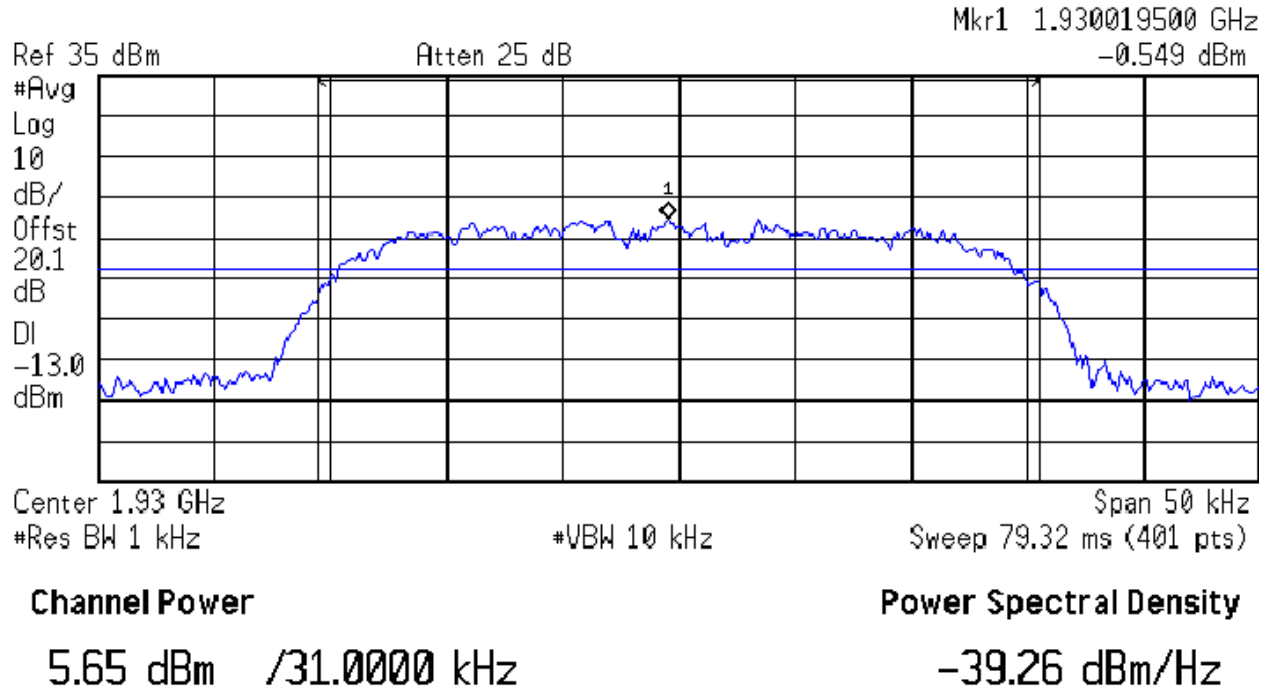






FIGURE 5: OUTPUT POWER PLOTS, DOWNLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Output Power</b>		
	DNB Job Number:	68119	Date:	15 Aug 2006	
	Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
	Model Number:	IVWA819			
	Description:	RF amplifier			
	Downlink TDMA 1930.040 MHz				















**2.1049 Measurement of Occupied Bandwidth (IC RSS-131 Clause 4.2)**

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Definition:

Occupied Bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are equal to 0.5 percent of the total mean power radiated by a given emission.

Test Method: Connect the Equipment per FIGURE 1.

For all measurements the maximum signal was determined by input the signal until the unit would no longer amplify the signal. This signal has been plotted in the section as modulation characteristics as input (EUT removed form circuit) and output (EUT inserted in circuit).

Measurements were made while the driving source generated the following:

TDMA Signal  
GSM Signal (AMPS)  
CDMA Signal


Test Results: See Plots

The center frequency of the signal did not shift with modulation. The Spectrum Bandwidth was well within the limits specified in the FCC Regulations.

Modulation characteristic plots are shown in this section.



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 824.180 MHz- Input			

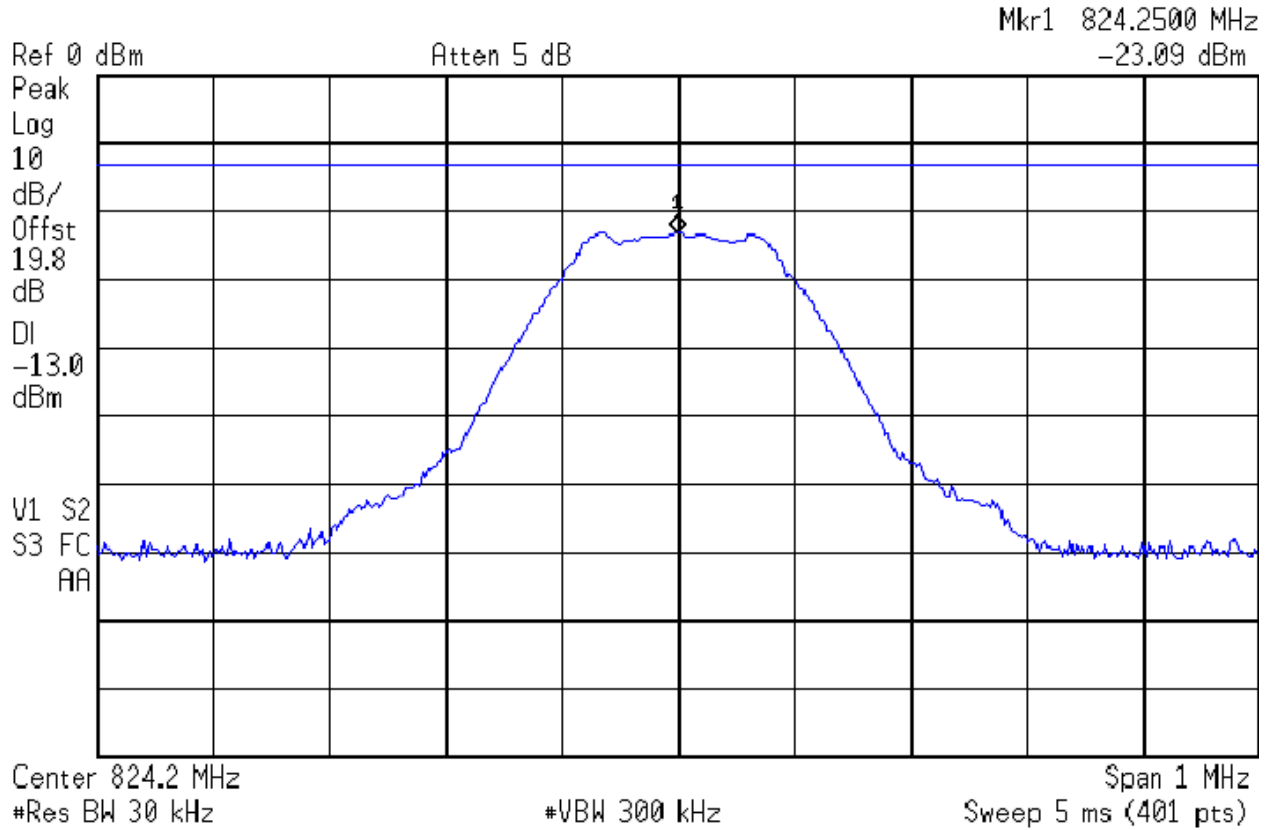

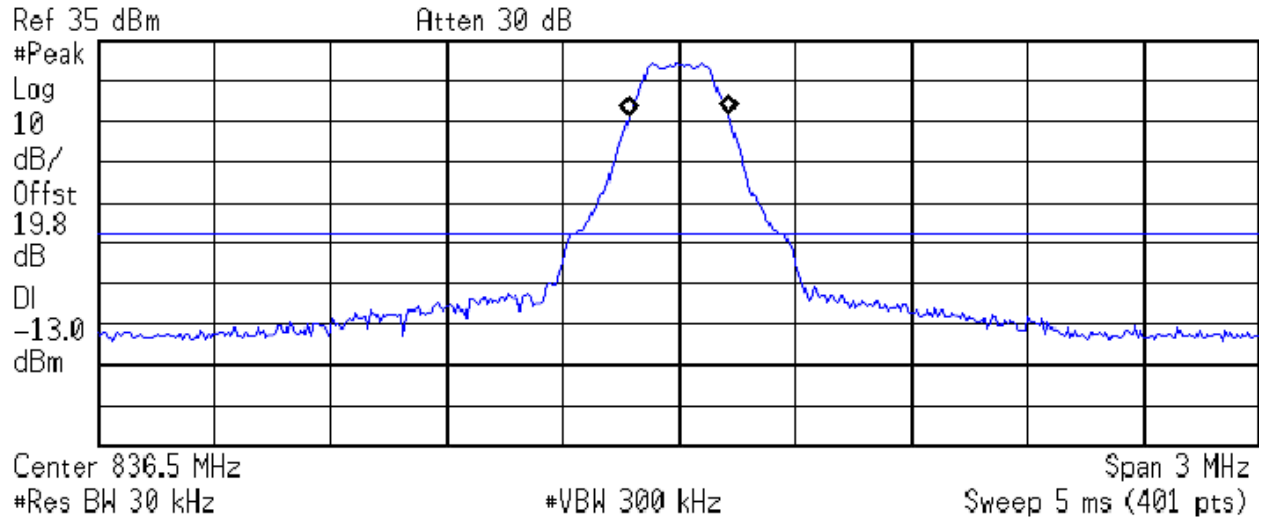






FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink GSM 836.500 MHz	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	




**Occupied Bandwidth**  
**254.4122 kHz**

**Occ BW % Pwr** 99.00 %  
**x dB** -26.00 dB

**Transmit Freq Error** -591.770 Hz  
**x dB Bandwidth** 343.115 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Uplink GSM 836.500 MHz - Input				

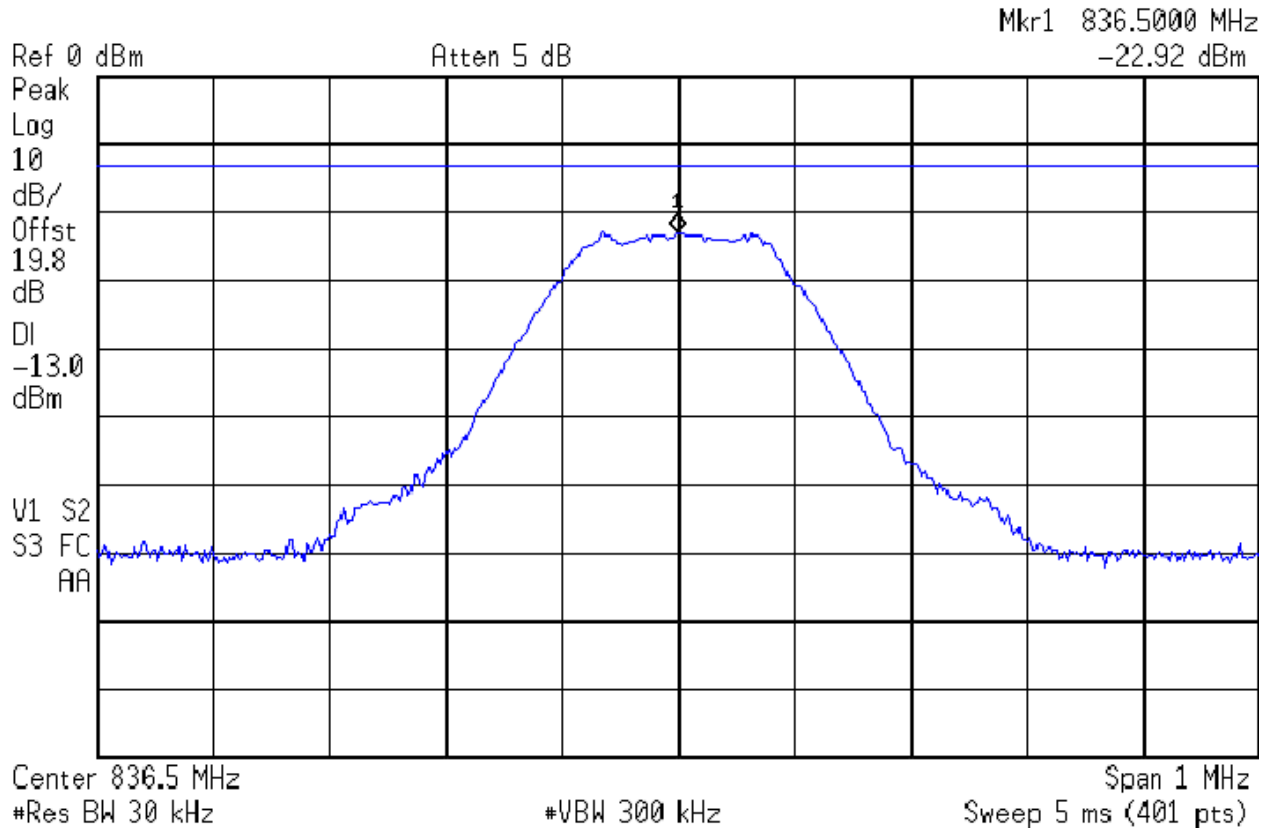



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 836.500 MHz - Output			

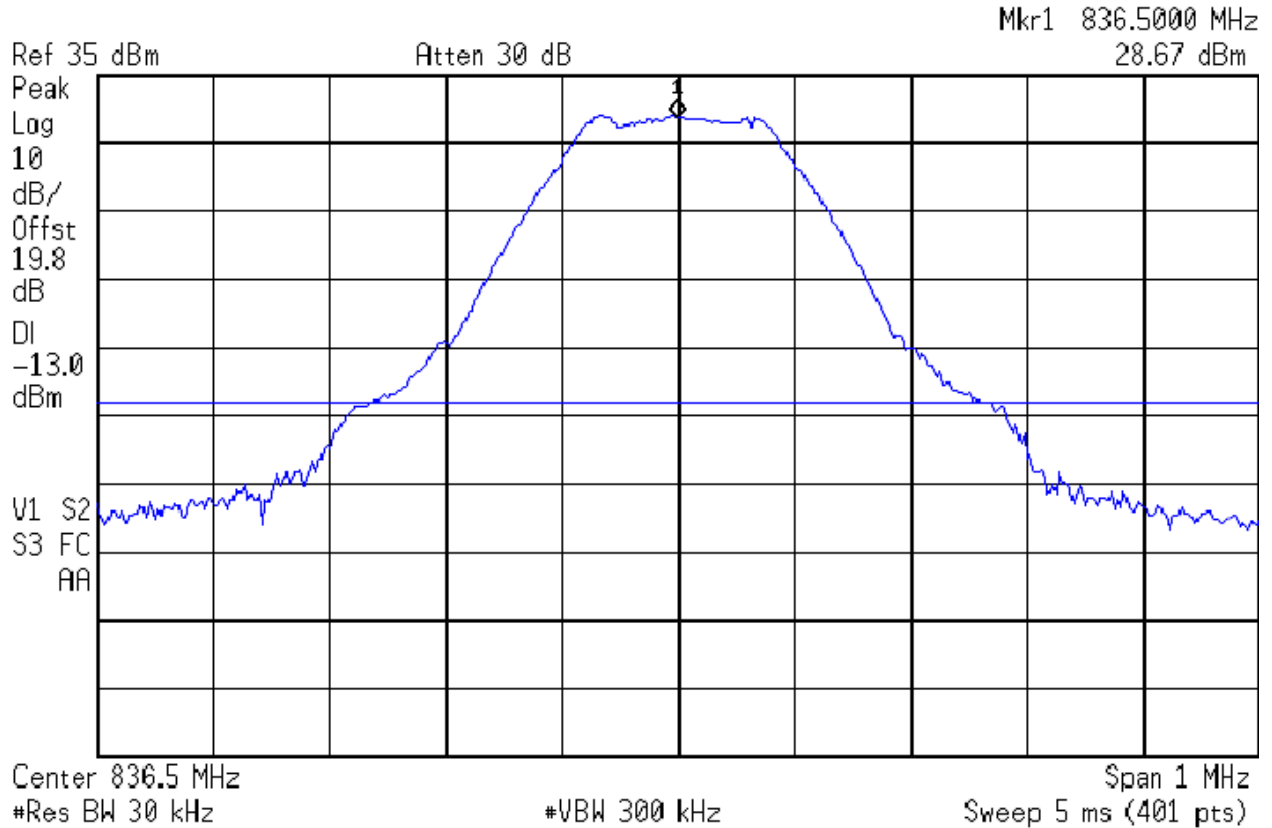





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 848.980 MHz- Input			

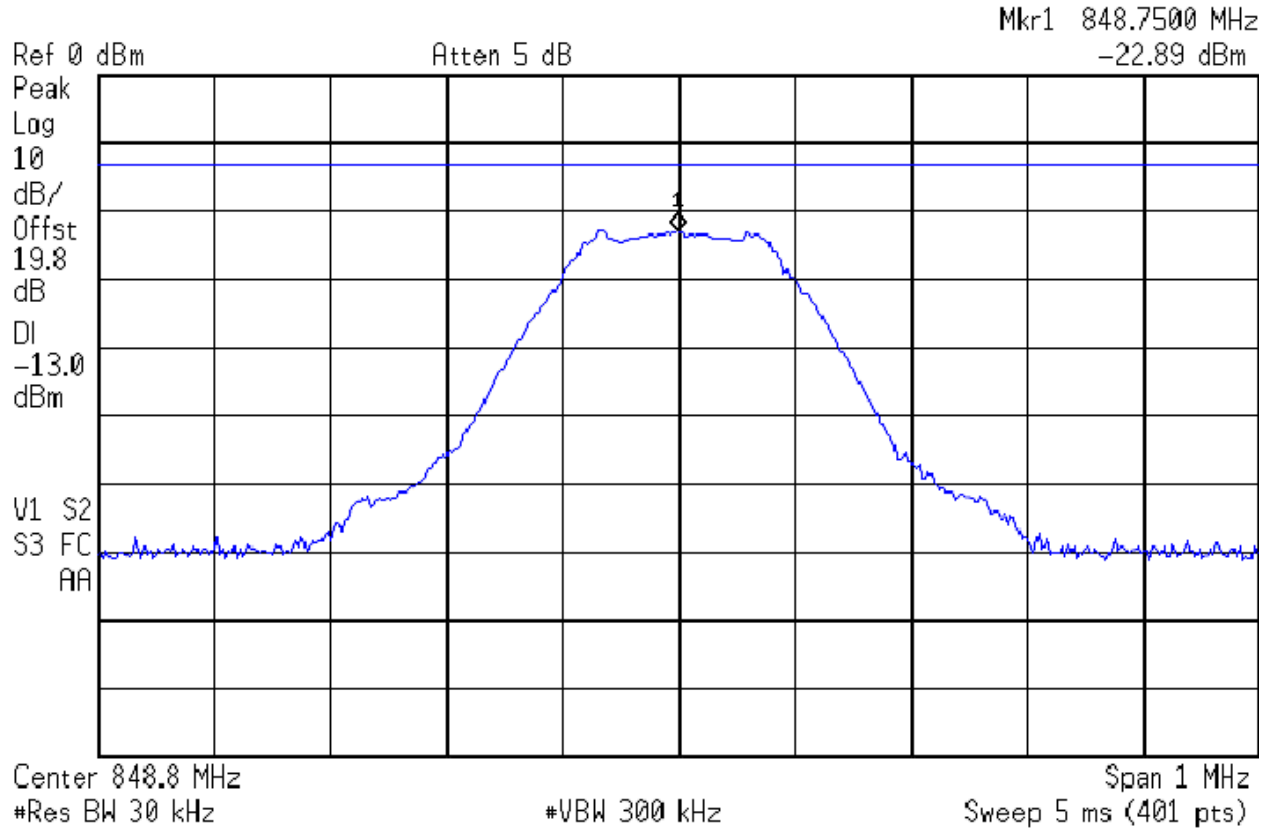



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 848.980 MHz- Output			

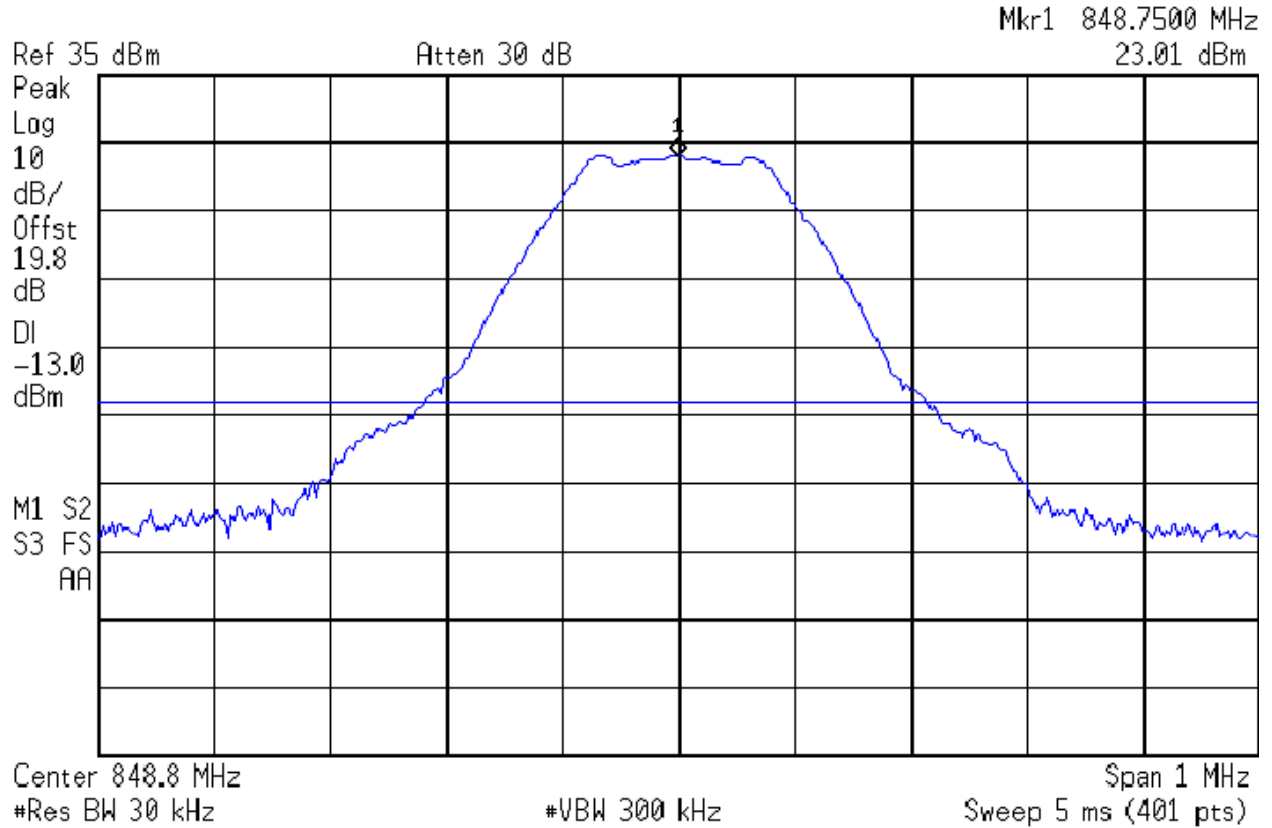





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 1850.200 MHz - Input			

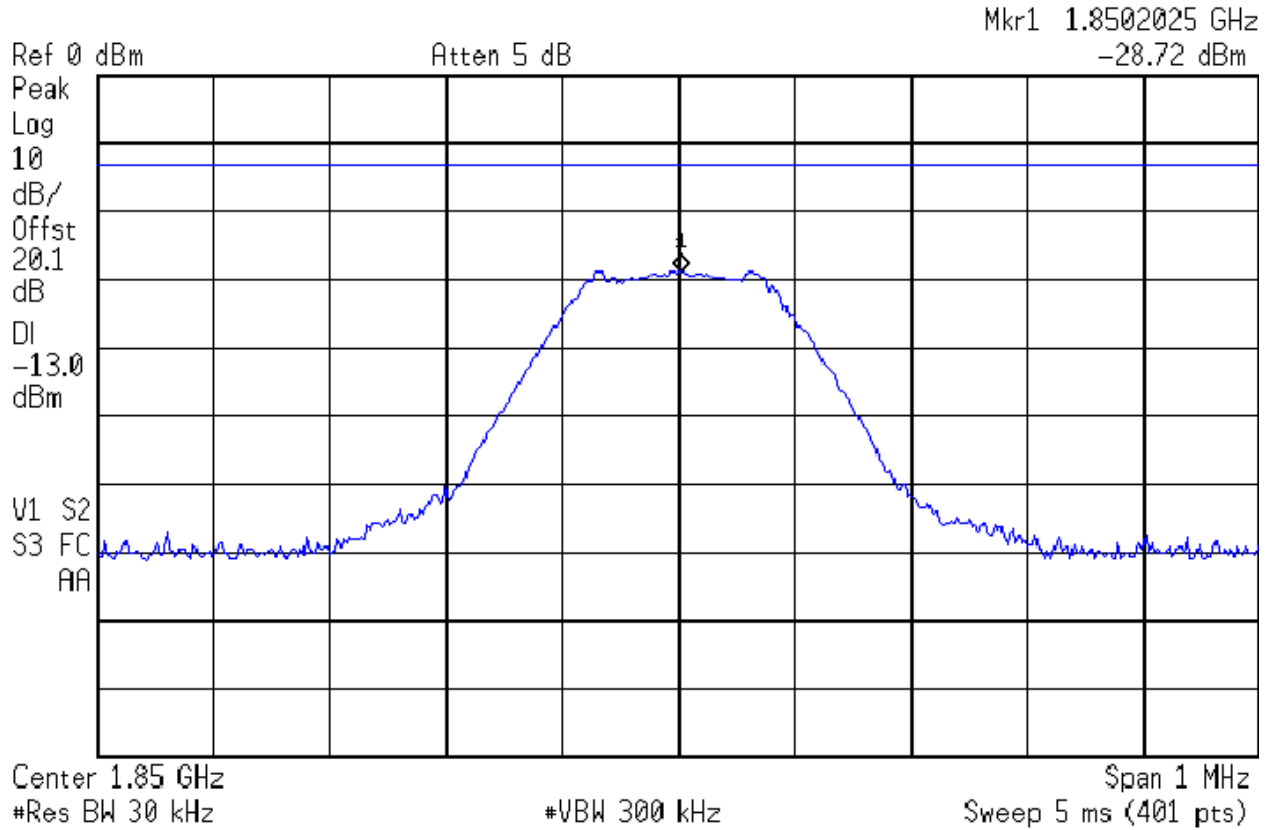









FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 1880 MHz - Input			

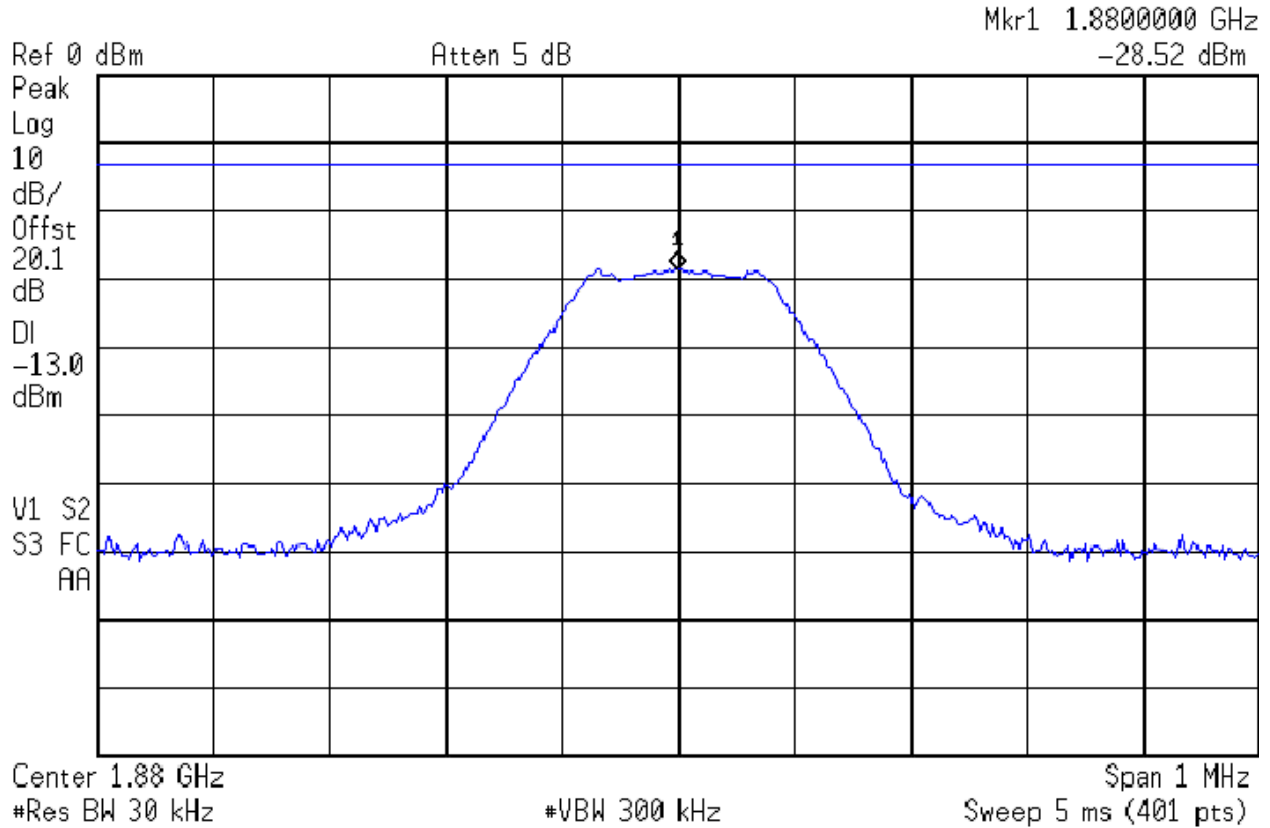







FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink GSM 1909.800 MHz - Input			

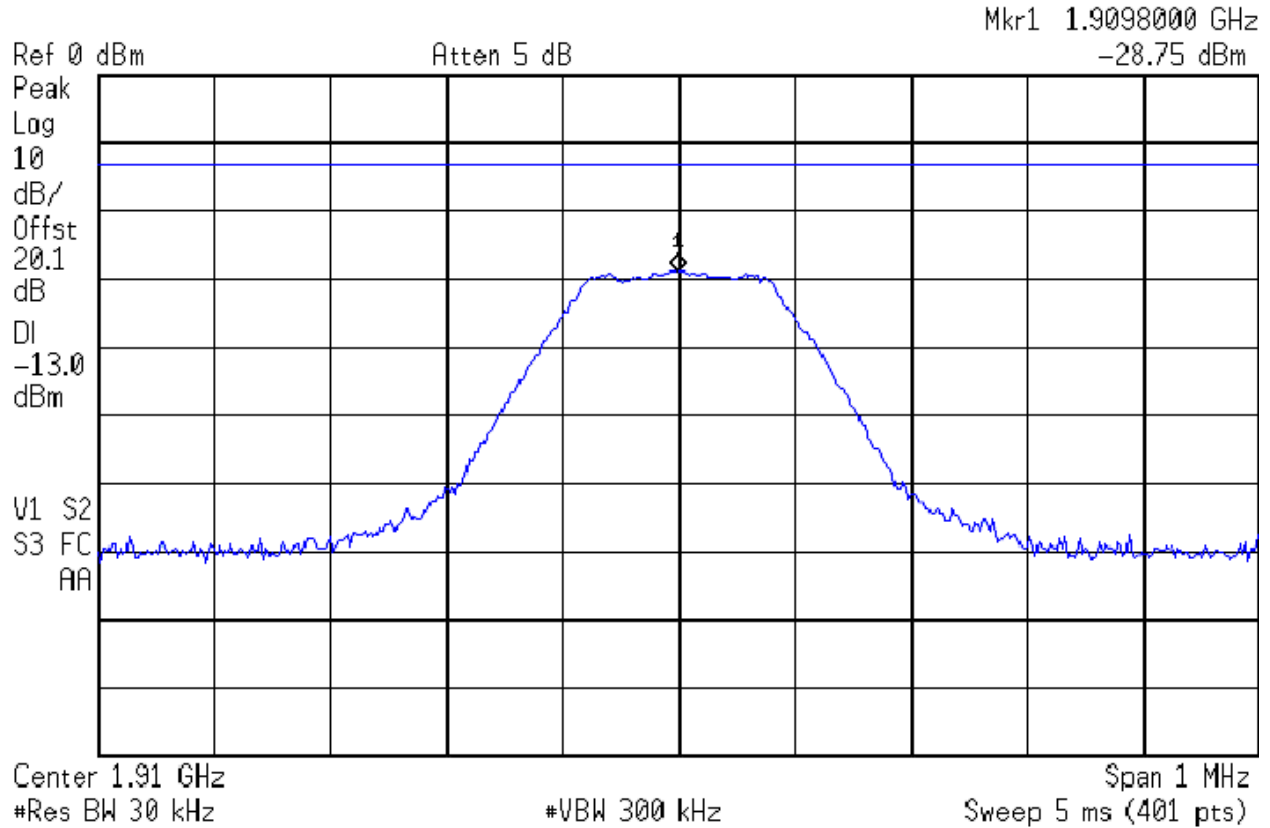





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>		
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24		
Customer: Janizary Holdings, Inc.					
Model Number: IVWA819					
Description: RF amplifier					
	Uplink TDMA 824.020 MHz				

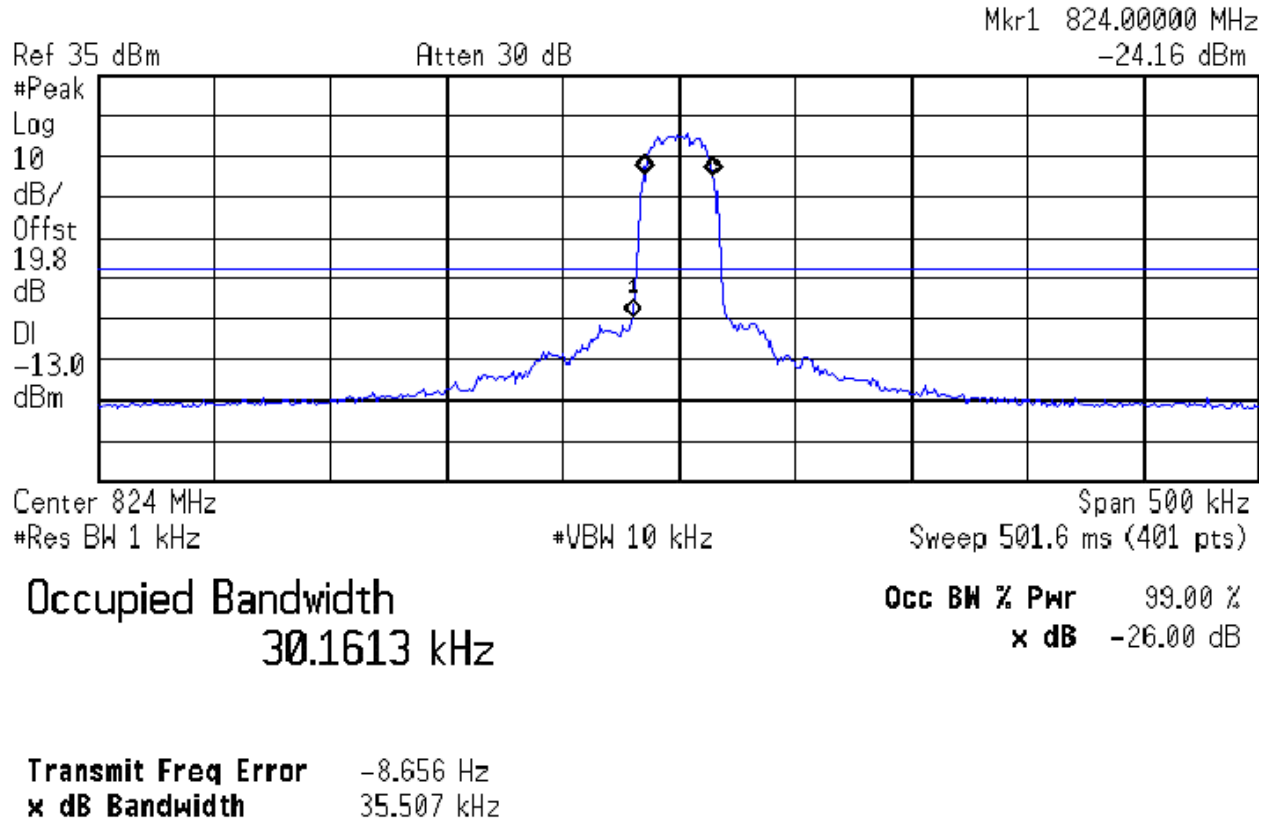





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 824.020 MHz - Input			

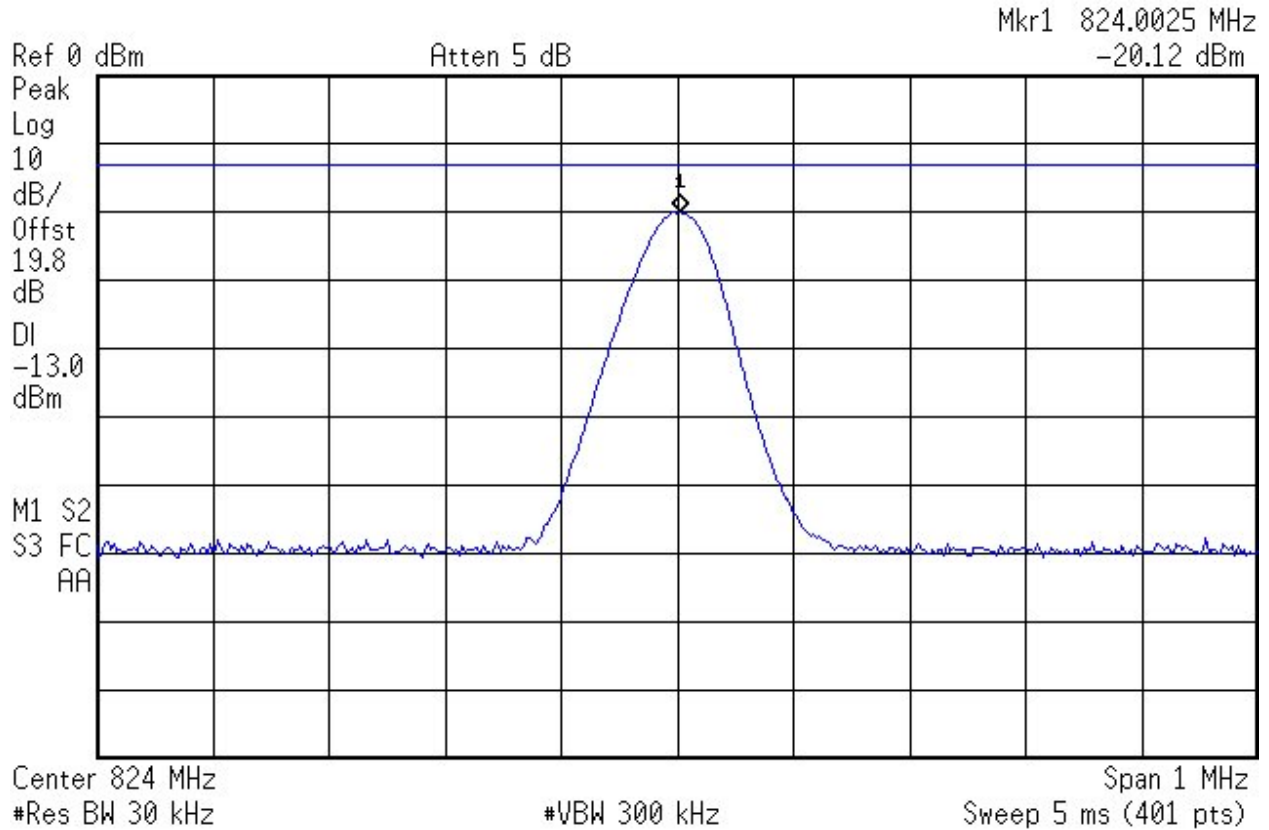



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 824.020 MHz - Output			

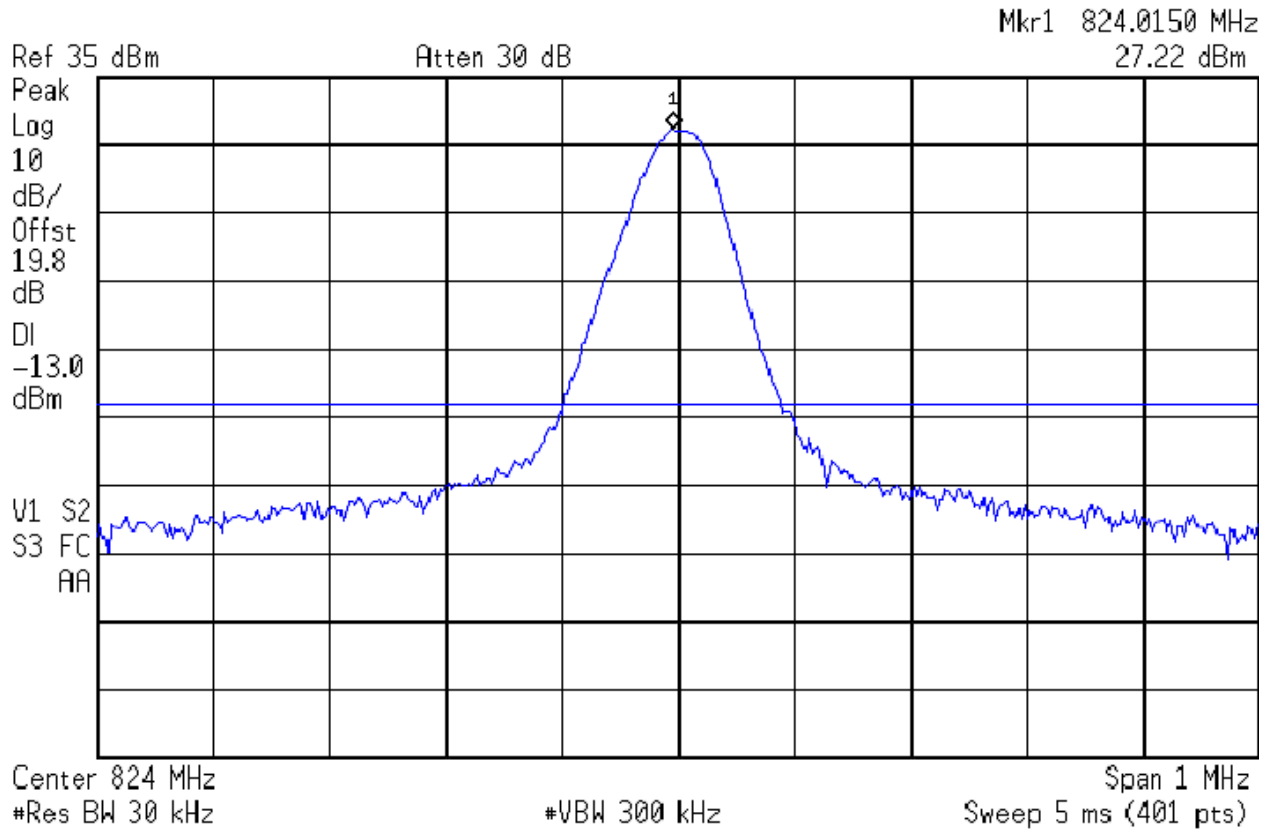

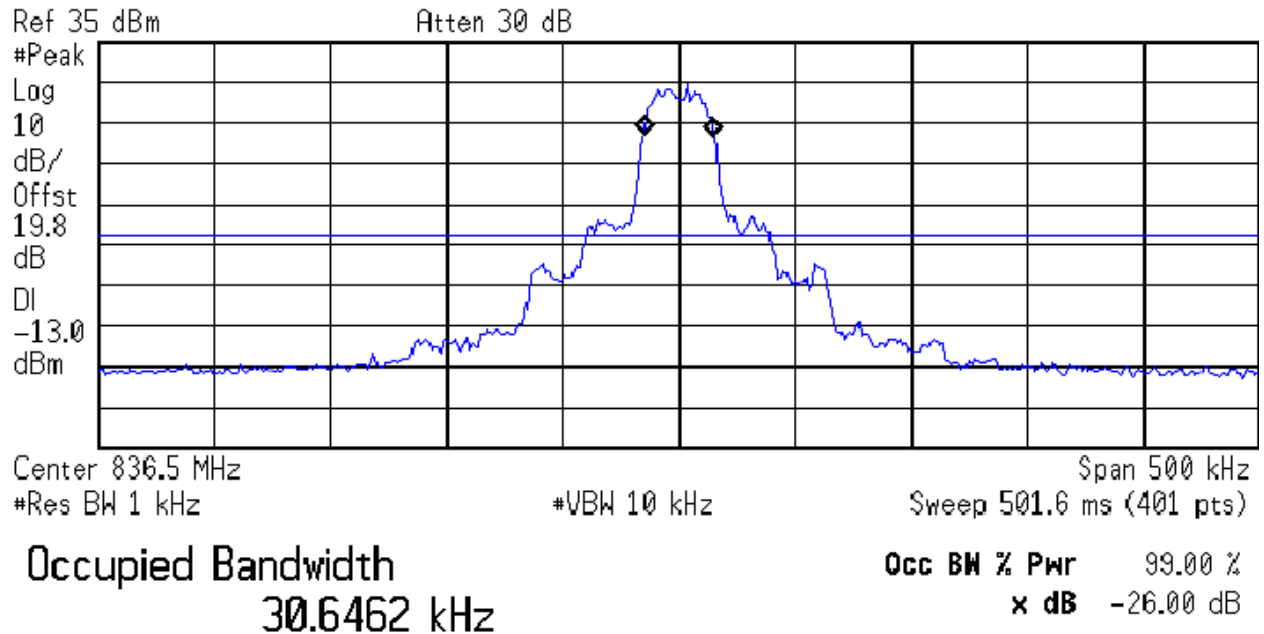


FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 836.5 MHz			



**Transmit Freq Error**                      -10.965 Hz  
**x dB Bandwidth**                      36.719 kHz



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 836.5 MHz - Output			

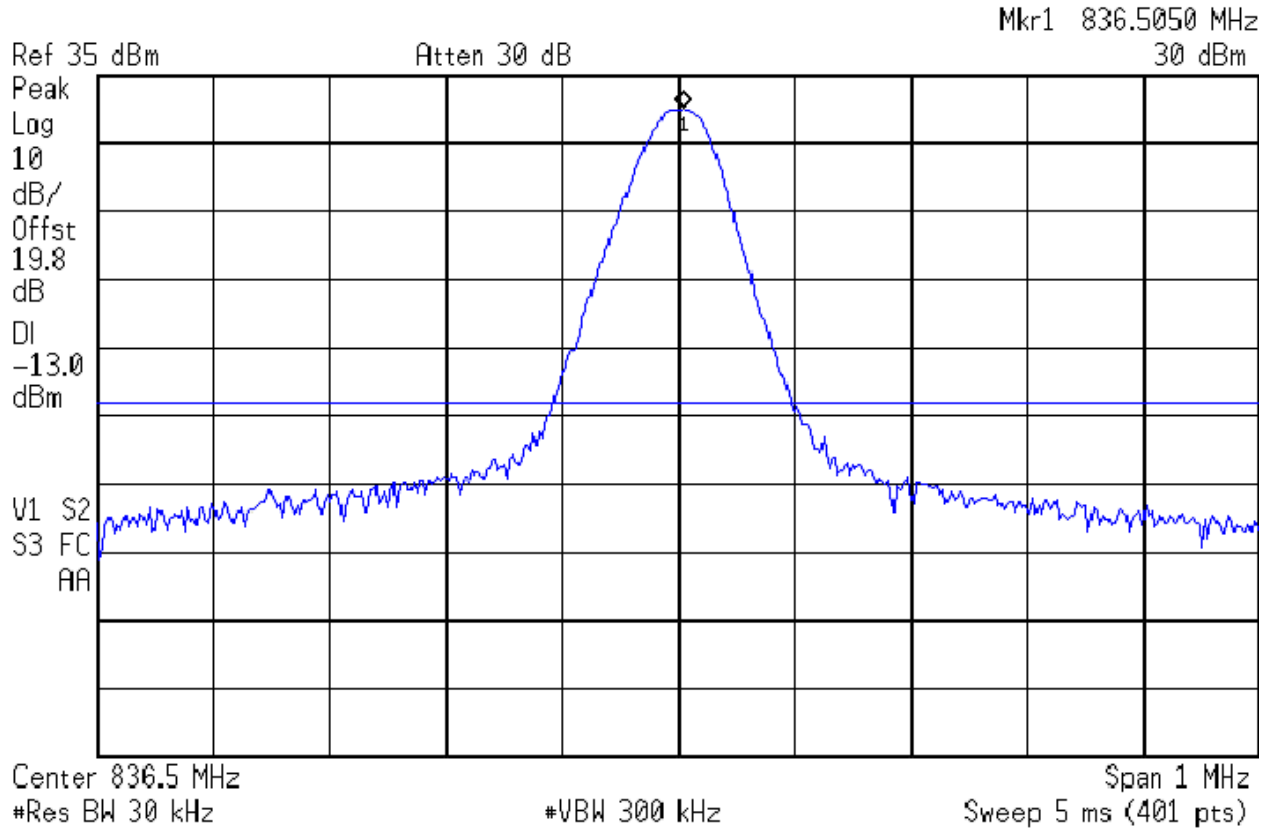

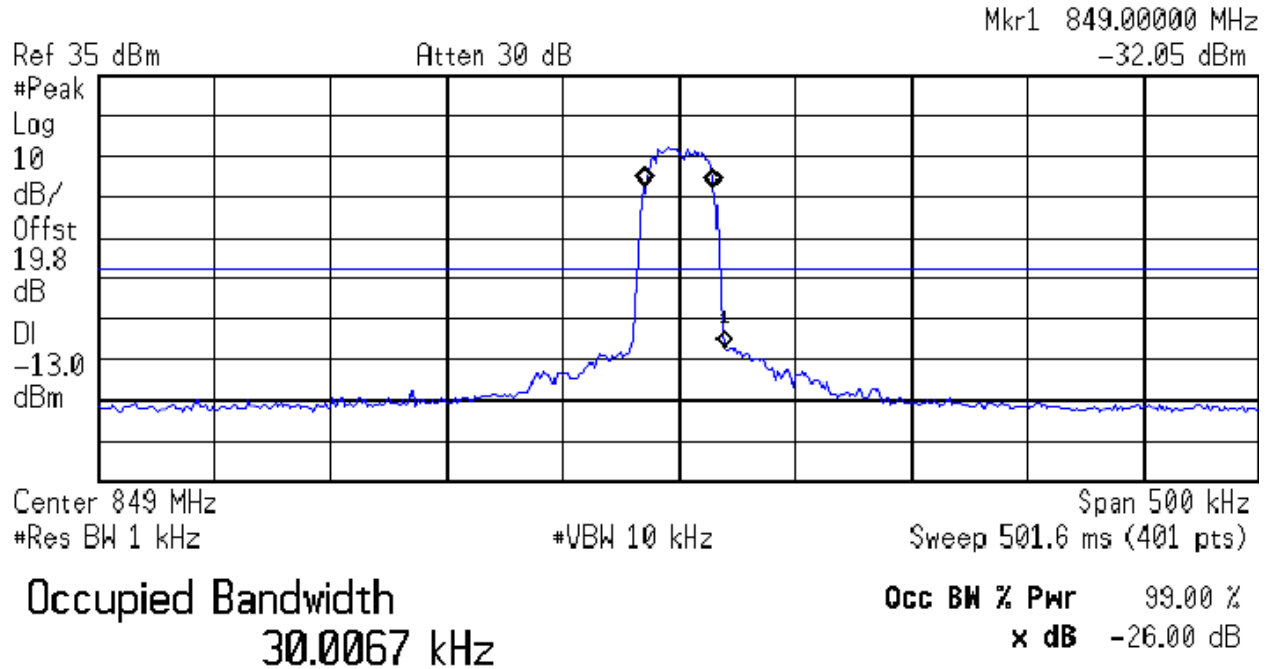



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>		
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24		
Customer: Janizary Holdings, Inc.					
Model Number: IVWA819					
Description: RF amplifier					
	Uplink TDMA 848.980 MHz				



**Transmit Freq Error**                      50.190 Hz  
**x dB Bandwidth**                      35.182 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 848.980 MHz - Input			

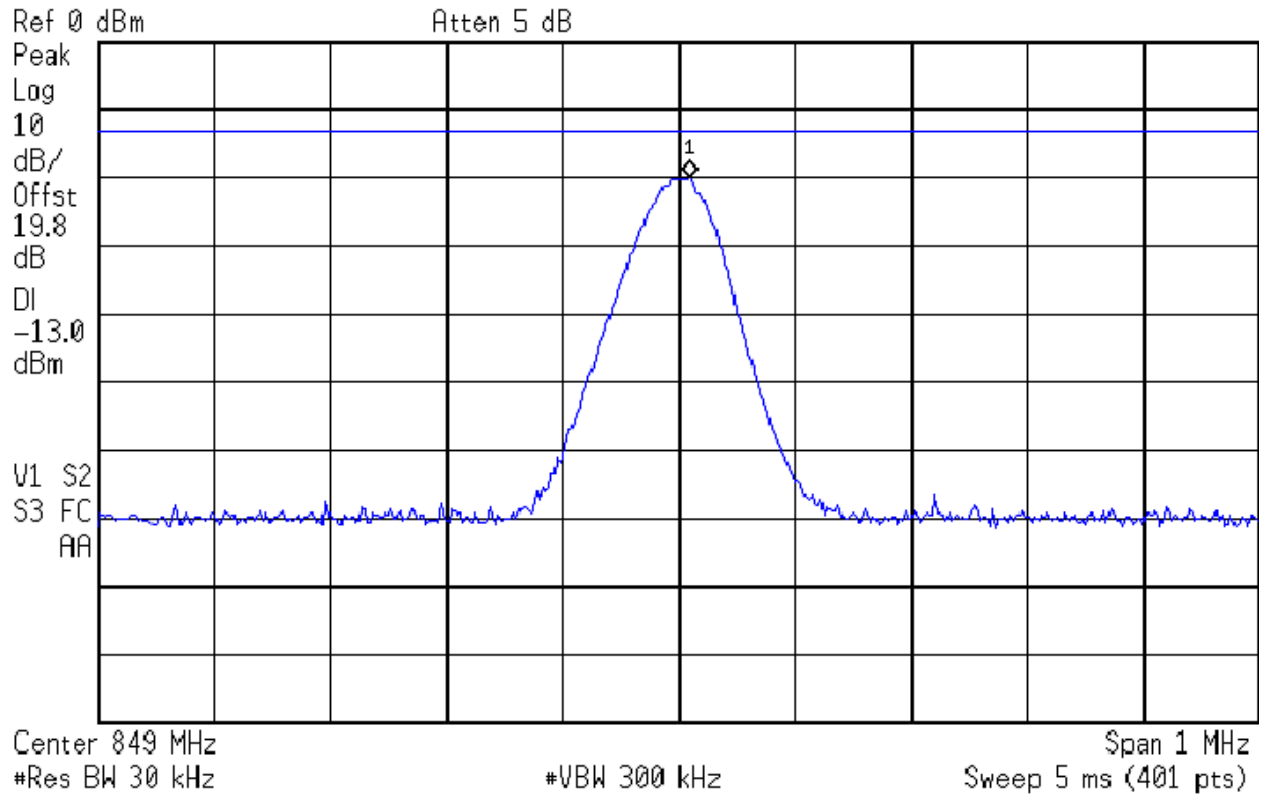









FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 1850.020 MHz - Input			

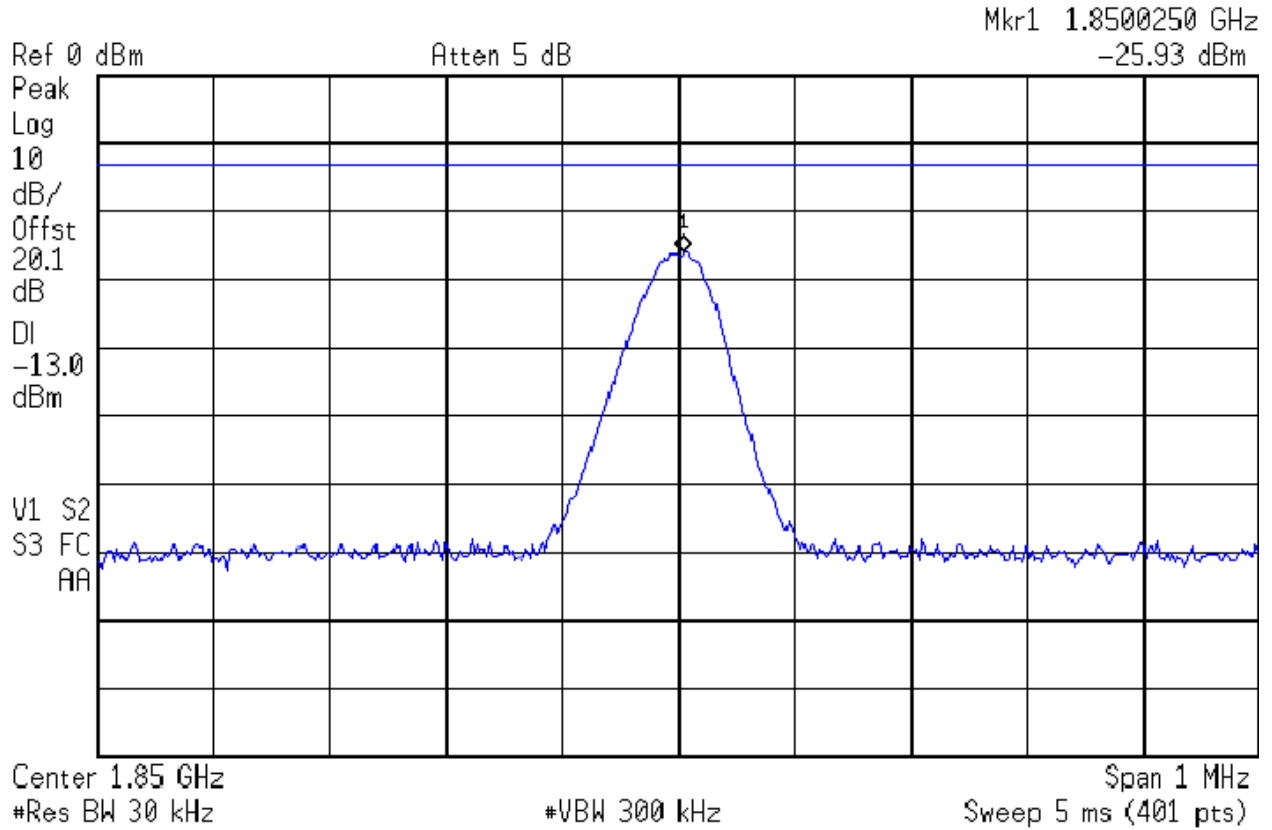

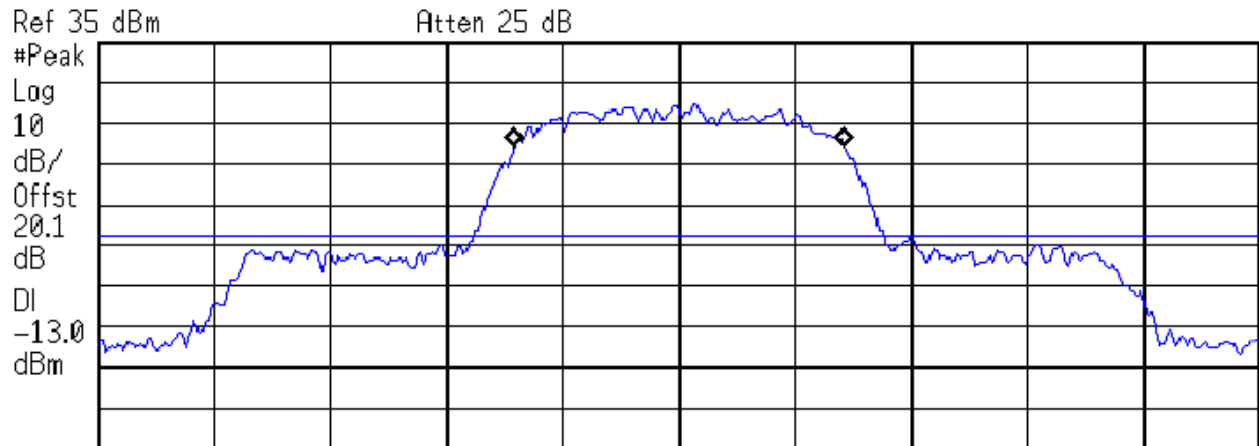




FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119 Customer: Janizary Holdings, Inc. Model Number: IVWA819 Description: RF amplifier Uplink TDMA 1880 MHz	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	



Center 1.88 GHz      Span 100 kHz  
 #Res BW 1 kHz      #VBW 10 kHz      Sweep 100.3 ms (401 pts)

**Occupied Bandwidth**  
 28.4003 kHz

**Occ BW % Pwr**    99.00 %  
**x dB**            -26.00 dB


**Transmit Freq Error**    74.571 Hz  
**x dB Bandwidth**        33.646 kHz







FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink TDMA 1909.980 MHz - Input			

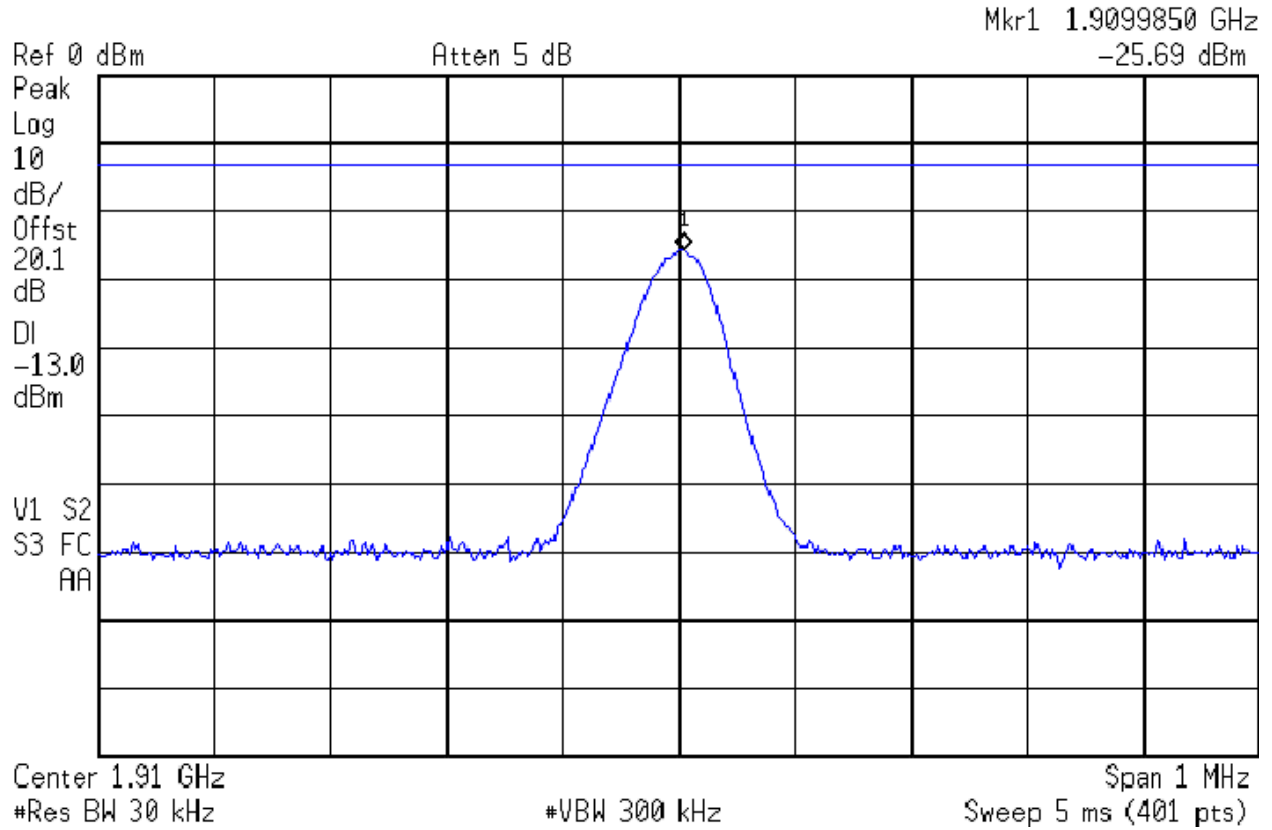









FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink CDMA 1851 MHz - Input			

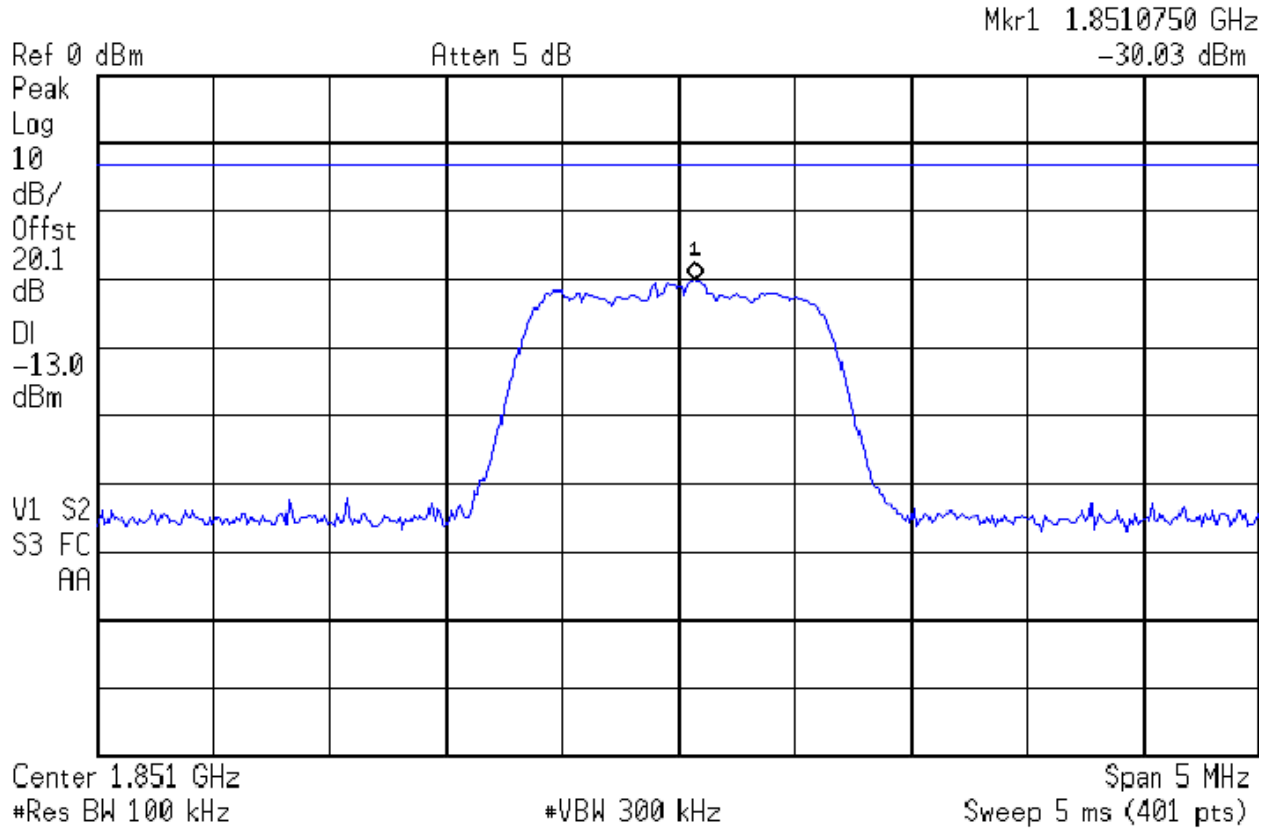



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number:	68119	Date:	16 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Uplink CDMA 1851 MHz - Output			

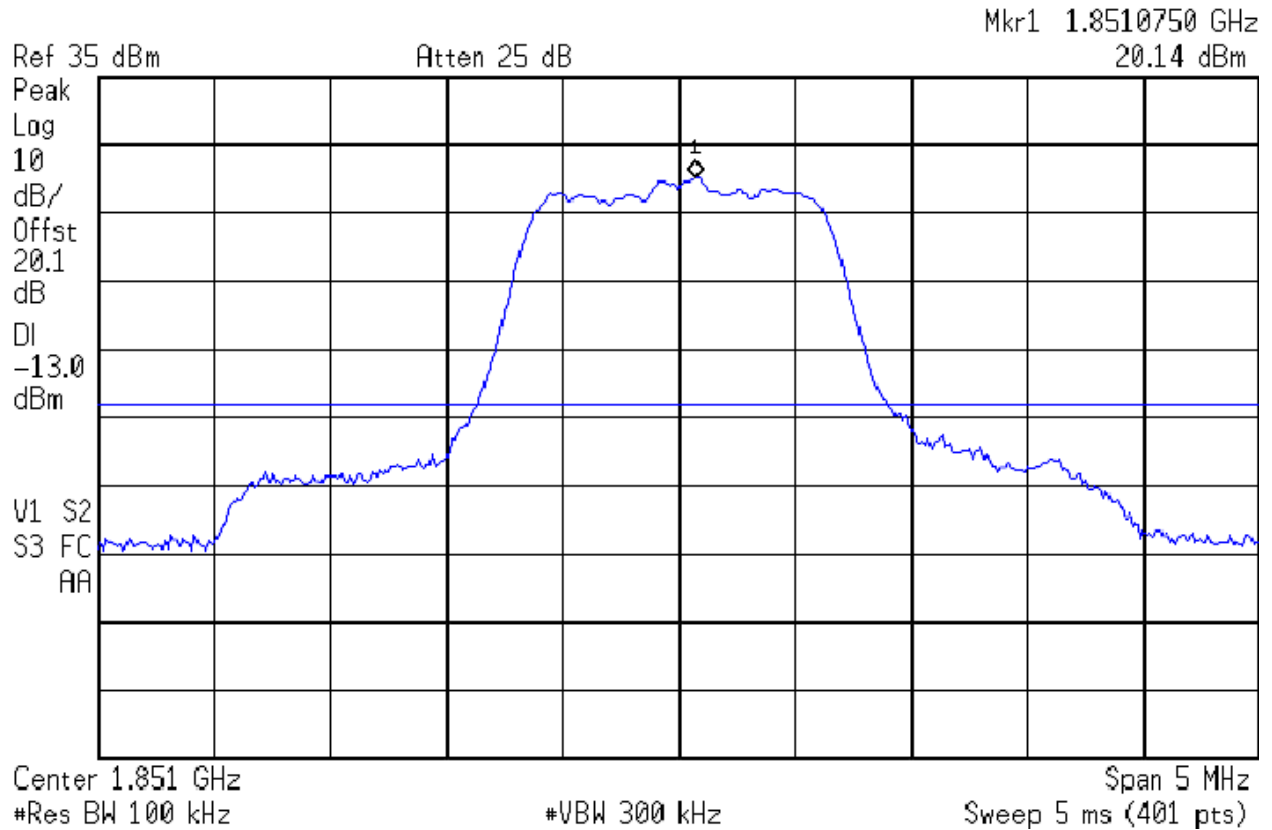

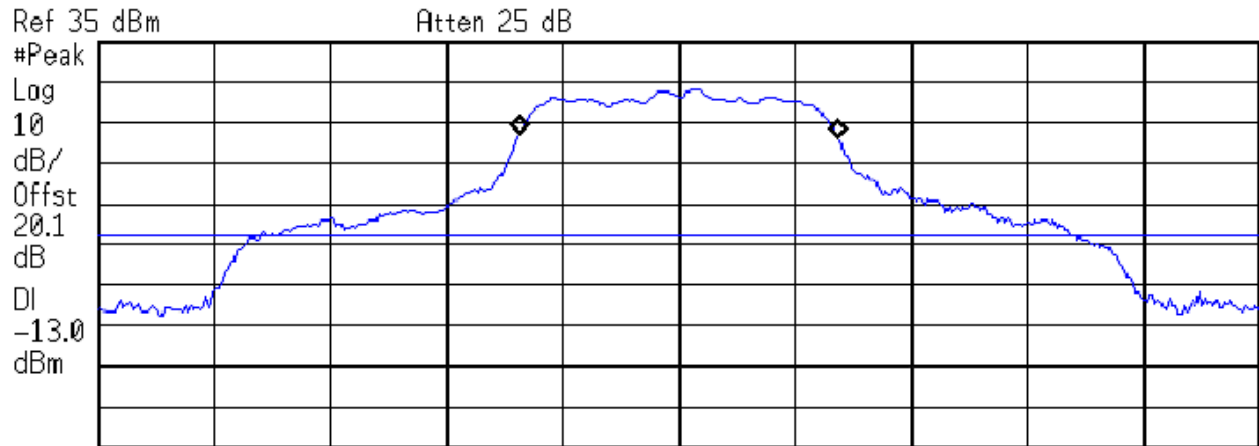


FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119	Date: 16 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink CDMA 1880 MHz			




Center 1.88 GHz Span 5 MHz  
 #Res BW 100 kHz #VBW 1 MHz Sweep 5 ms (401 pts)

**Occupied Bandwidth**  
**1.3720 MHz**

**Occ BW % Pwr** 99.00 %  
**x dB** -26.00 dB

**Transmit Freq Error** 389.196 Hz  
**x dB Bandwidth** 1.918 MHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink CDMA 1880 MHz - Input			

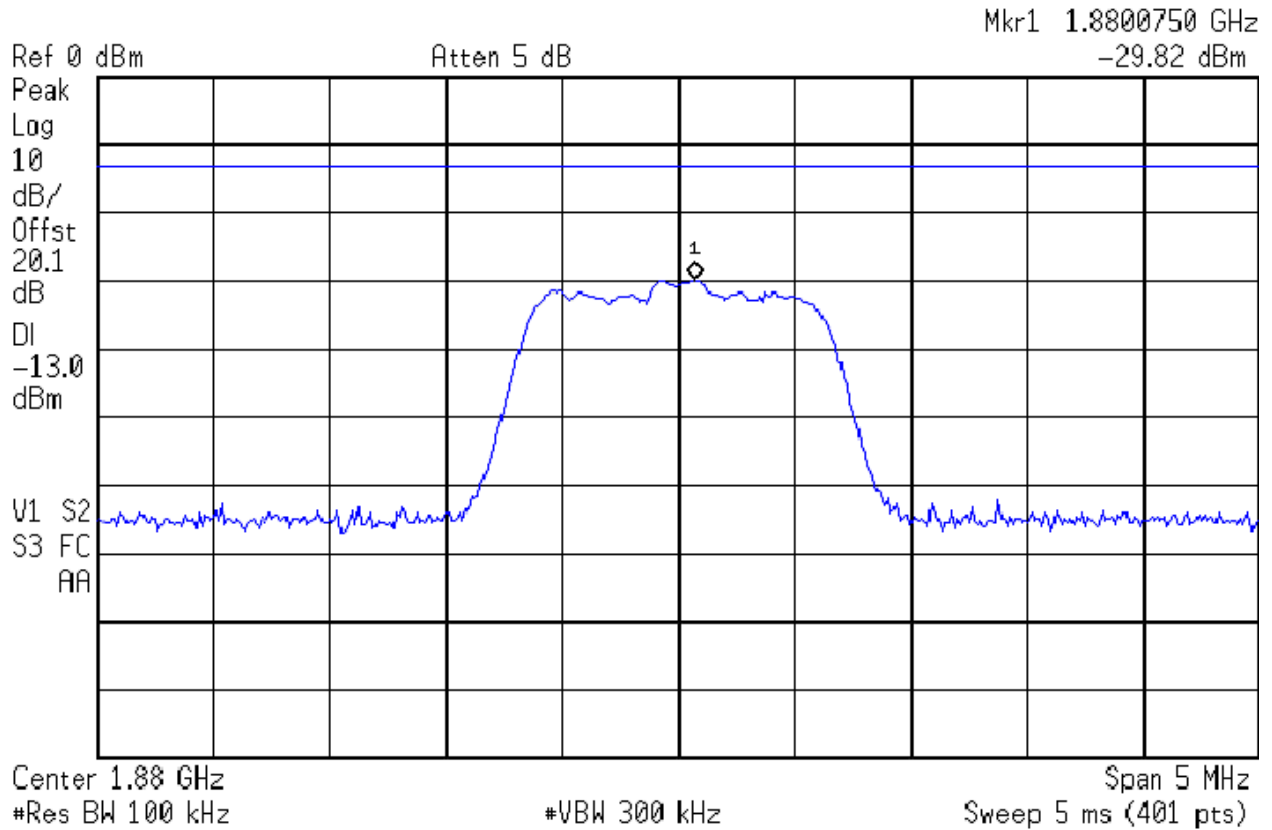





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Uplink CDMA 1909 MHz				

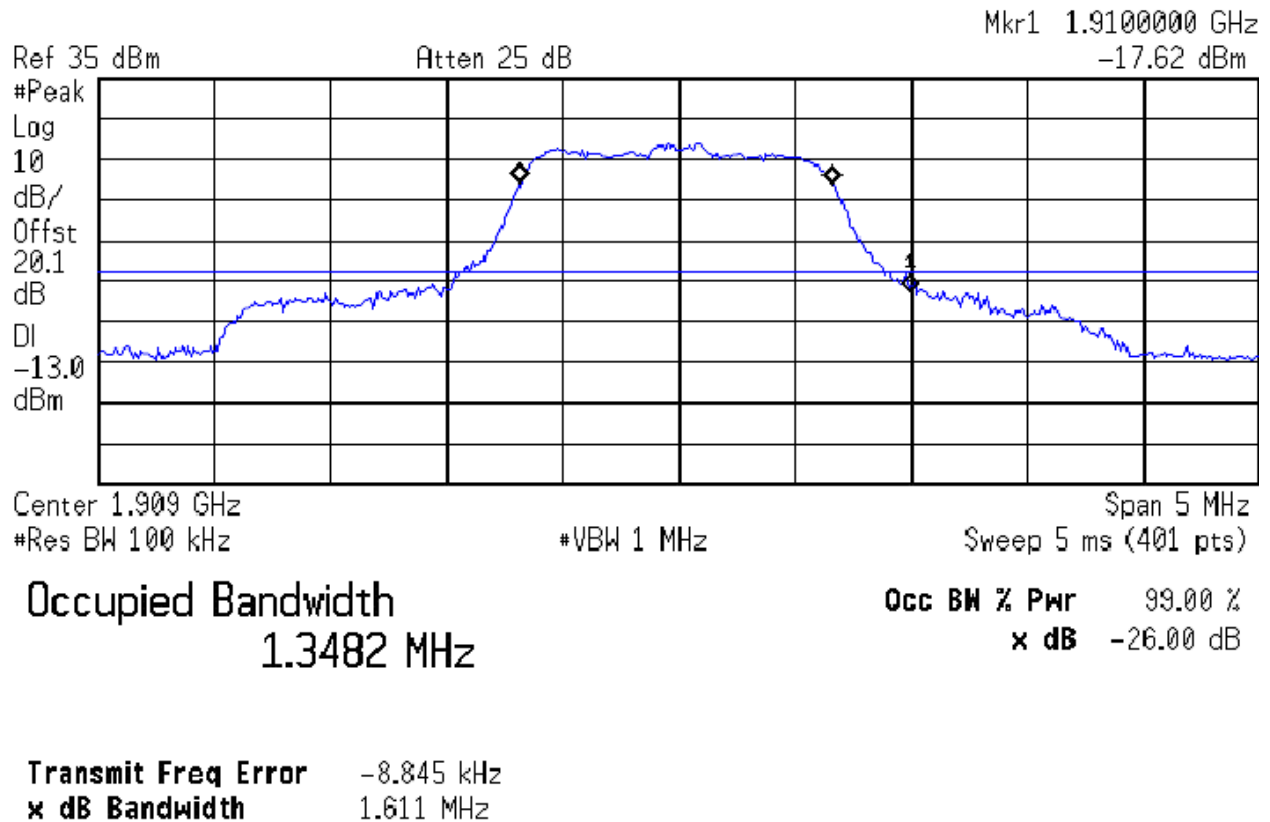





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink CDMA 1909 MHz - Input			

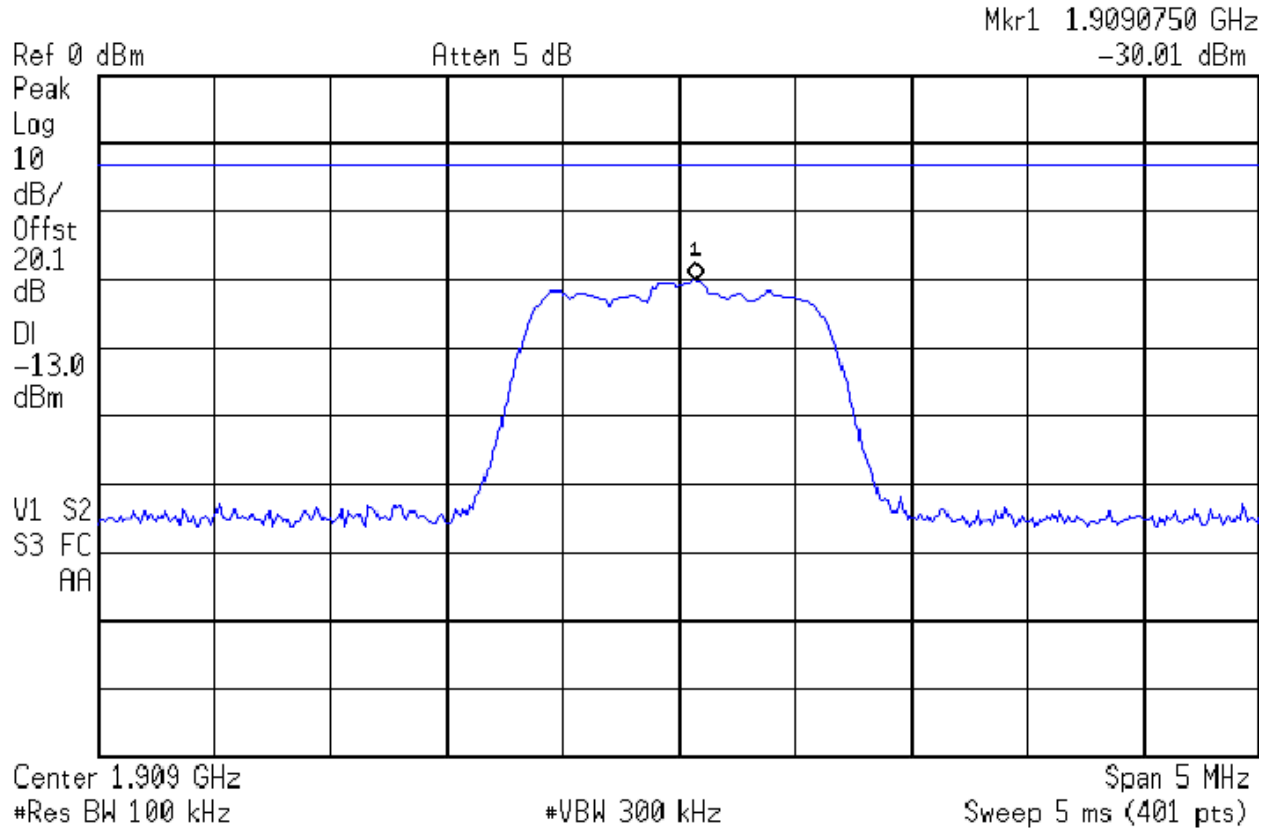



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number:	68119	Date:	16 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Uplink CDMA 1909 MHz - Output			

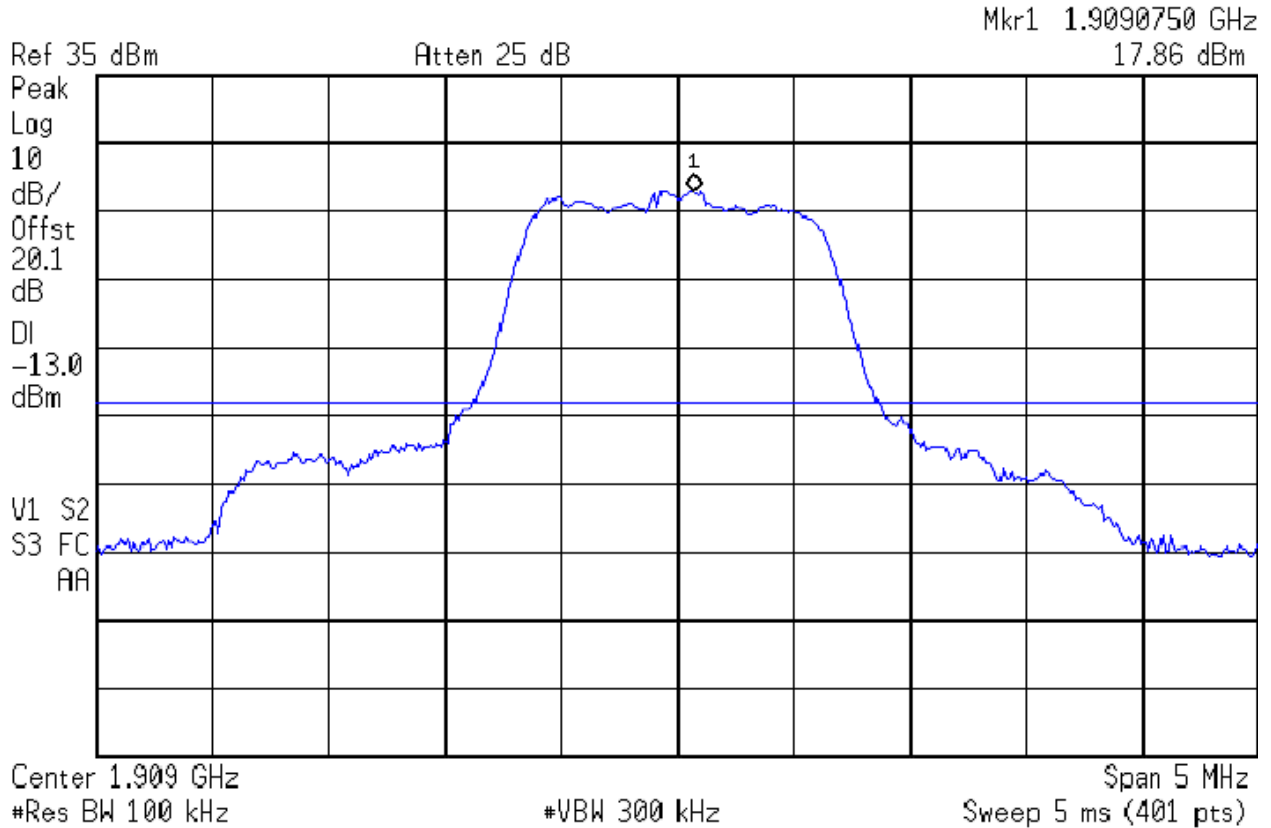

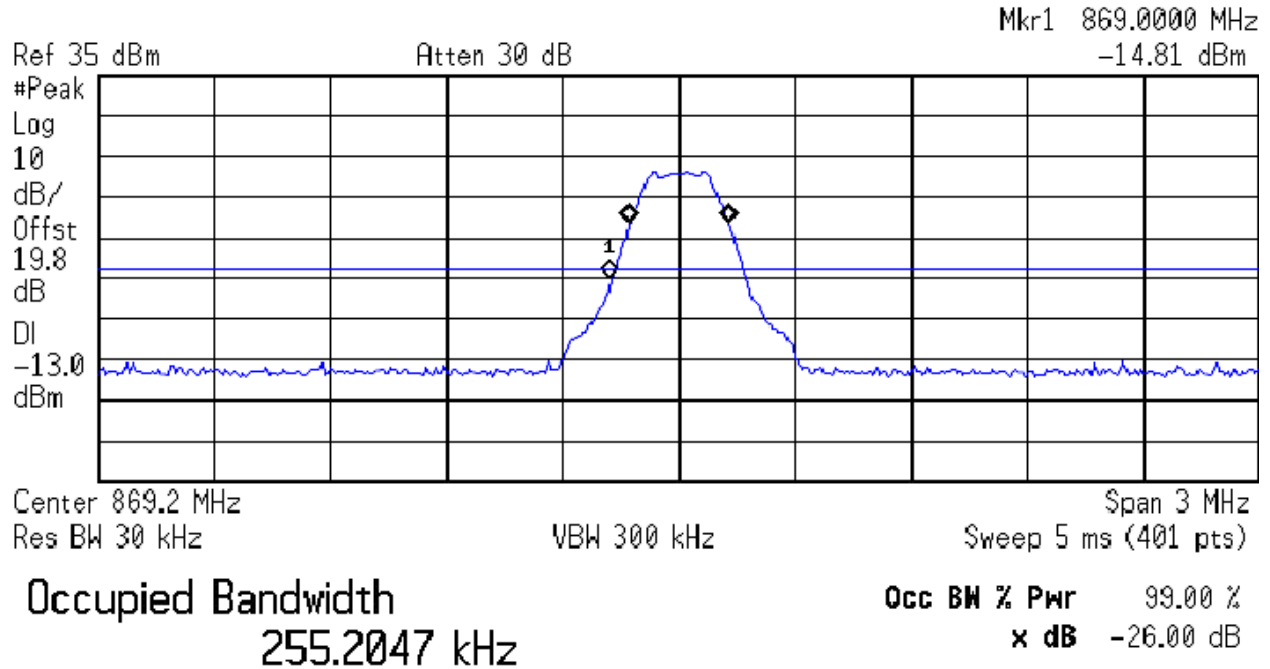



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h2>Occupied Bandwidth</h2>	
	DNB Job Number: 68119	Date: 16 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 869.180 MHz				



**Transmit Freq Error**    1.360 kHz  
**x dB Bandwidth**        344.761 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink GSM 869.180 MHz - Input			

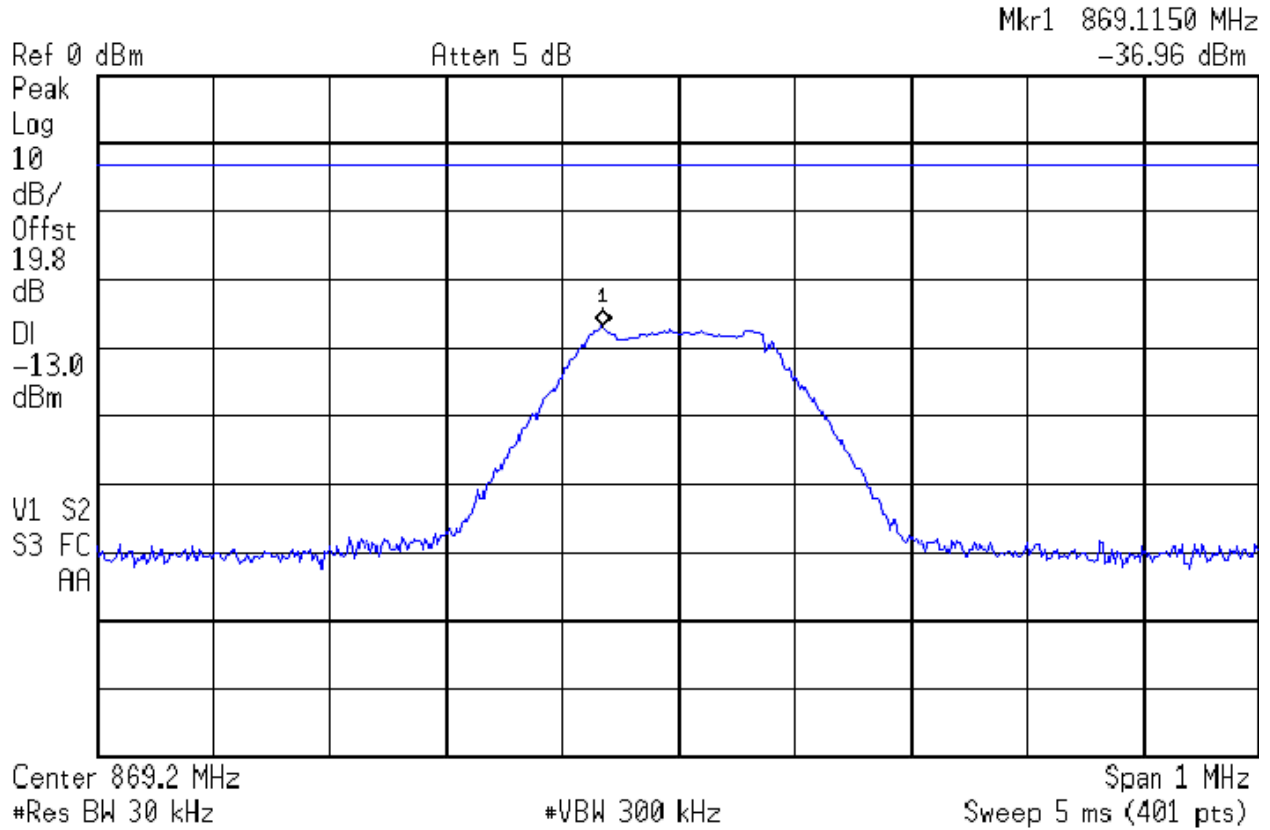

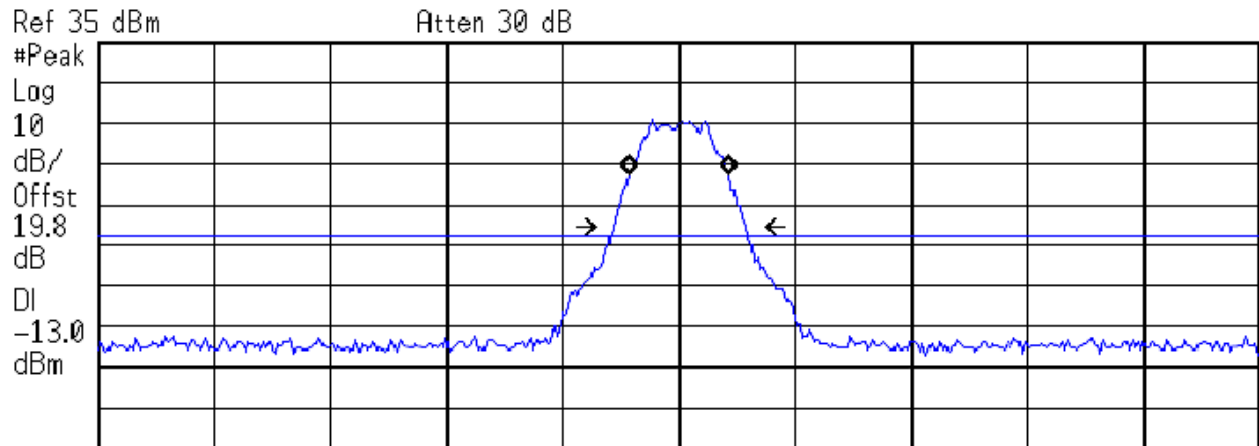




FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink GSM 881.5 MHz			




Center 881.5 MHz      Span 3 MHz  
 #Res BW 30 kHz      #VBW 300 kHz      Sweep 5 ms (401 pts)

**Occupied Bandwidth**  
 255.0713 kHz

**Occ BW % Pwr**    99.00 %  
**x dB**            -26.00 dB

**Transmit Freq Error**    -393.838 Hz  
**Occupied Bandwidth**    340.080 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 881.5 MHz - Input				

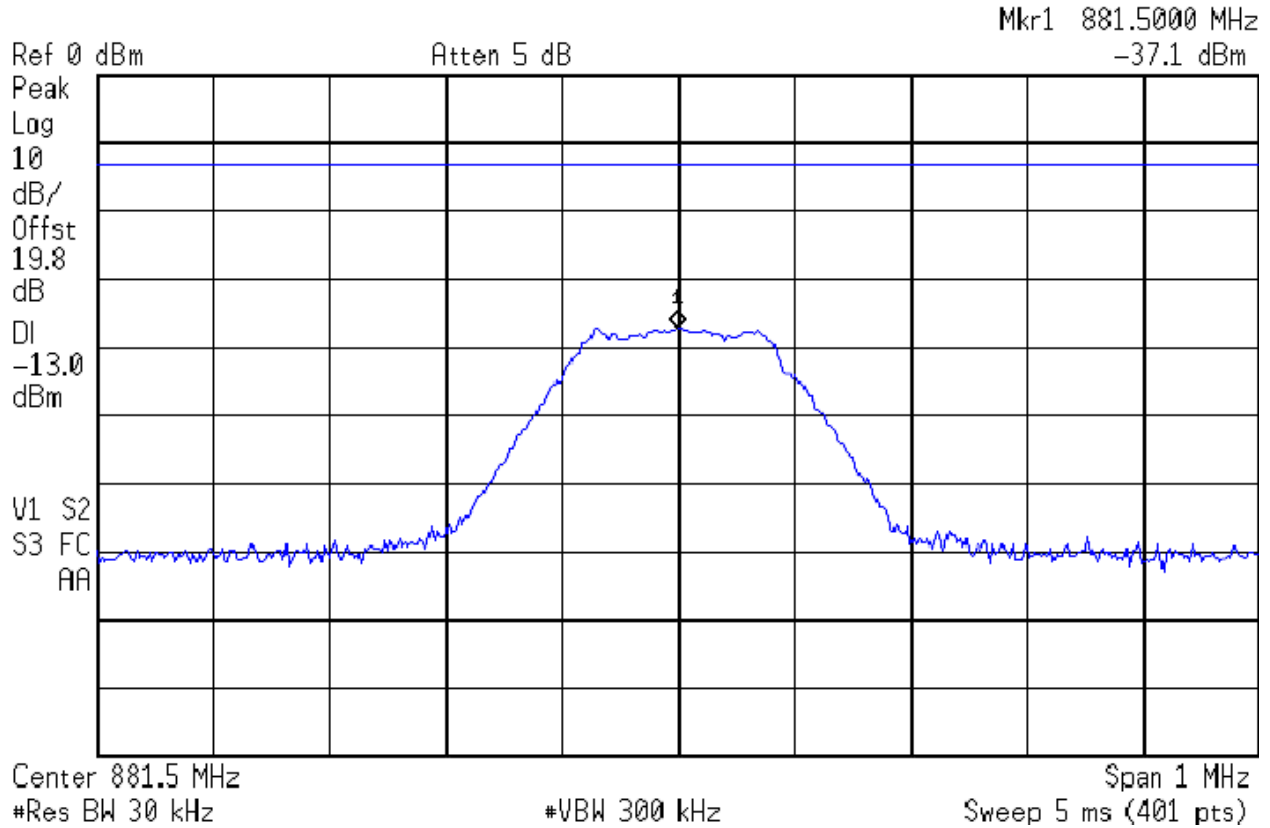







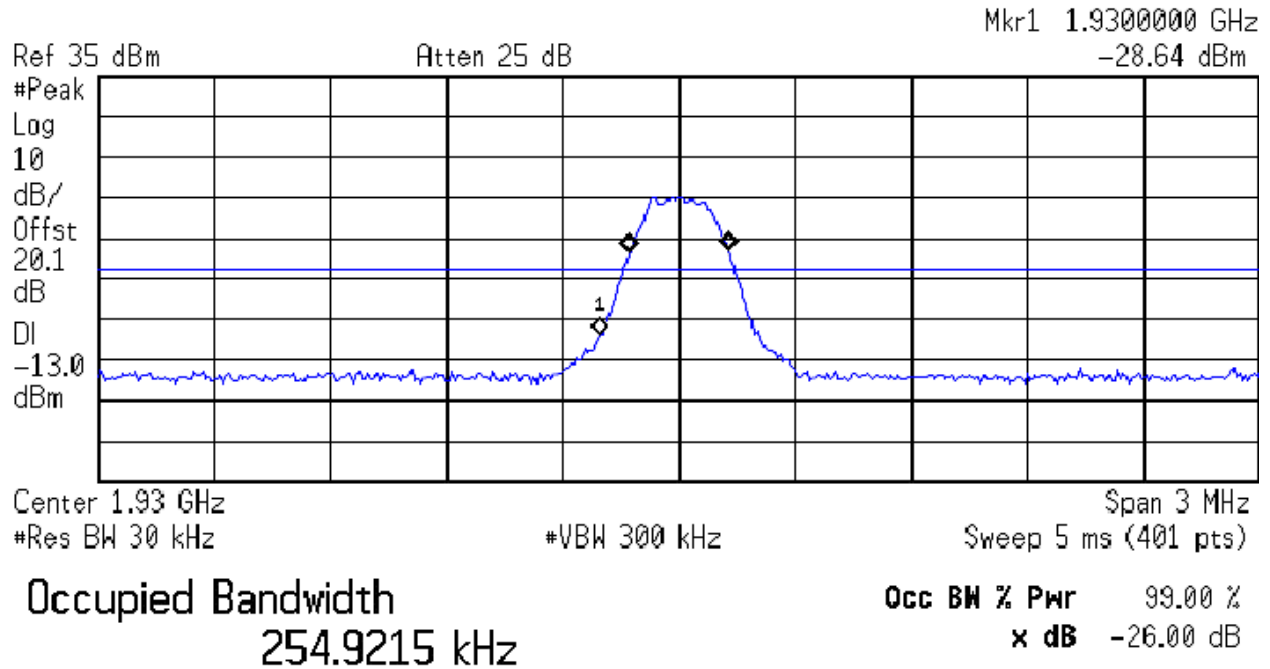







FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 1930.200 MHz				



**Transmit Freq Error** 717.379 Hz  
**x dB Bandwidth** 340.935 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 1930.200 MHz - Input				

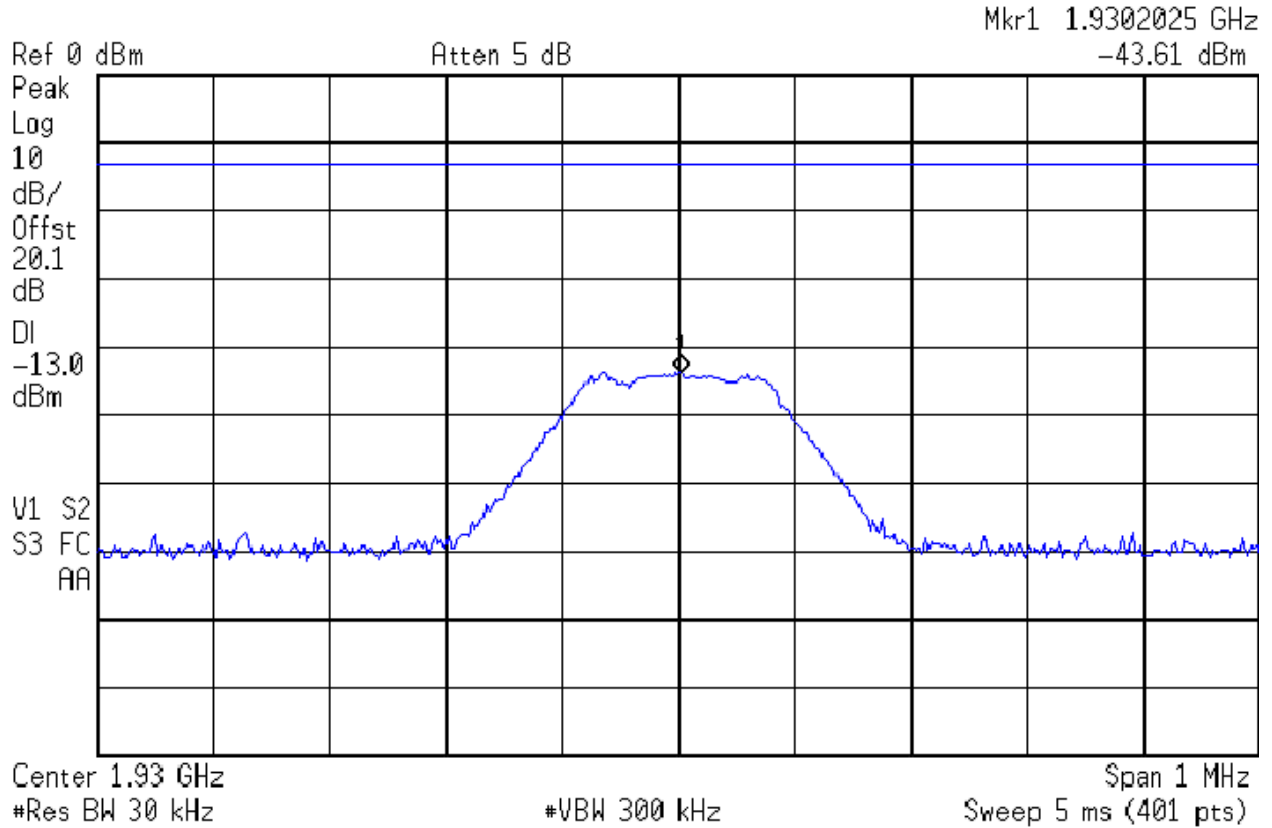

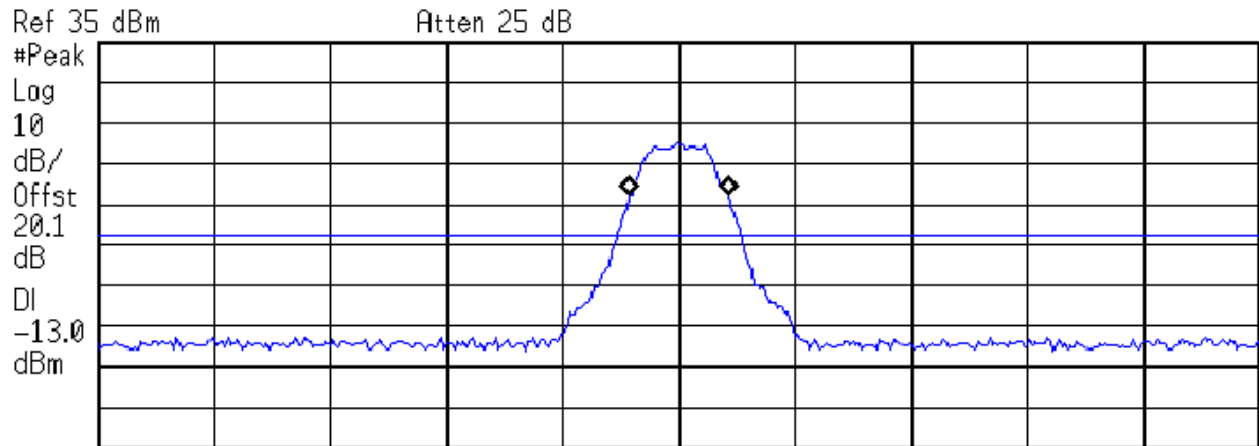




FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 1960 MHz				



Center 1.96 GHz Span 3 MHz  
 #Res BW 30 kHz #VBW 300 kHz Sweep 5 ms (401 pts)

**Occupied Bandwidth**  
 254.9517 kHz


**Occ BW % Pwr** 99.00 %  
**x dB** -26.00 dB

**Transmit Freq Error** 420.578 Hz  
**x dB Bandwidth** 341.050 kHz





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink GSM 1960 MHz - Output			

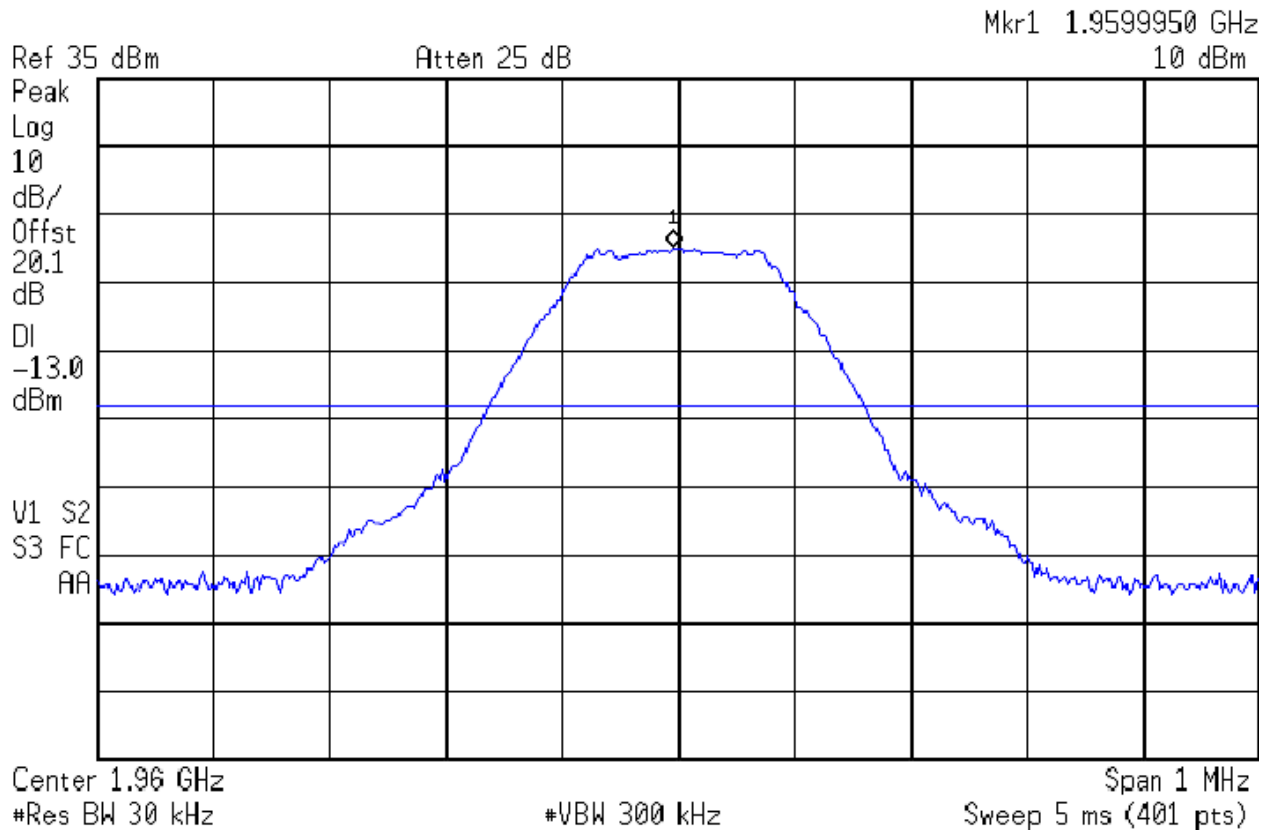



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink GSM 1989.800 MHz				

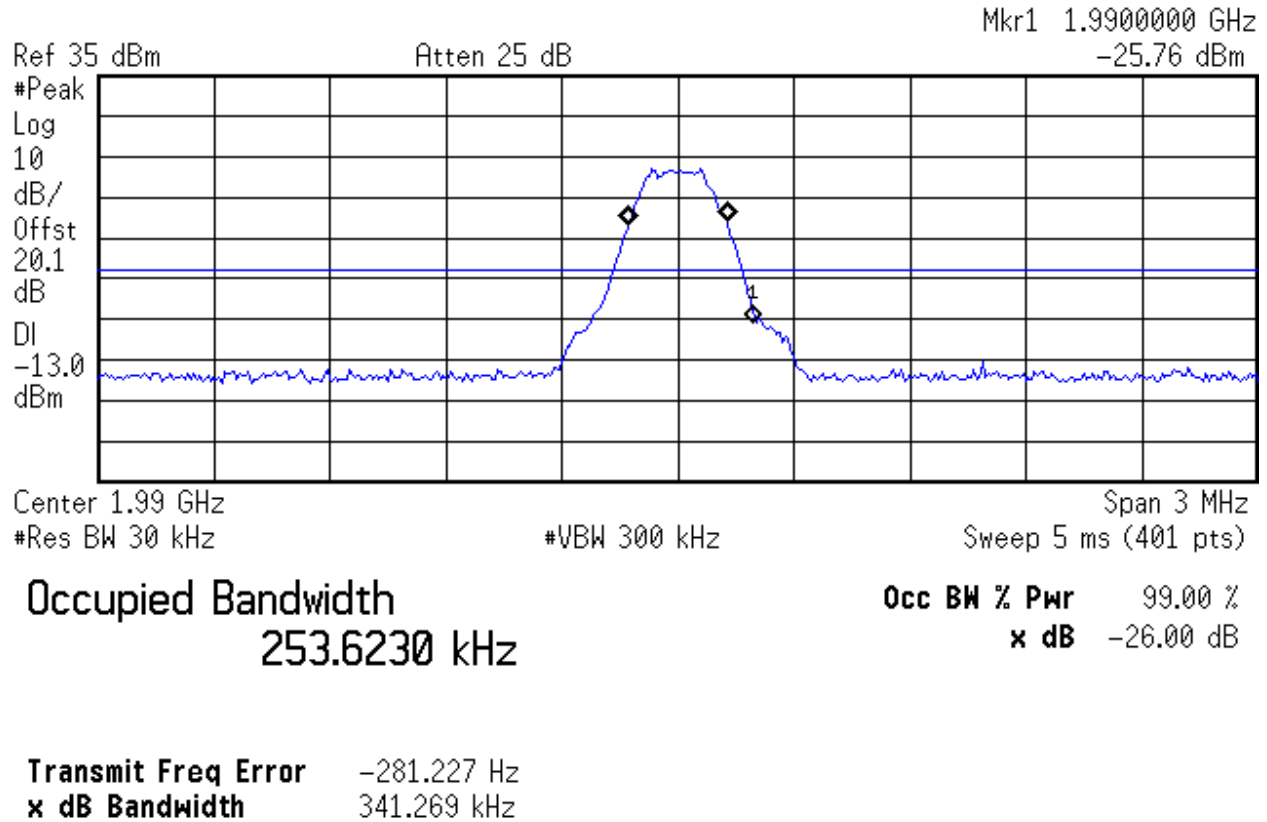



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 1989.800 MHz - Input				

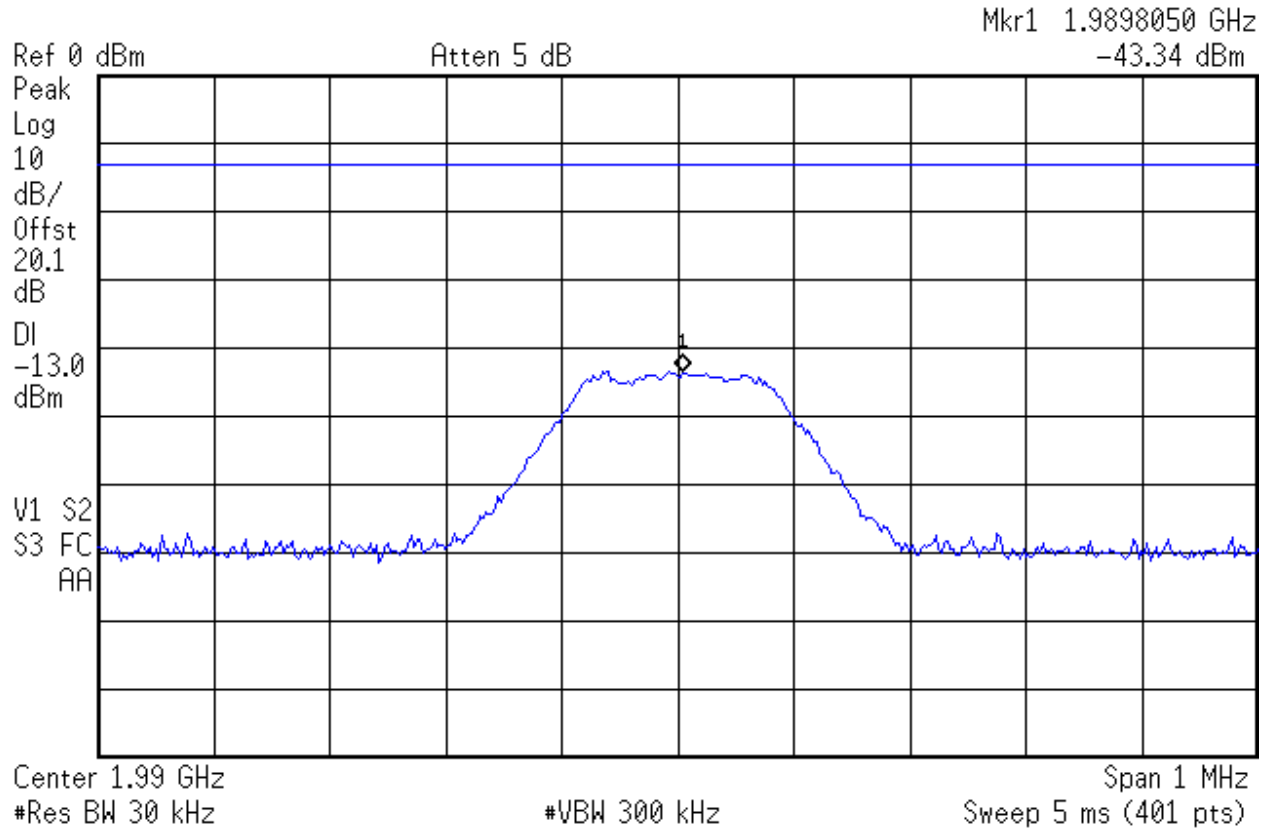





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 869.020 MHz				

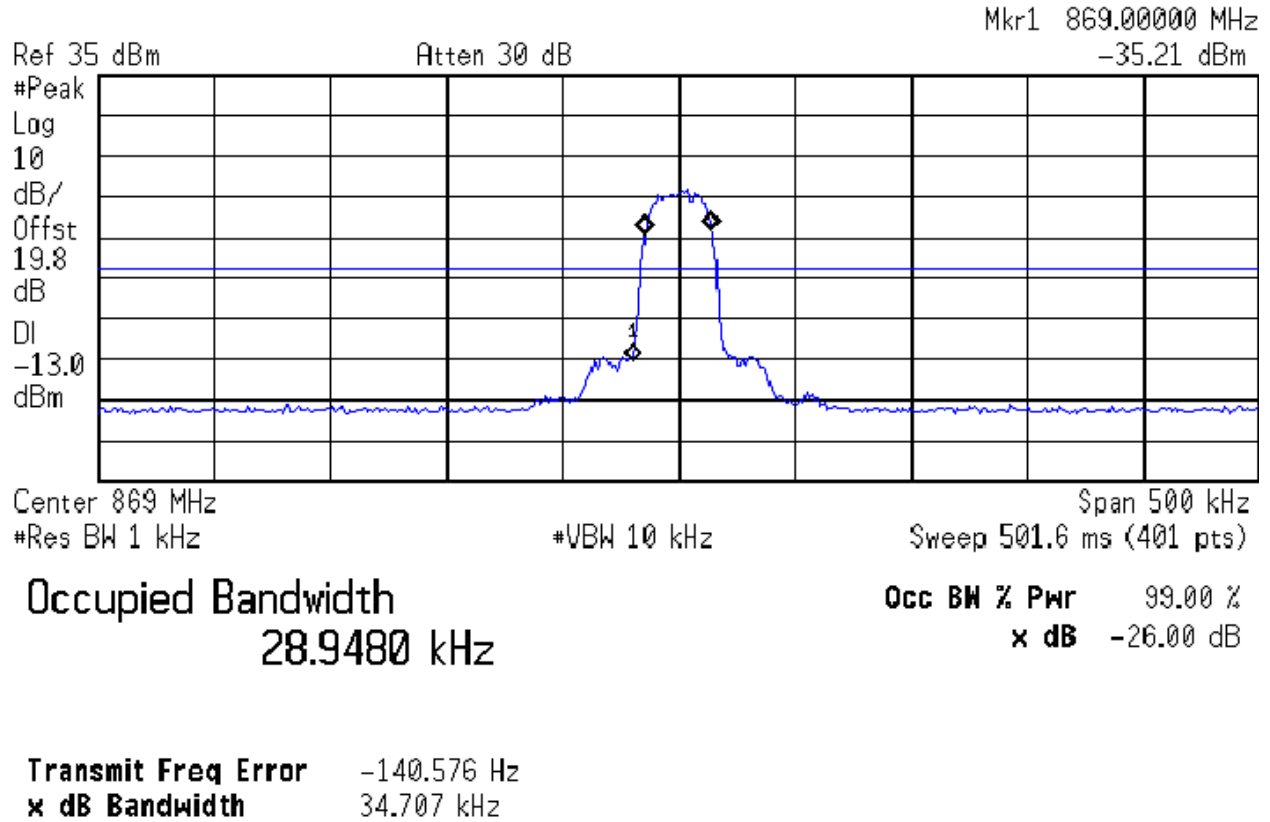



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink TDMA 869.020 MHz - Input			

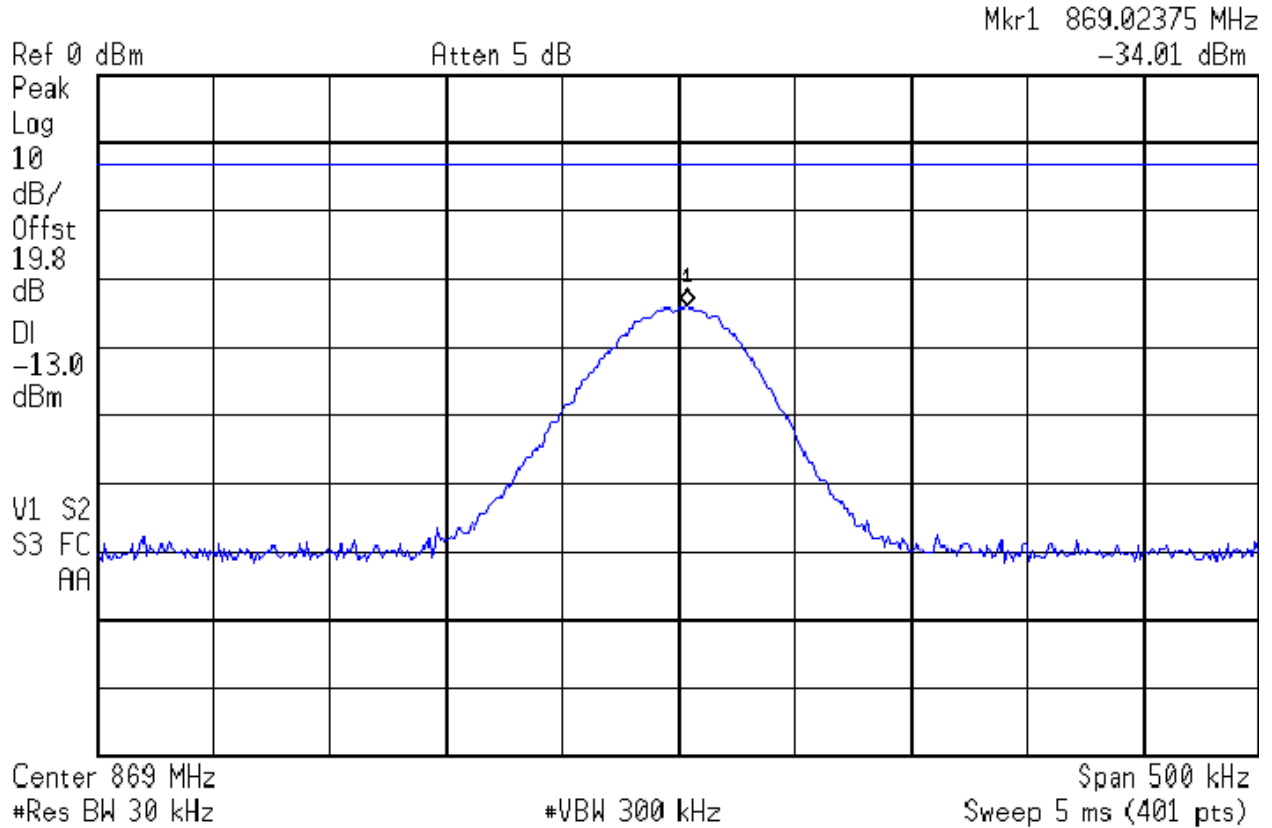



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.	Model Number: IVWA819			
Description: RF amplifier	Downlink TDMA 869.020 MHz - Output			

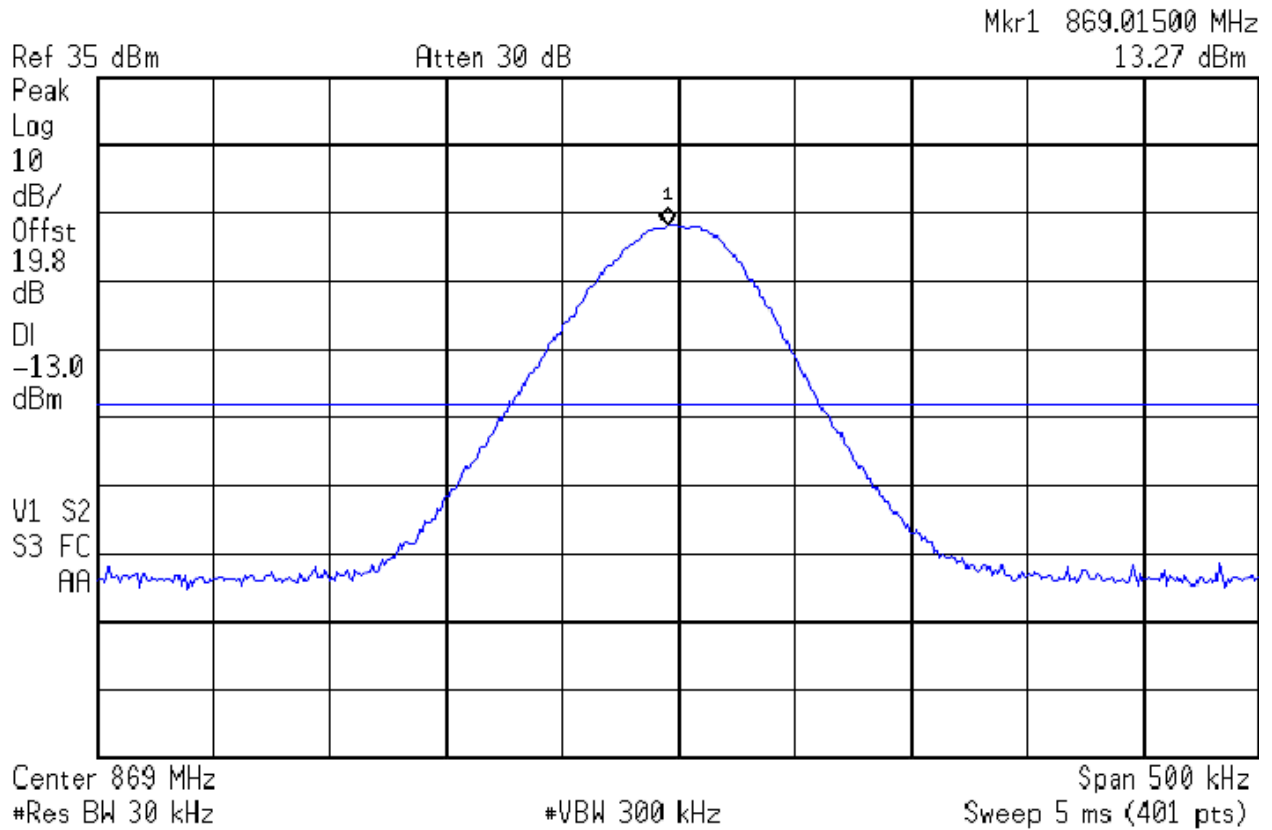

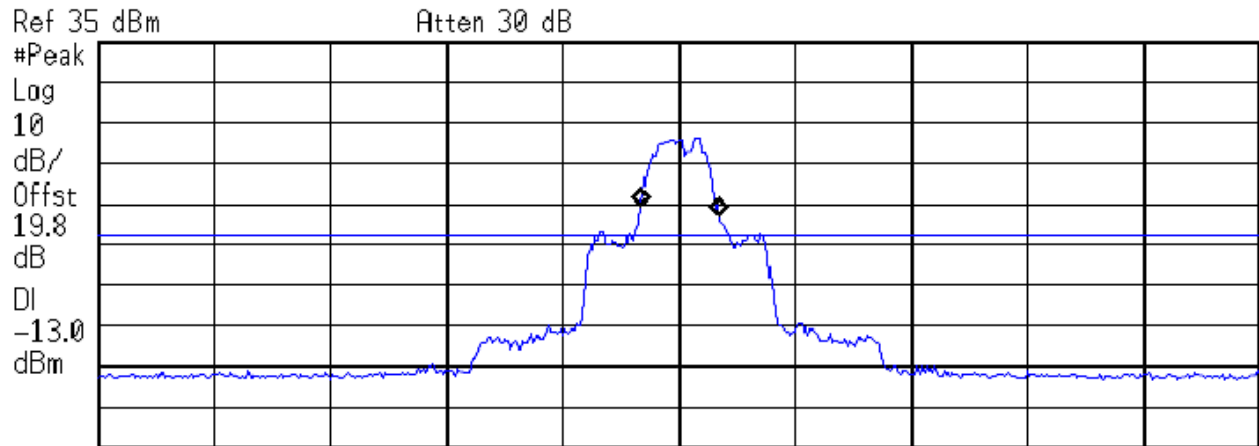


FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>		
	DNB Job Number:	68119	Date:	15 Aug 2006	
	Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
	Model Number:	IVWA819			
	Description:	RF amplifier			
	Downlink TDMA 881.5 MHz				



Center 881.5 MHz Span 500 kHz  
 #Res BW 1 kHz #VBW 10 kHz Sweep 501.6 ms (401 pts)


**Occupied Bandwidth**  
33.6556 kHz

**Occ BW % Pwr** 99.00 %  
**x dB** -26.00 dB

**Transmit Freq Error** 311.294 Hz  
**x dB Bandwidth** 74.476 kHz



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 881.5 MHz - Input				

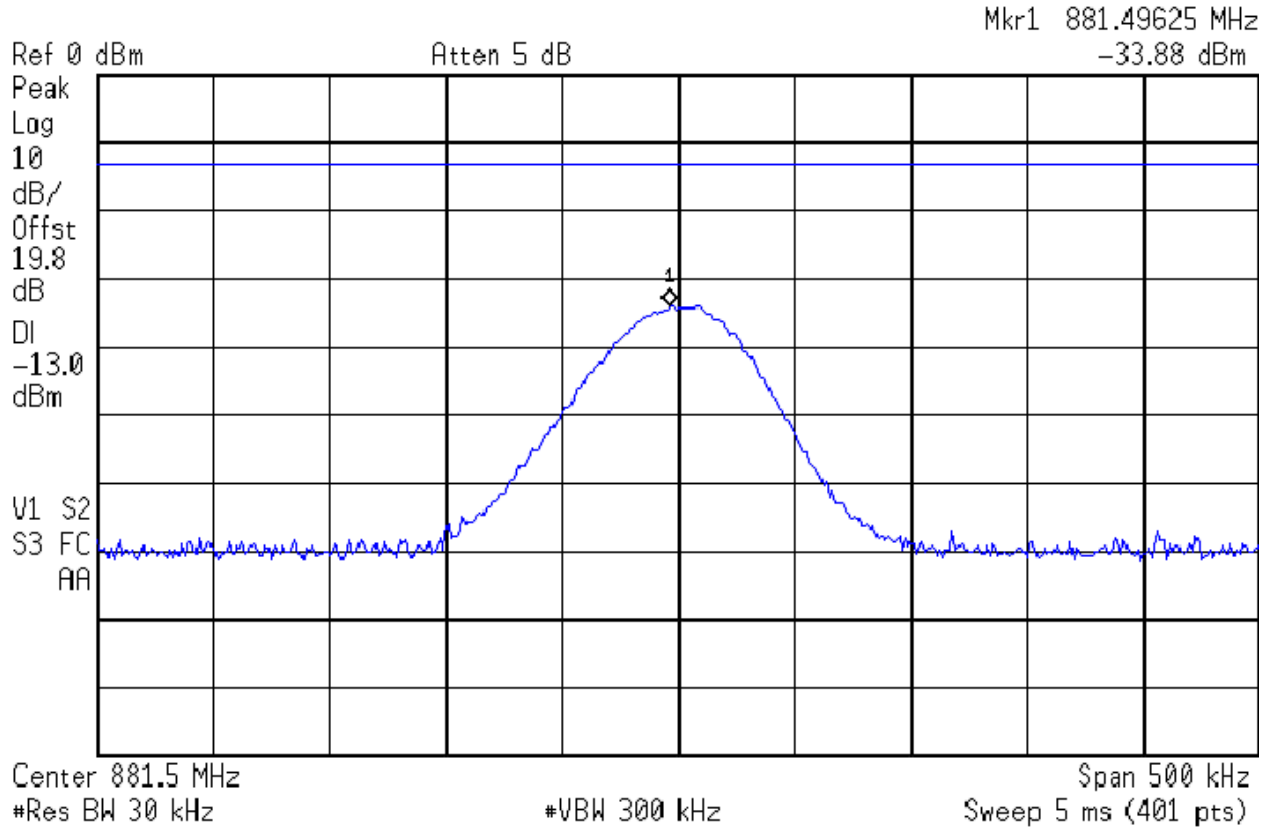







FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink TDMA 893.980 MHz - Input			

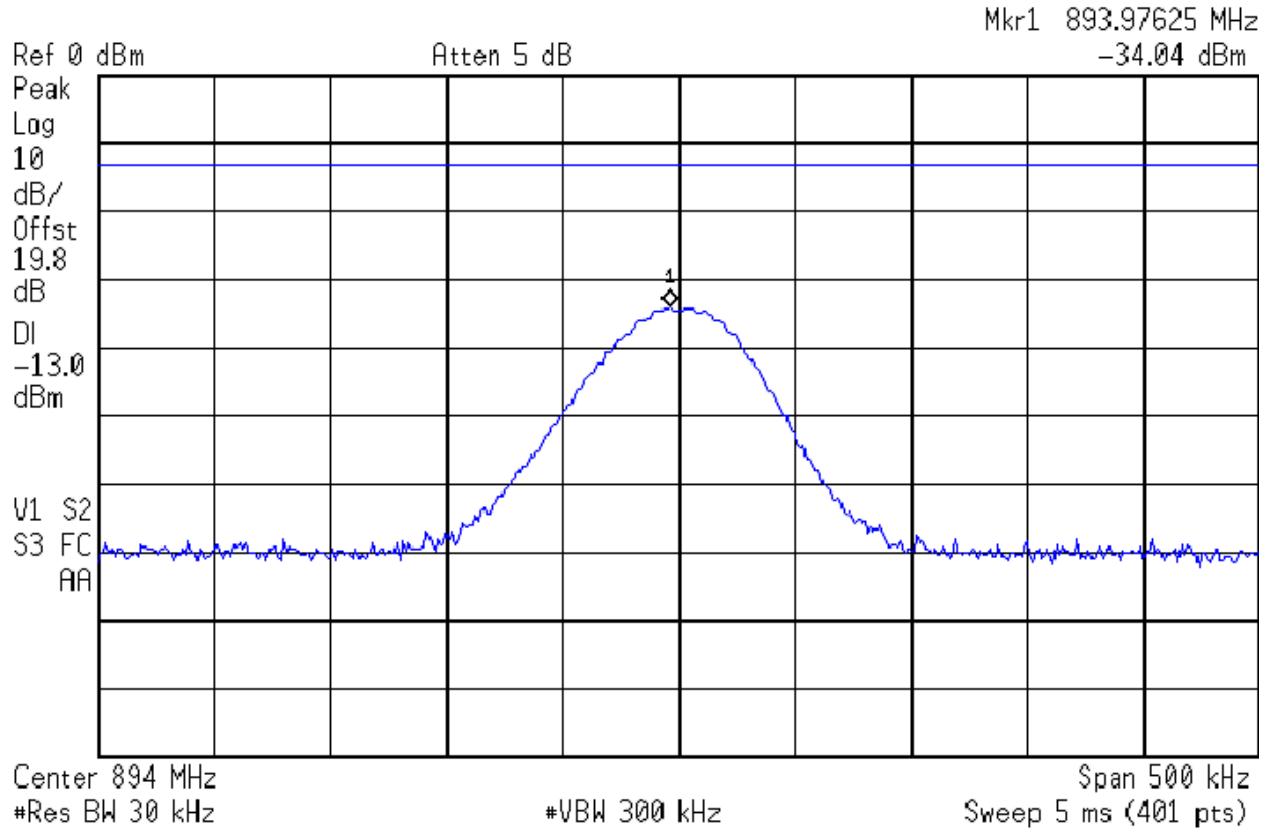







FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 1930.020 MHz - Input				

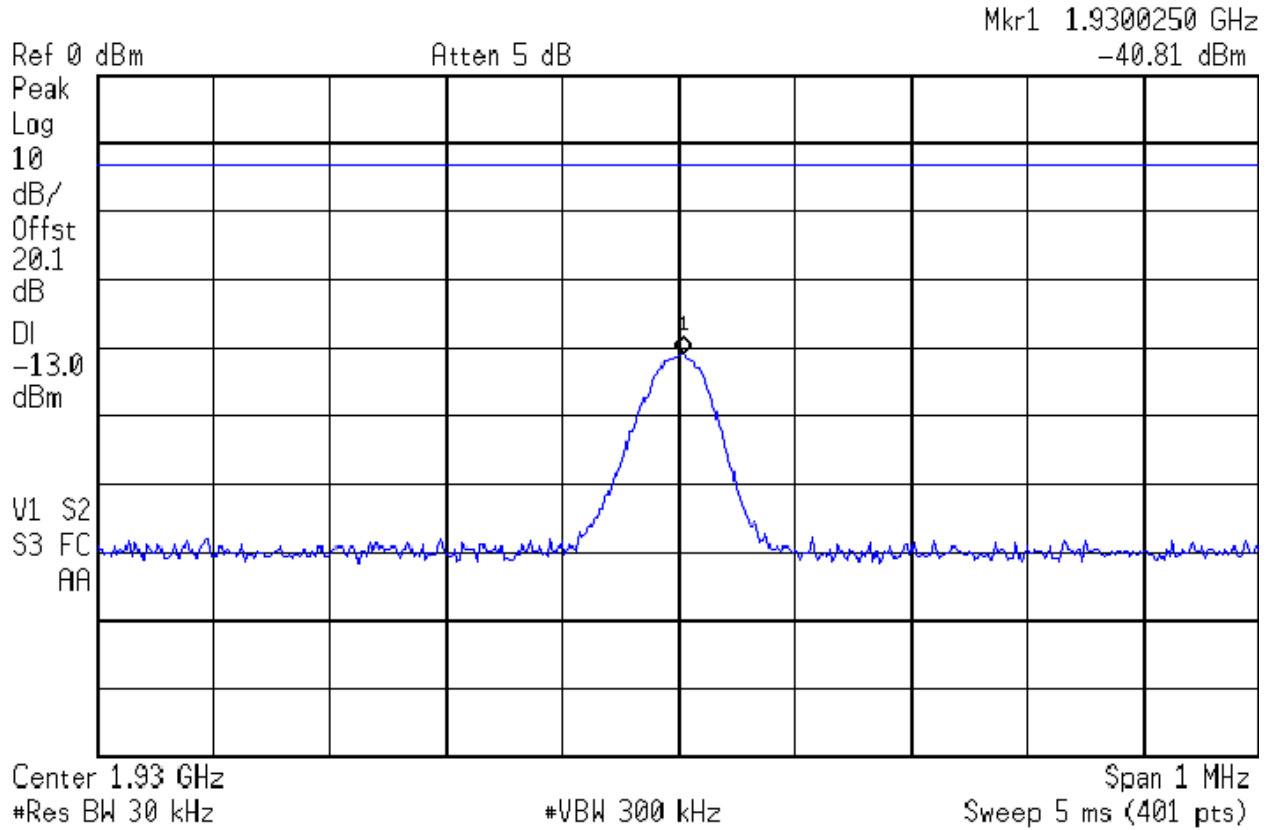

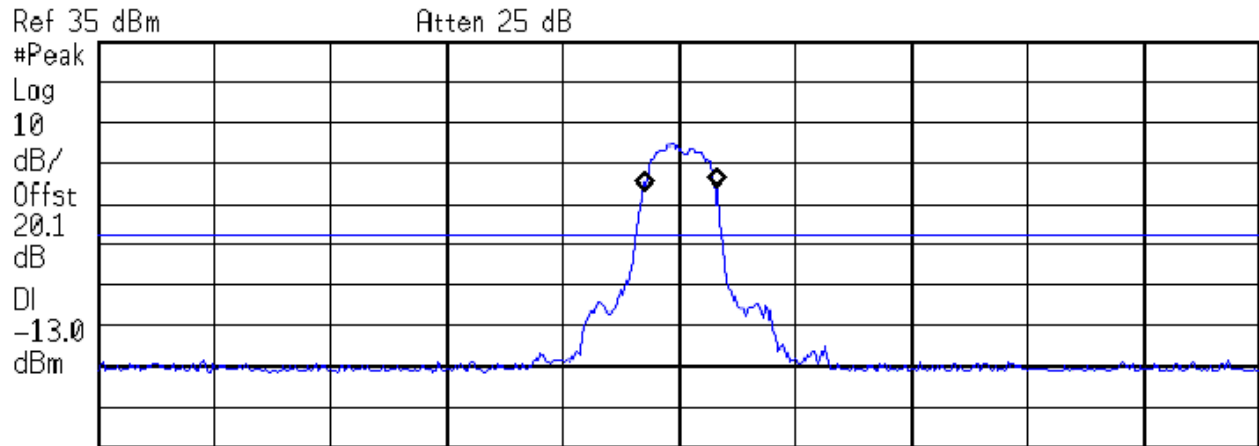






FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 1960 MHz				




Center 1.96 GHz      Span 500 kHz  
 Res BW 3 kHz      VBW 30 kHz      Sweep 55.74 ms (401 pts)

**Occupied Bandwidth**  
 31.2094 kHz

**Occ BW % Pwr**      99.00 %  
**x dB**                -26.00 dB

**Transmit Freq Error**      263.949 Hz  
**x dB Bandwidth**            38.788 kHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink TDMA 1960 MHz - Input			

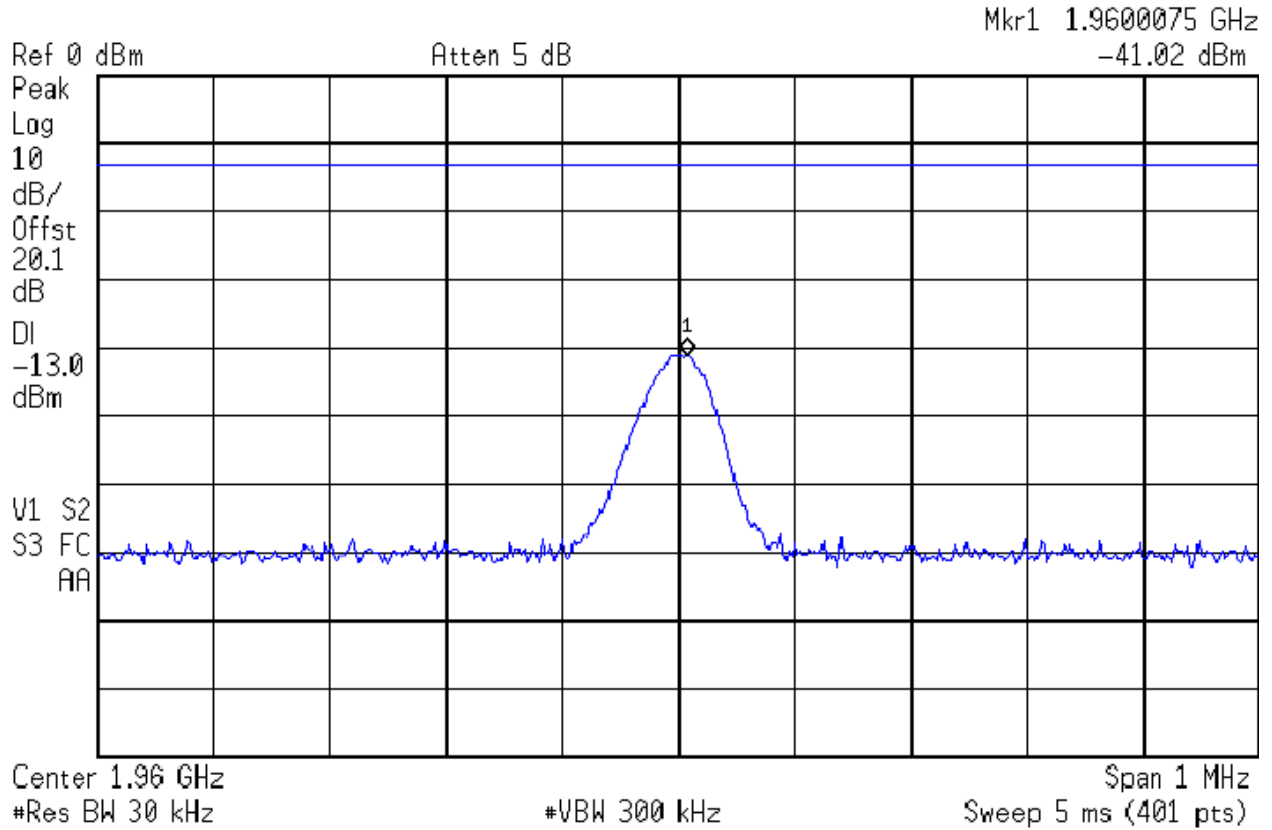



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
DNB Job Number:	68119		Date:	15 Aug 2006
Customer:	Janizary Holdings, Inc.			
Model Number:	IVWA819			
Description:	RF amplifier			
	Downlink TDMA 1960 MHz - Output			
			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	

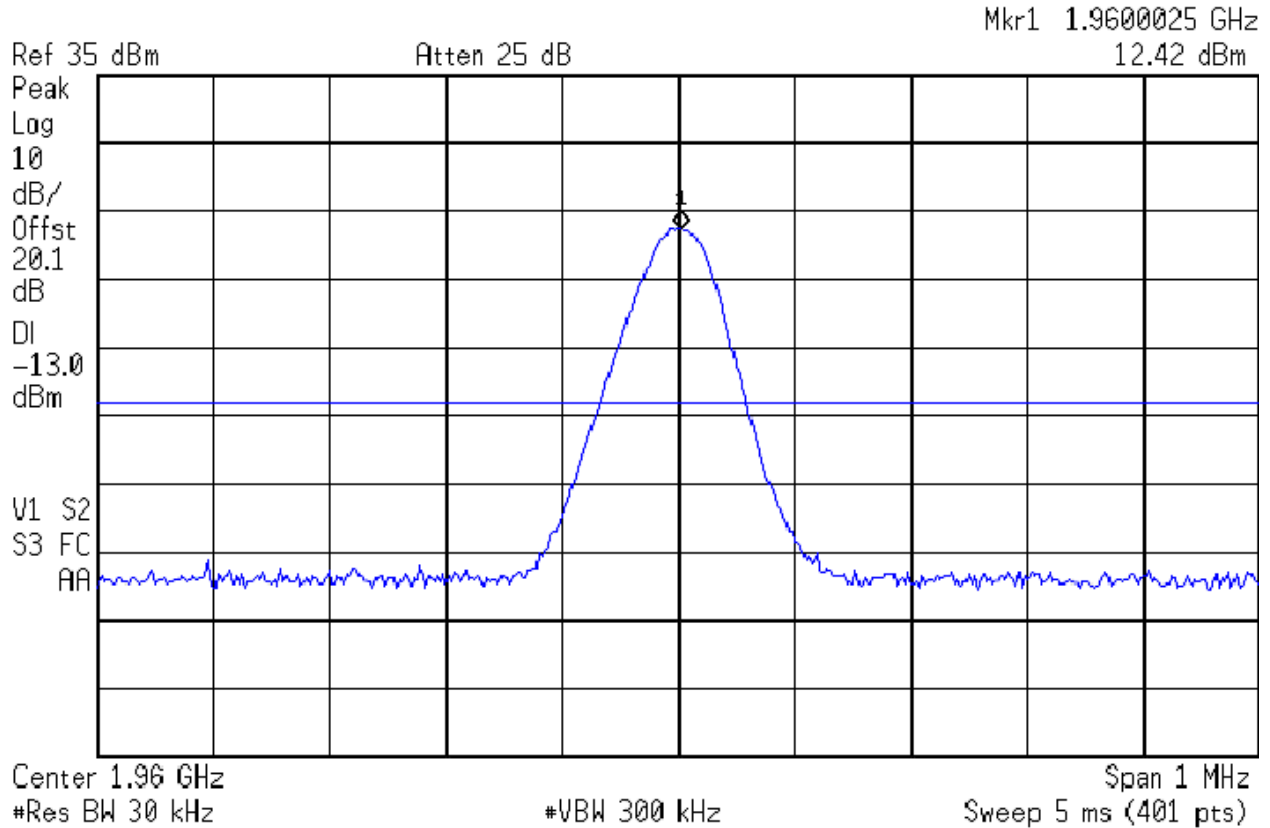





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 1989.980 MHz - Input				

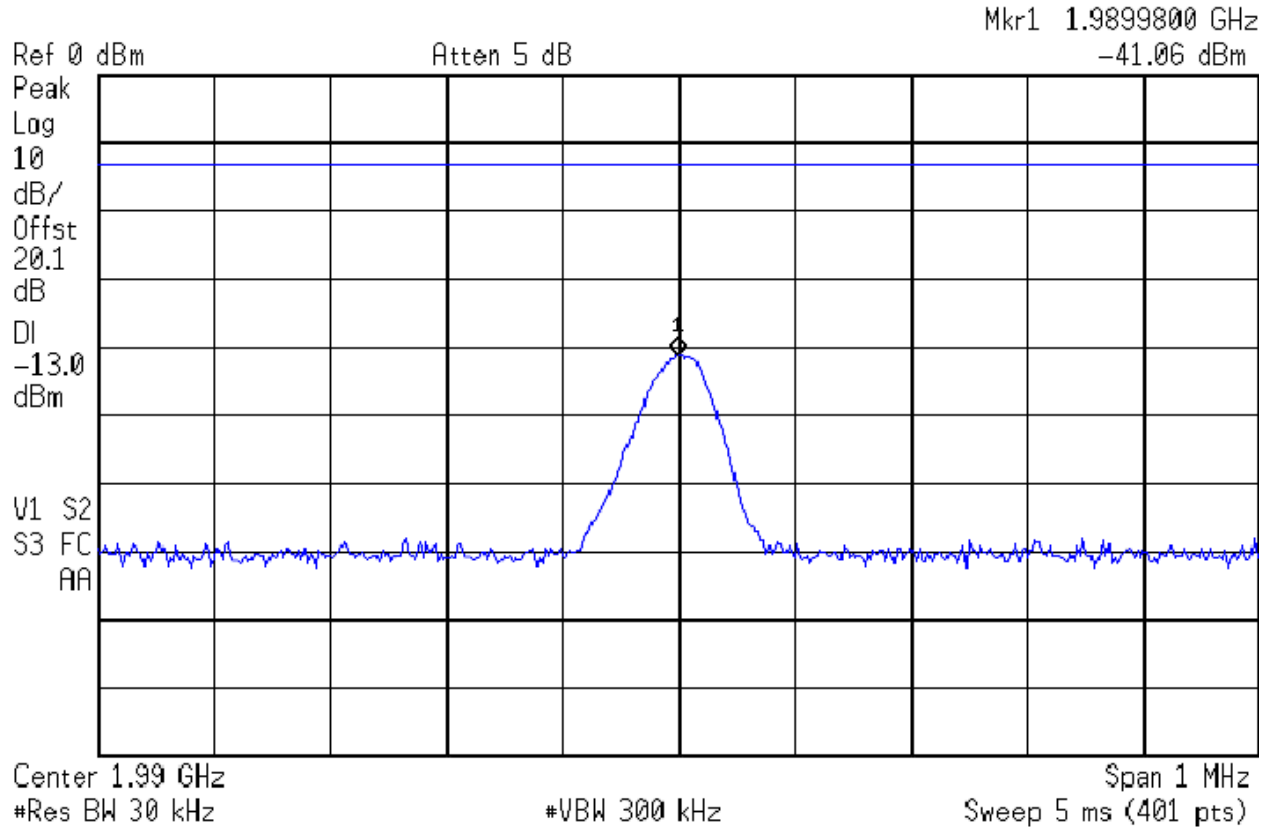



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number:	68119	Date:	15 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Downlink TDMA 1989.980 MHz - Output			

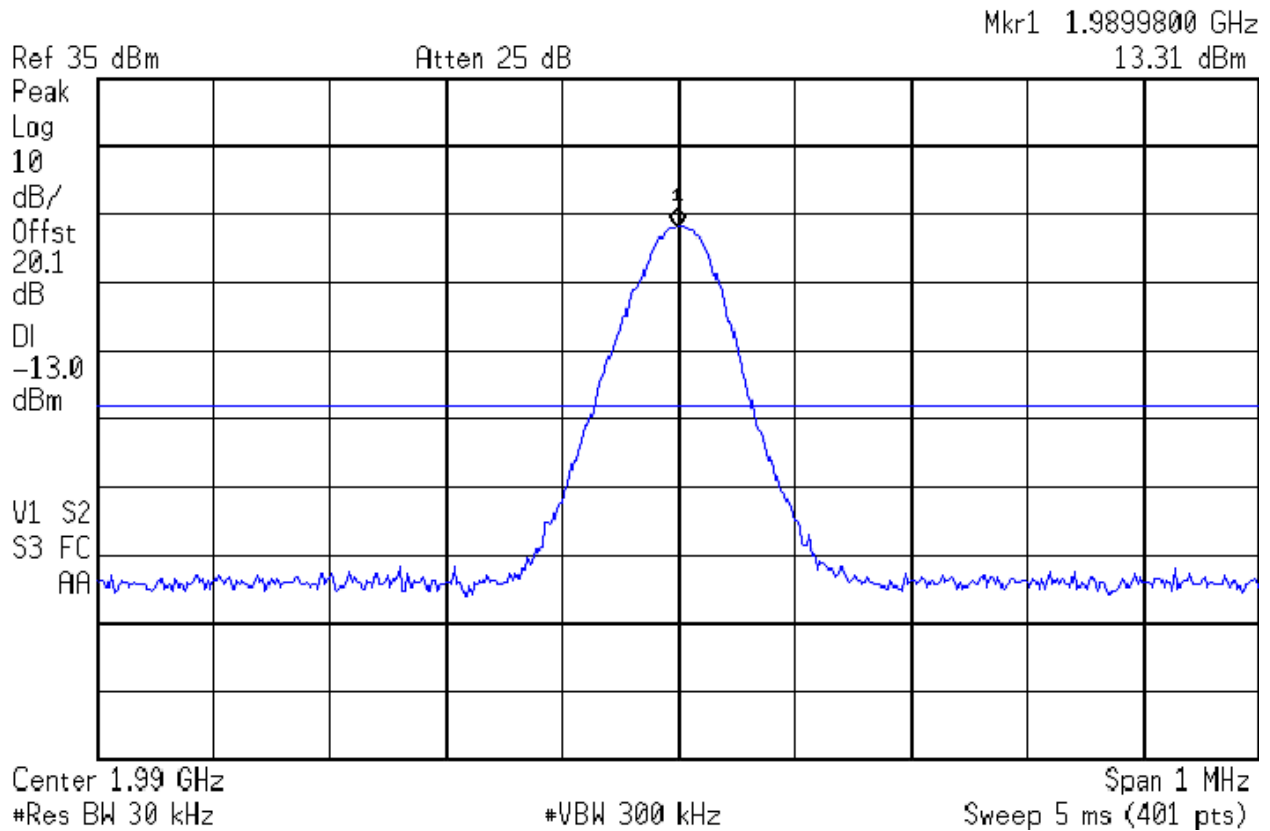

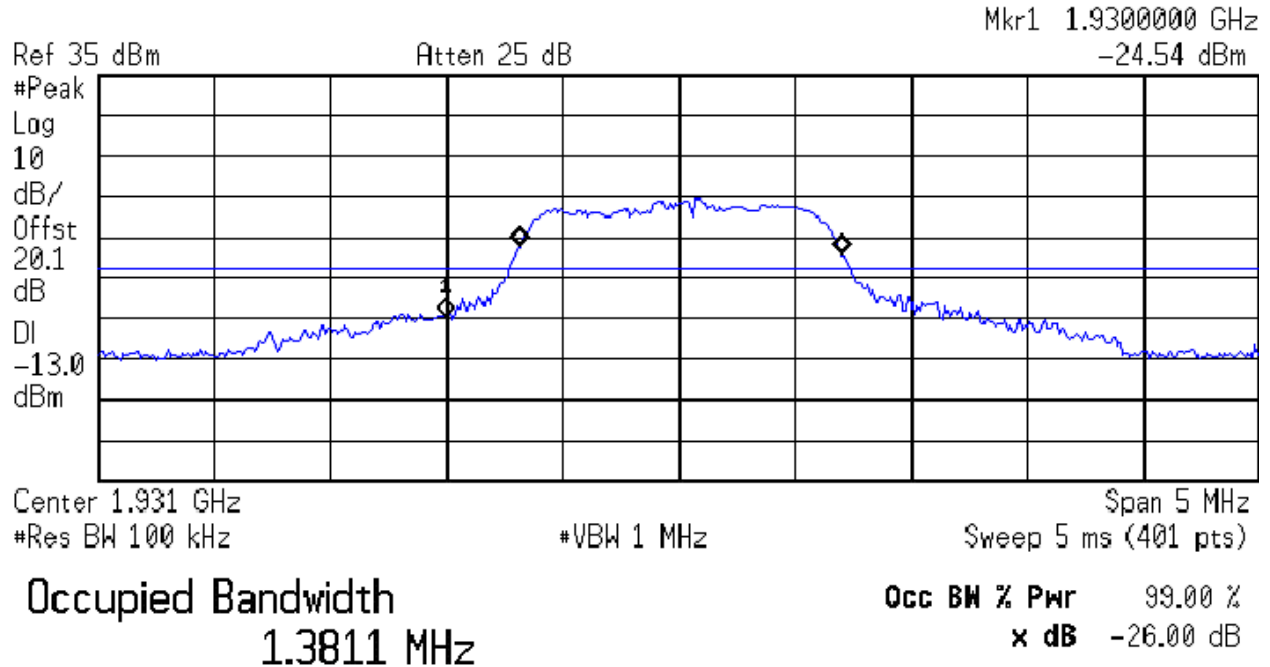



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink CDMA 1931 MHz				



**Transmit Freq Error**                      7.137 kHz  
**x dB Bandwidth**                              2.049 MHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink CDMA 1931 MHz - Input				

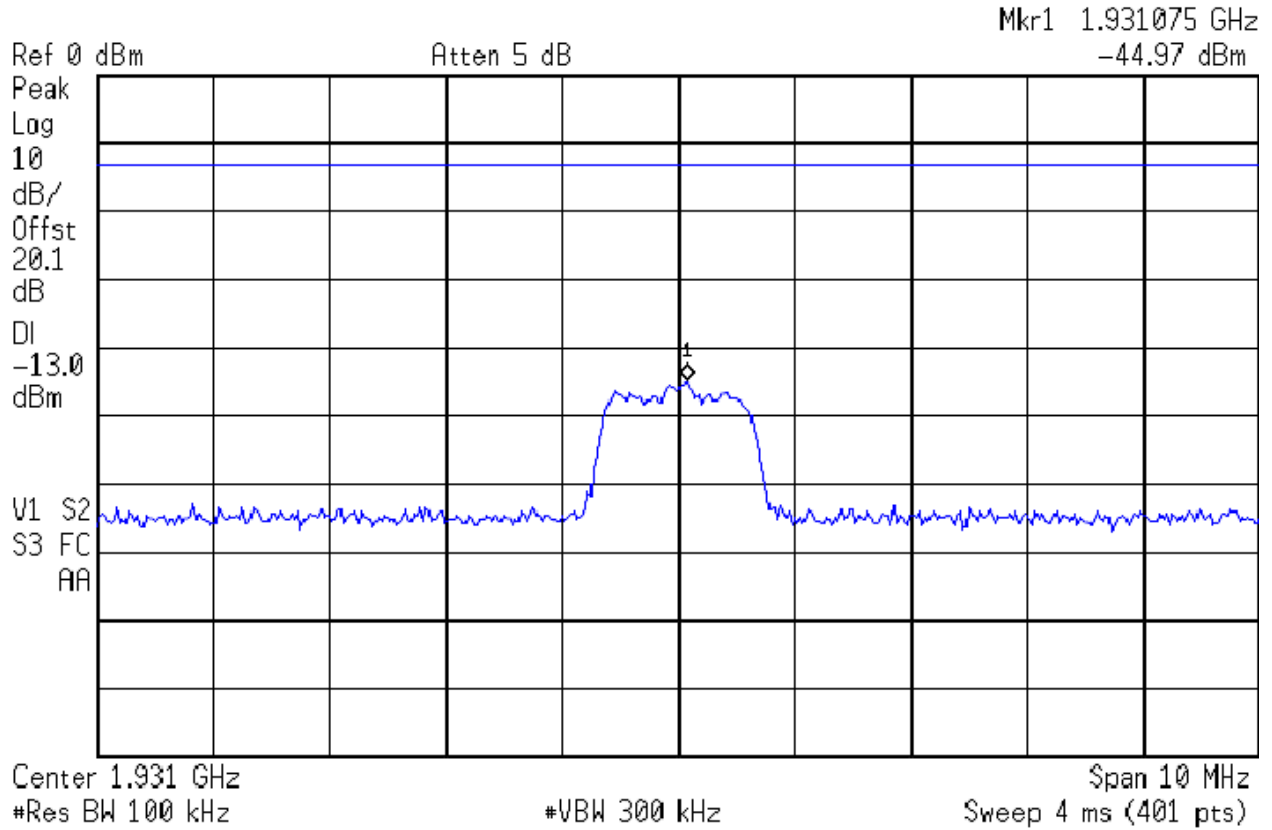

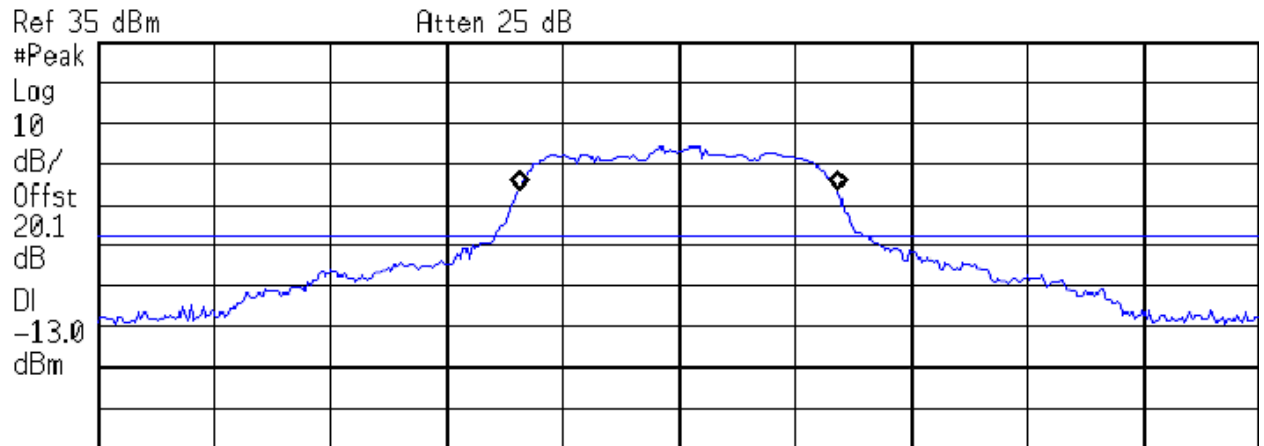






FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Occupied Bandwidth</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink CDMA 1960 MHz				




Ref 35 dBm                      Atten 25 dB  
 #Peak  
 Log  
 10  
 dB/  
 Offst  
 20.1  
 dB  
 DI  
 -13.0  
 dBm  
 Center 1.96 GHz                      Span 5 MHz  
 #Res BW 100 kHz                      #VBW 1 MHz                      Sweep 5 ms (401 pts)

**Occupied Bandwidth**  
**1.3738 MHz**

**Occ BW % Pwr**    99.00 %  
**x dB**                -26.00 dB

**Transmit Freq Error**    -3.766 kHz  
**x dB Bandwidth**        1.940 MHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink CDMA 1960 MHz - Input			

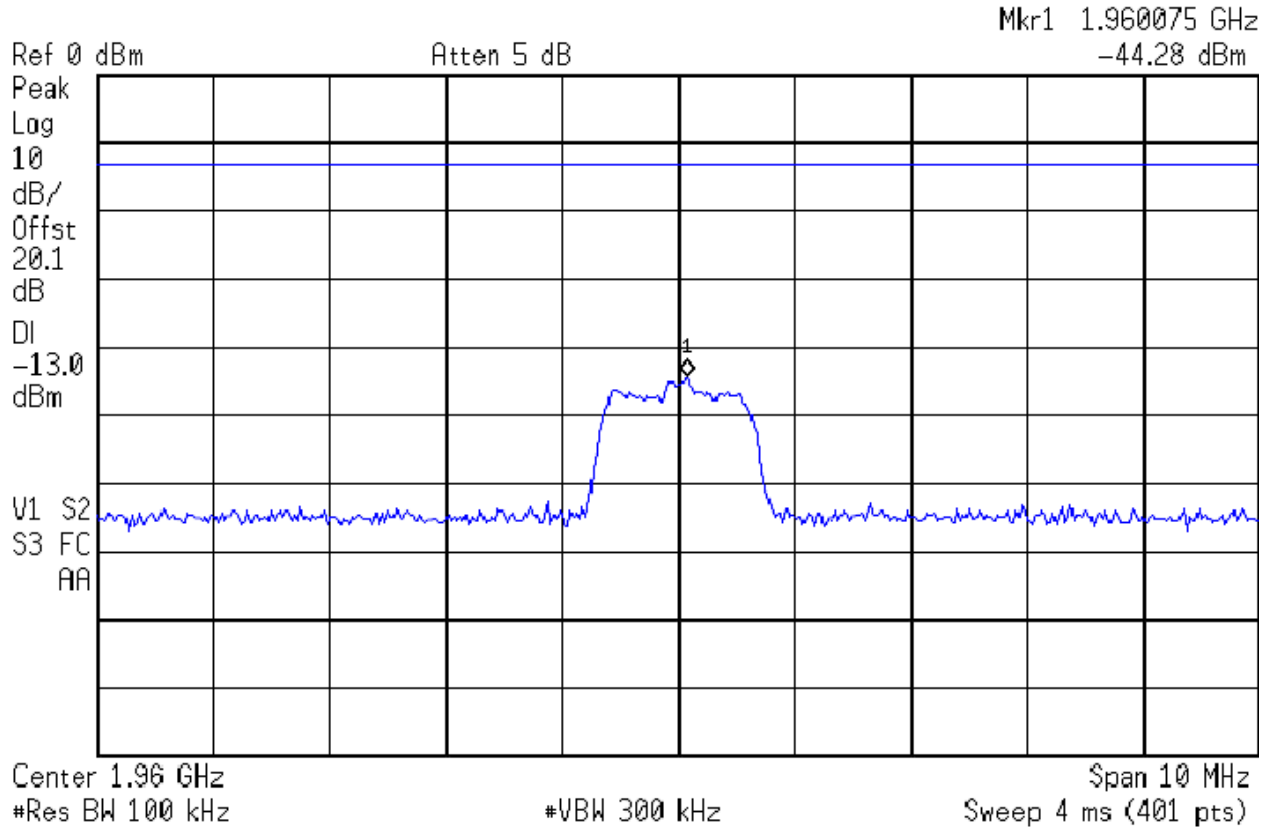

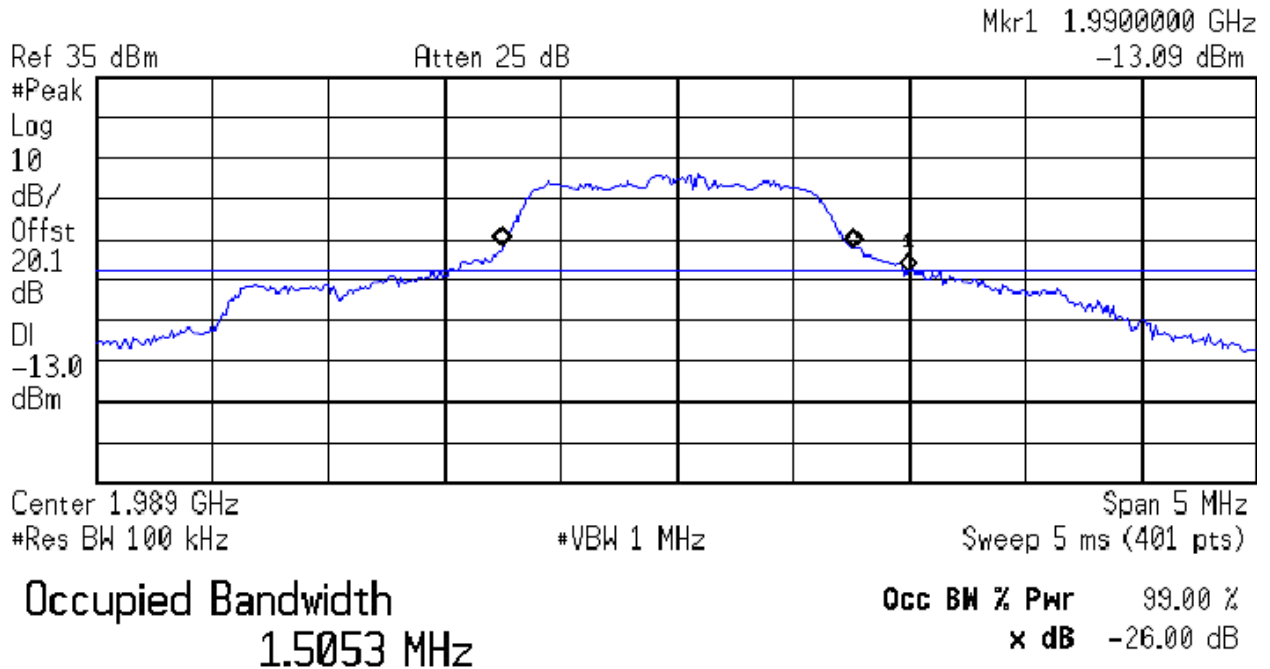





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Occupied Bandwidth</h3>	
	DNB Job Number:	68119	Date:	15 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> <input checked="" type="checkbox"/> IC RSS-131 <input checked="" type="checkbox"/> FCC Part 22 <input checked="" type="checkbox"/> FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Downlink CDMA 1989 MHz			



**Transmit Freq Error**                      6.296 kHz  
**x dB Bandwidth**                      2.540 MHz

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Modulation Characteristics</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Downlink CDMA 1989 MHz - Input			

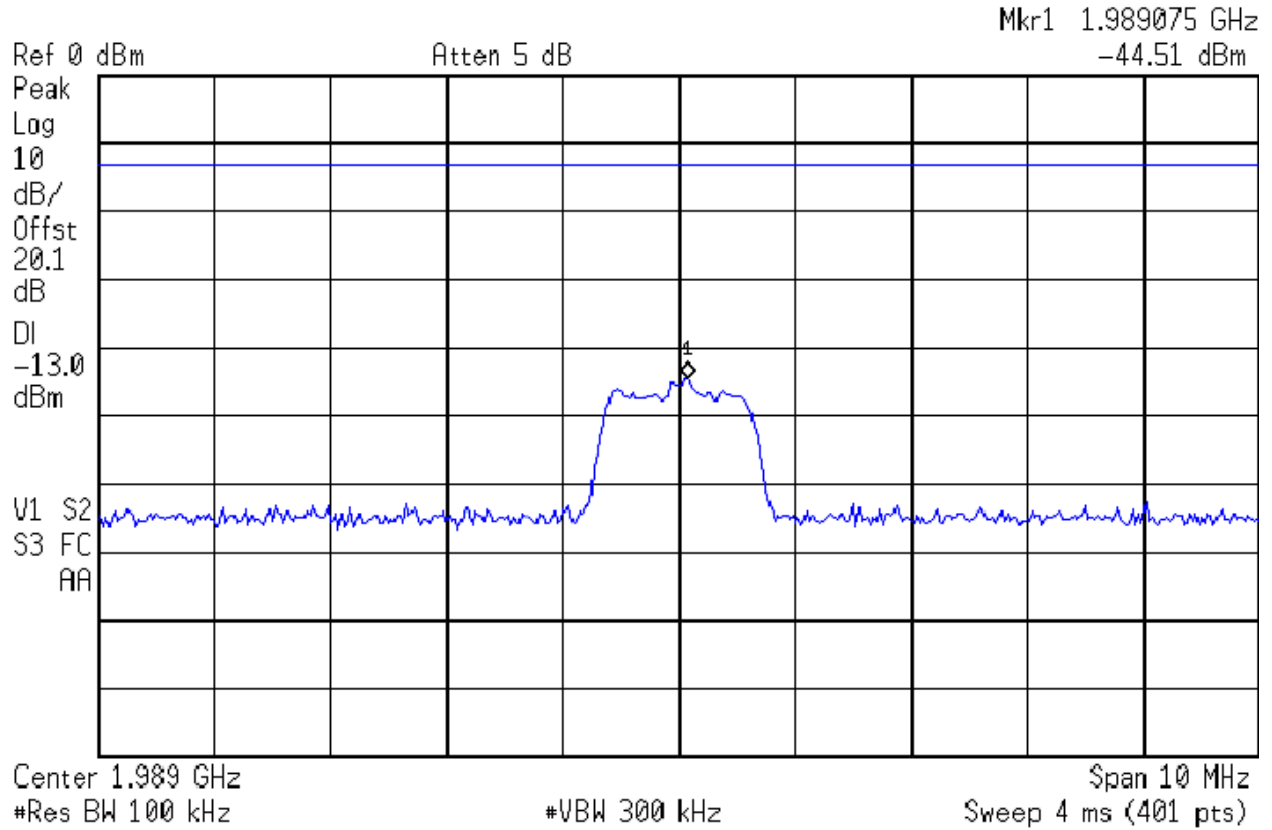





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 824 / 849 MHz				

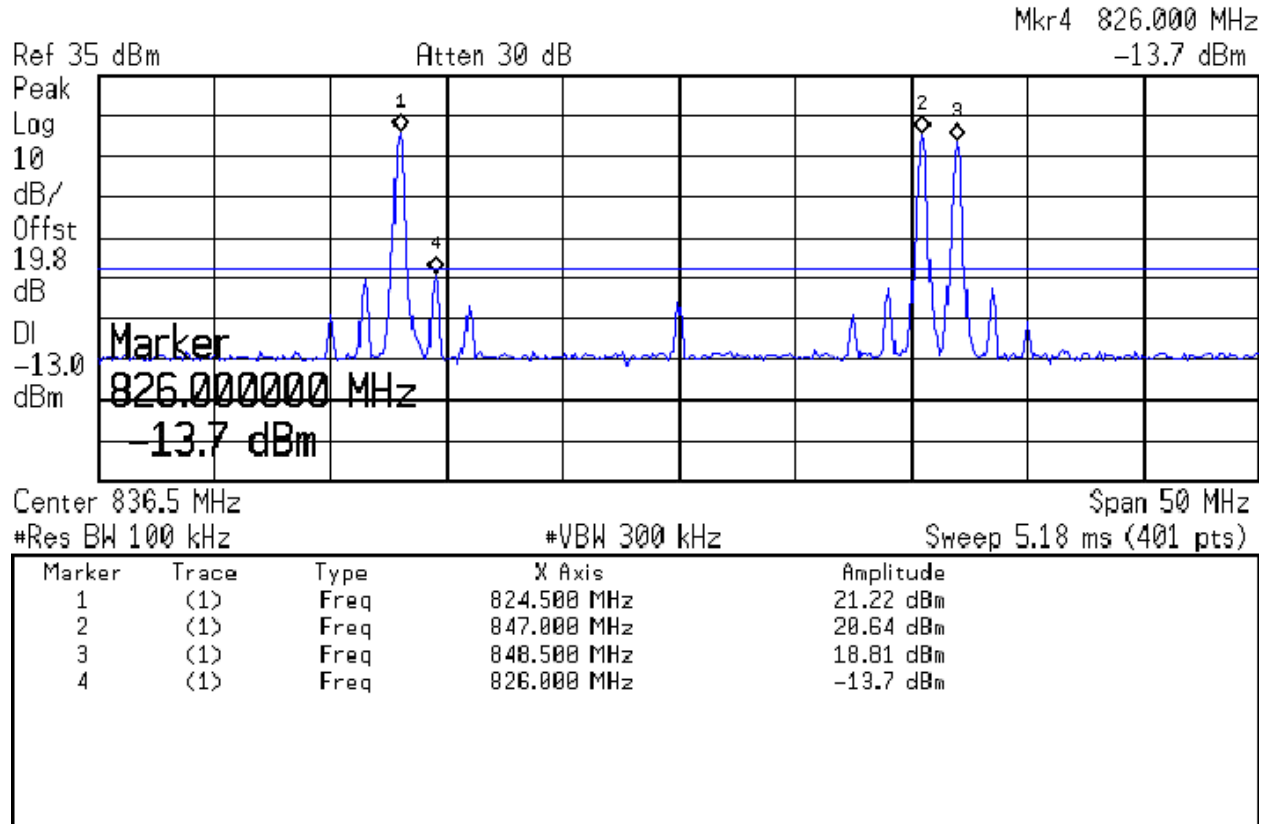





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 824 / 849 MHz				

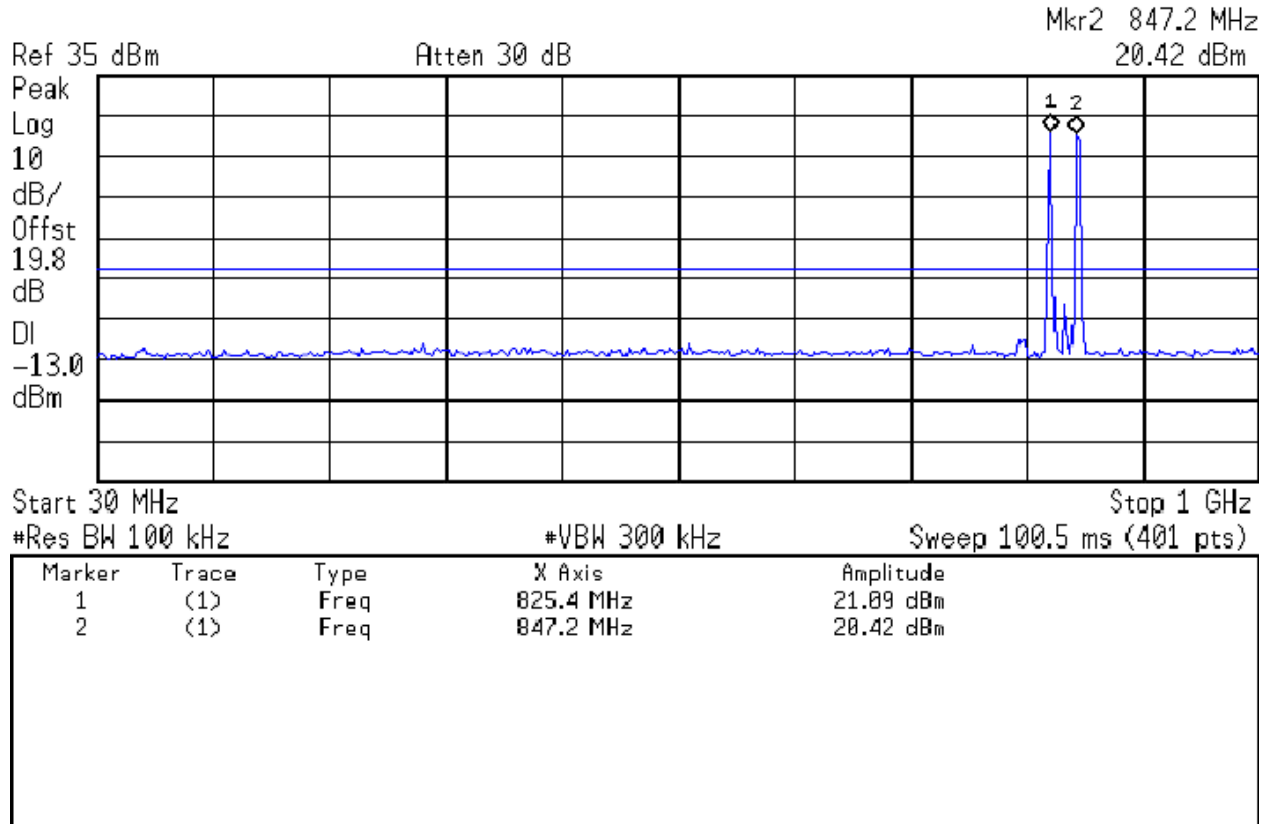



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNR Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 824 / 849 MHz				

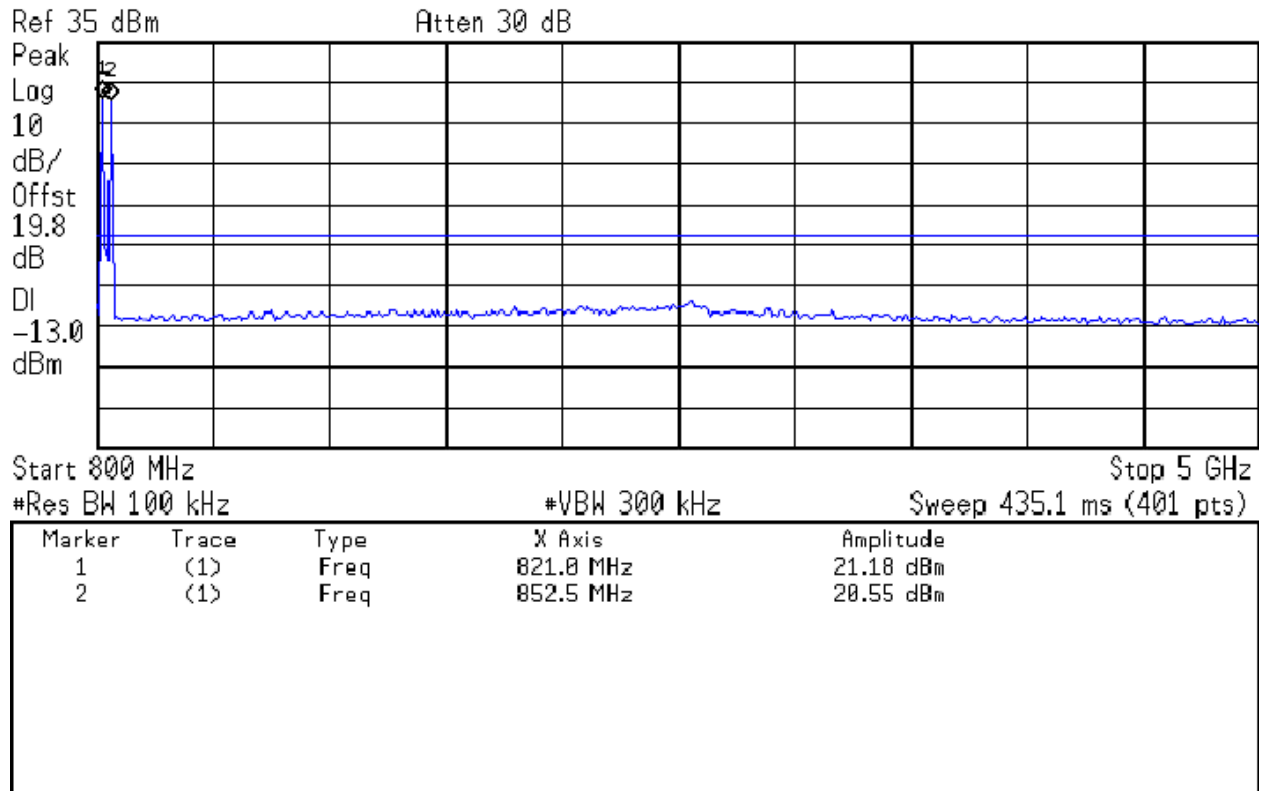



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNR Job Number:	68119	Date:	14 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Uplink			
	Signal Source - CW - Input - 824 / 849 MHz			

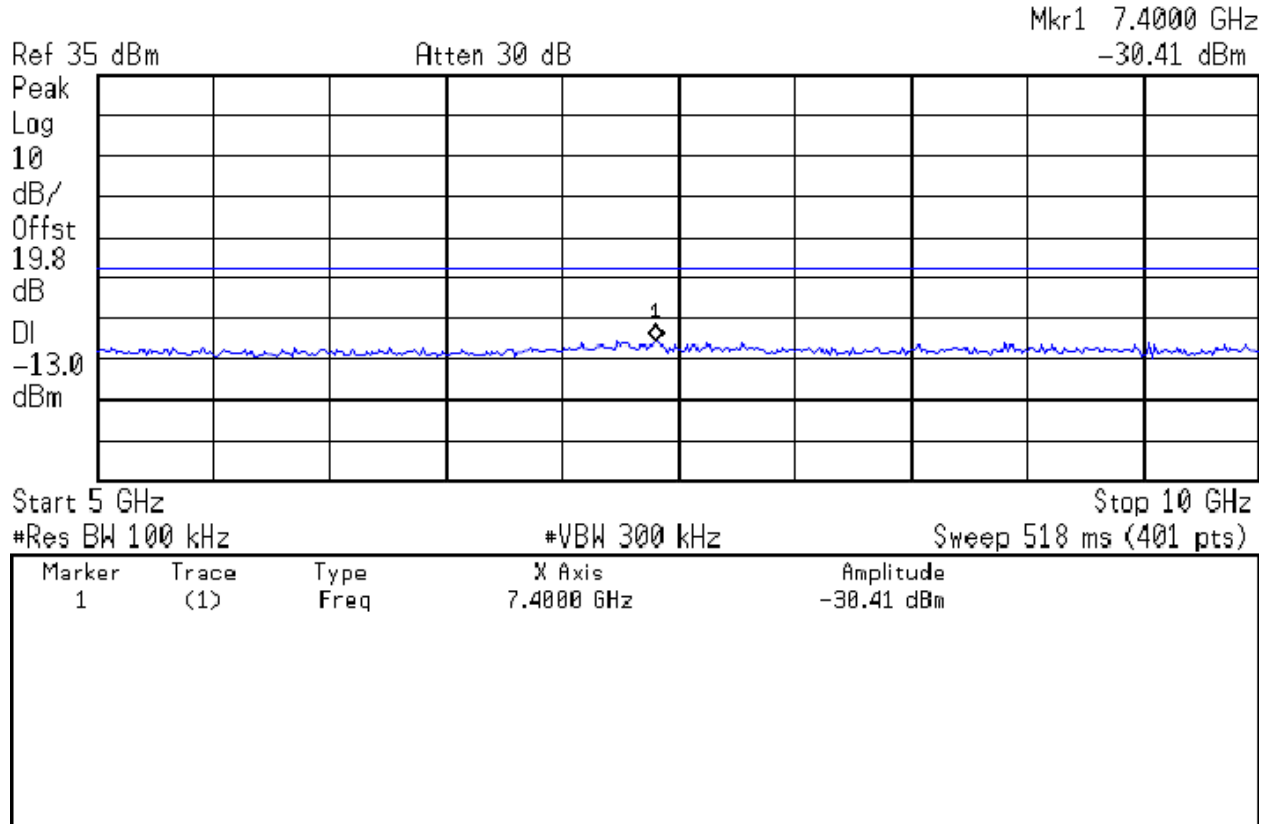



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 1850 / 1910 MHz				

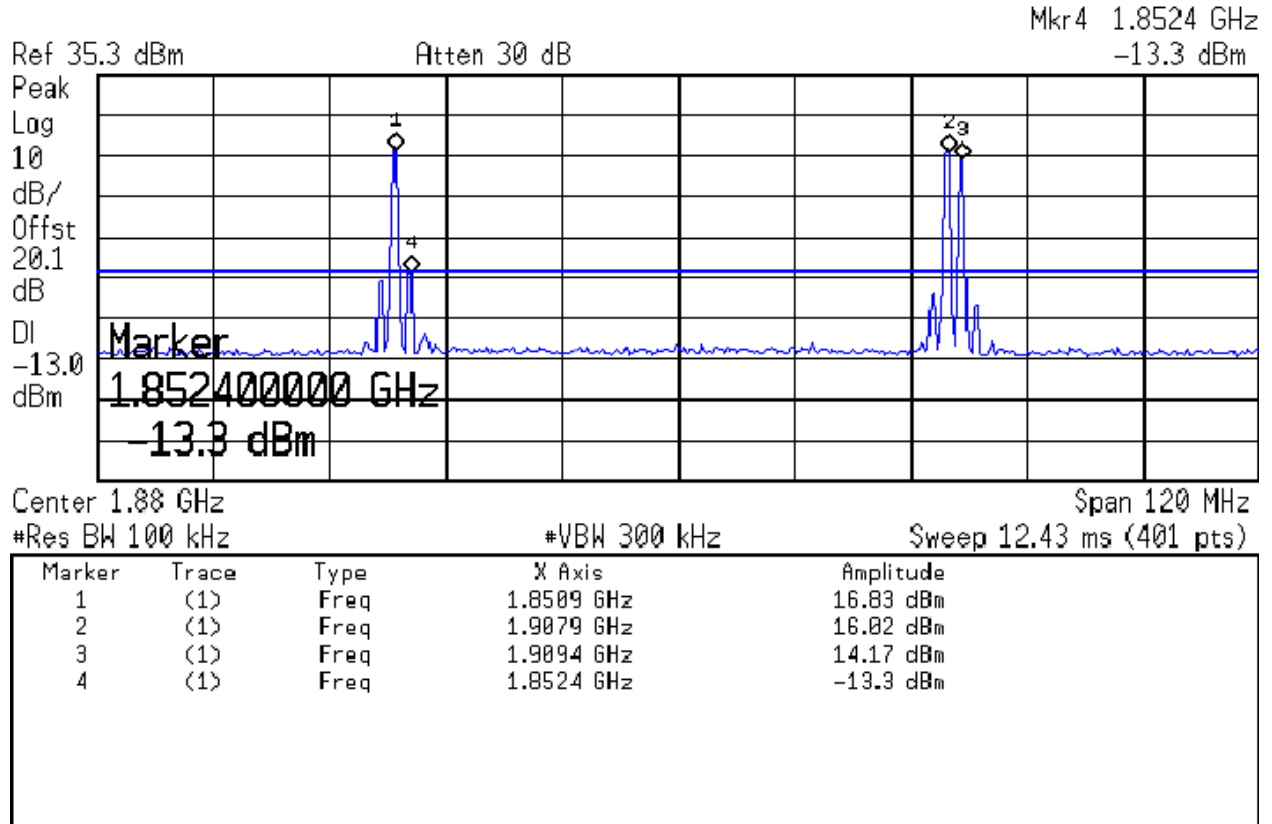



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 1850 / 1910 MHz				

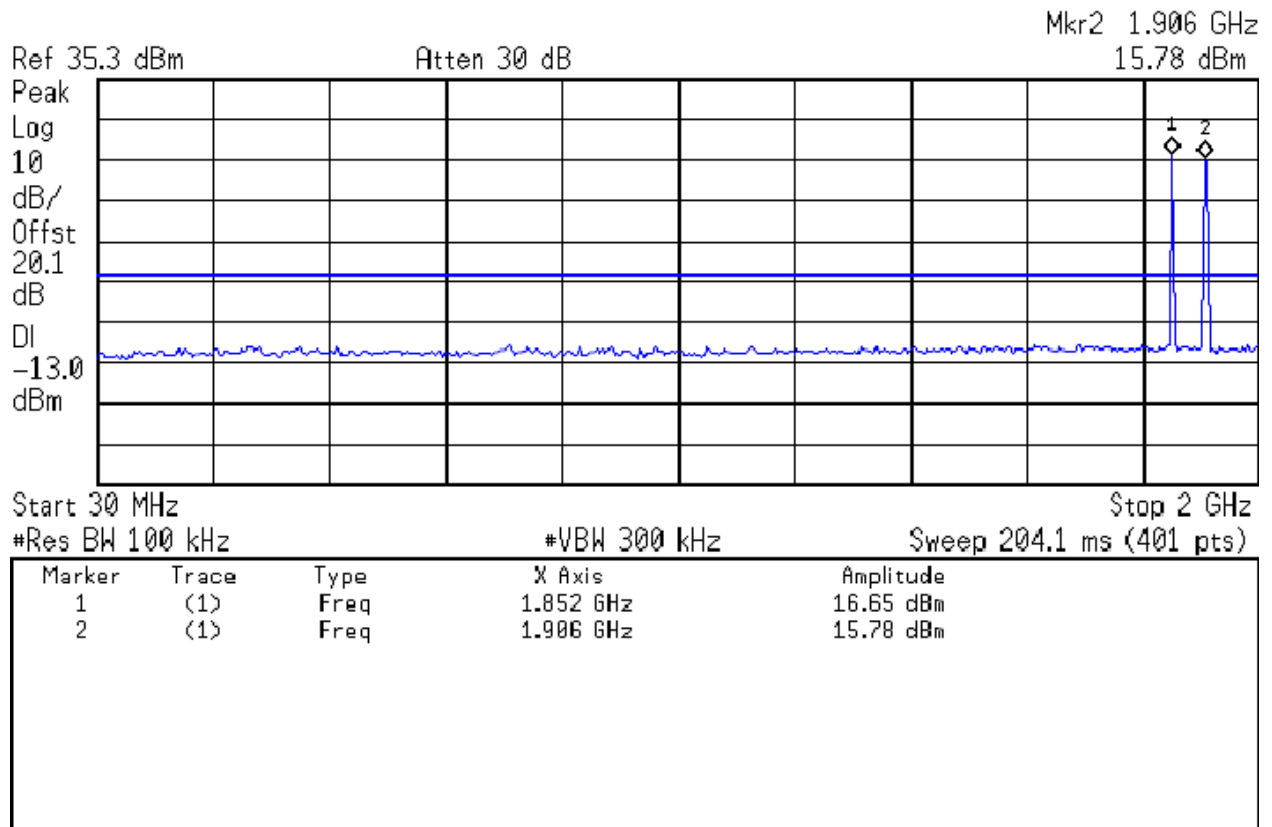



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CW - Input - 1850 / 1910 MHz				

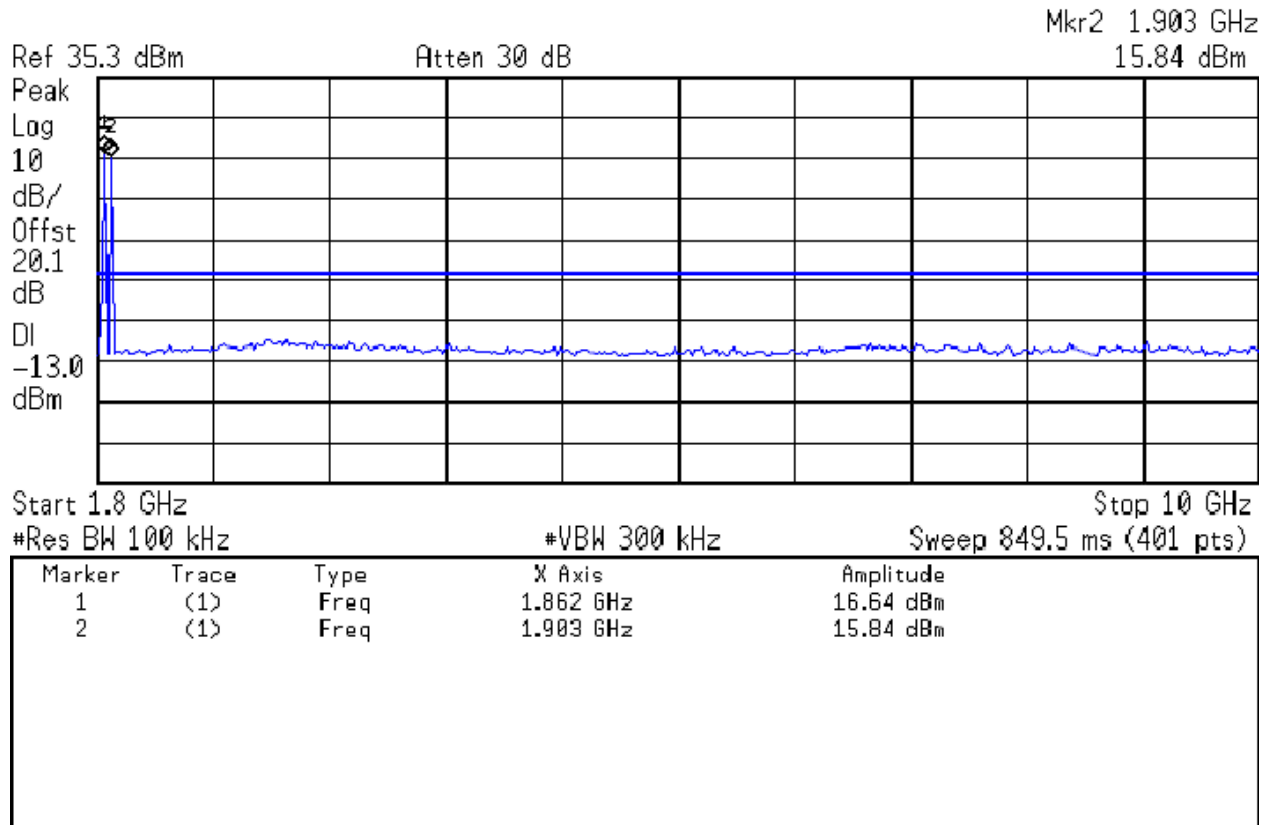



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNR Job Number:	68119	Date:	14 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Uplink			
	Signal Source - CW - Input - 1850 / 1910 MHz			

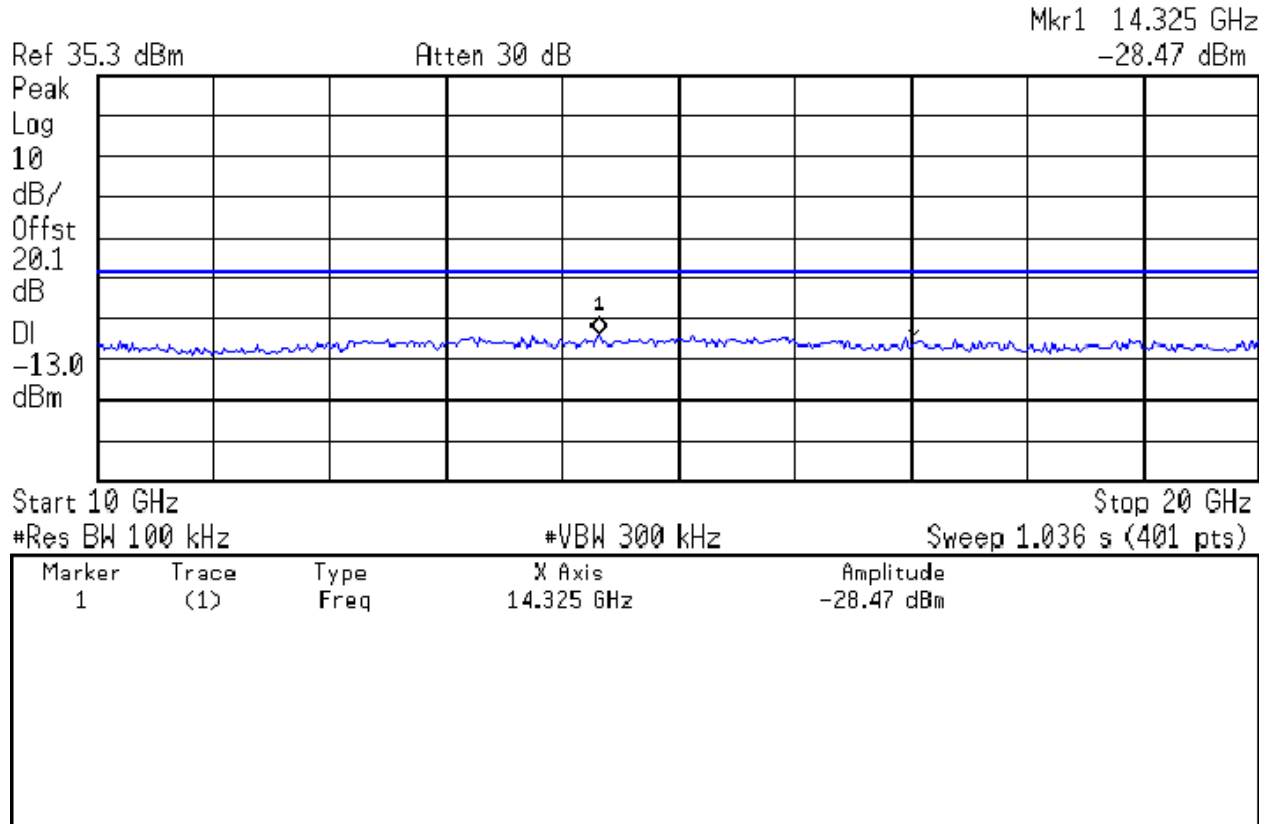



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 869 / 894 MHz				

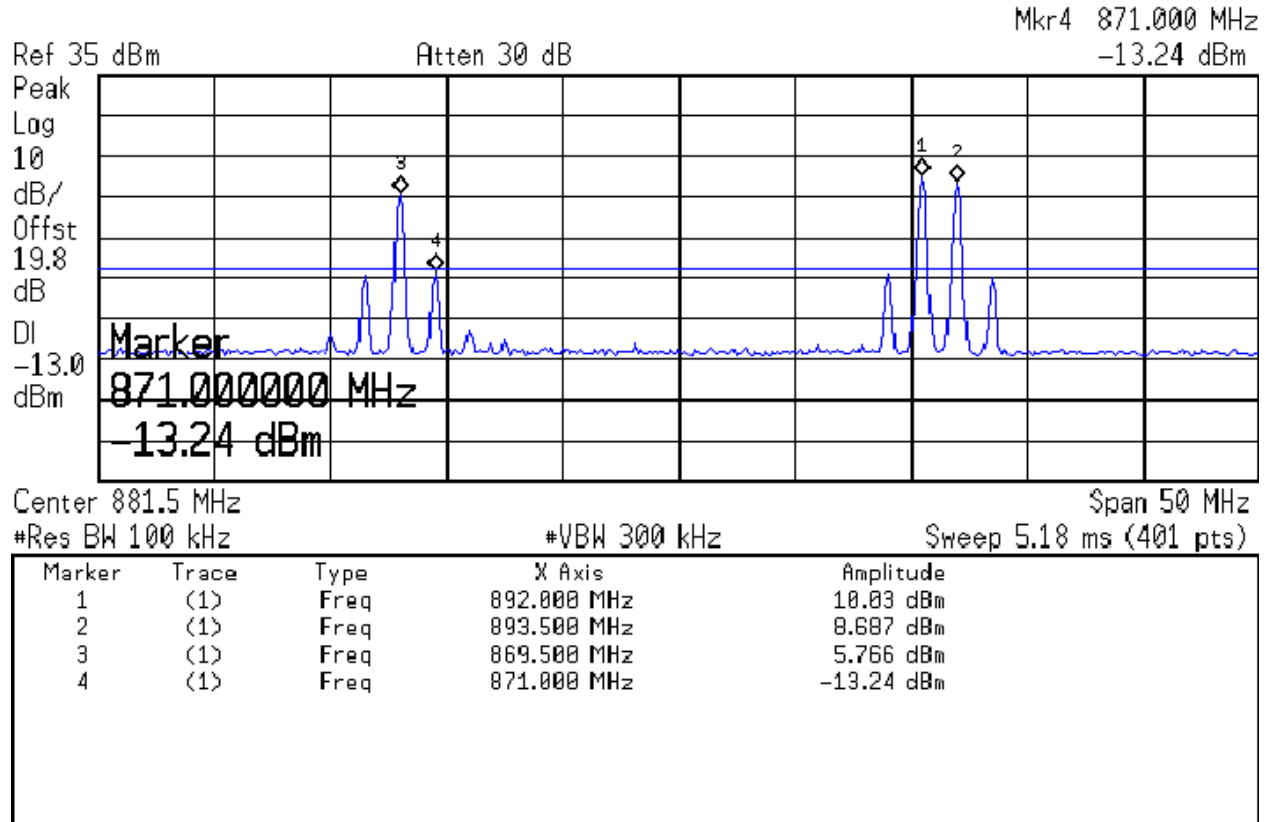





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 869 / 894 MHz				

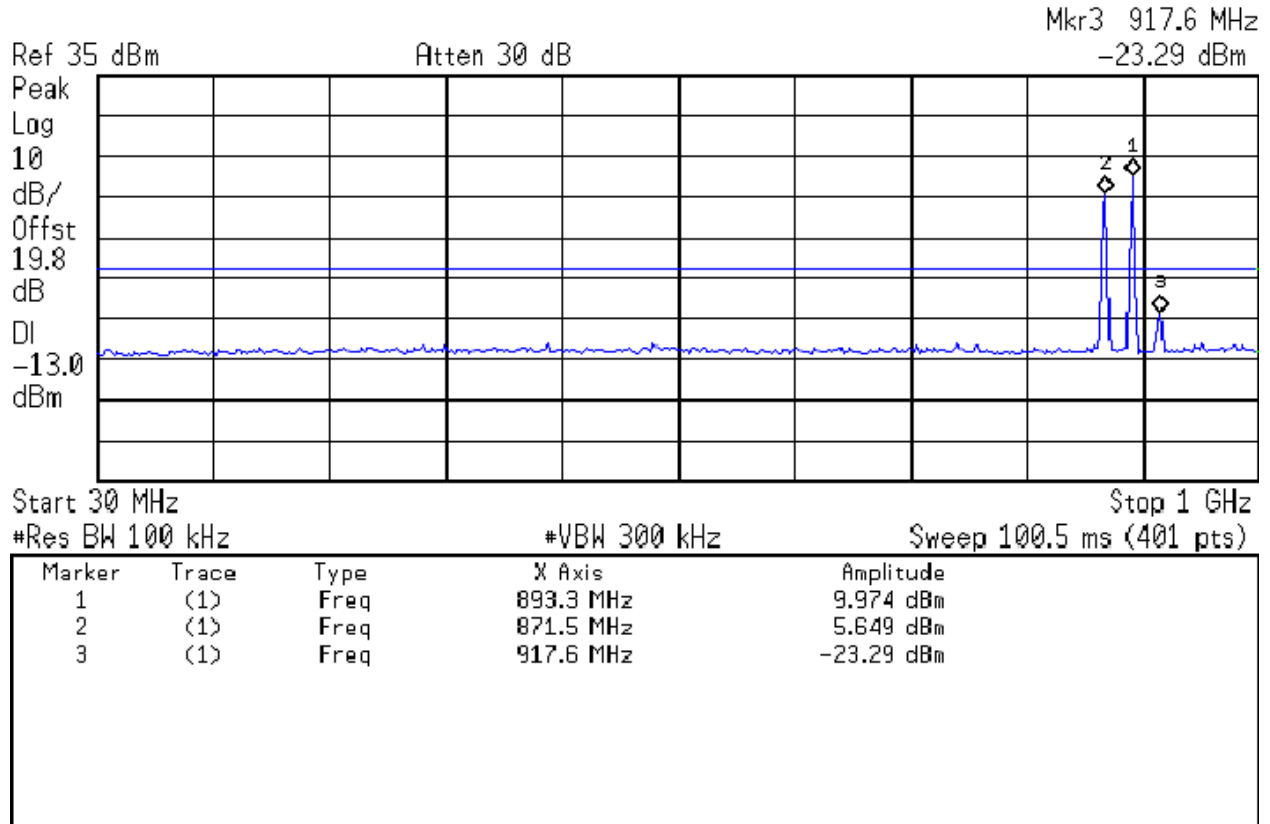



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNR Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 869 / 894 MHz				

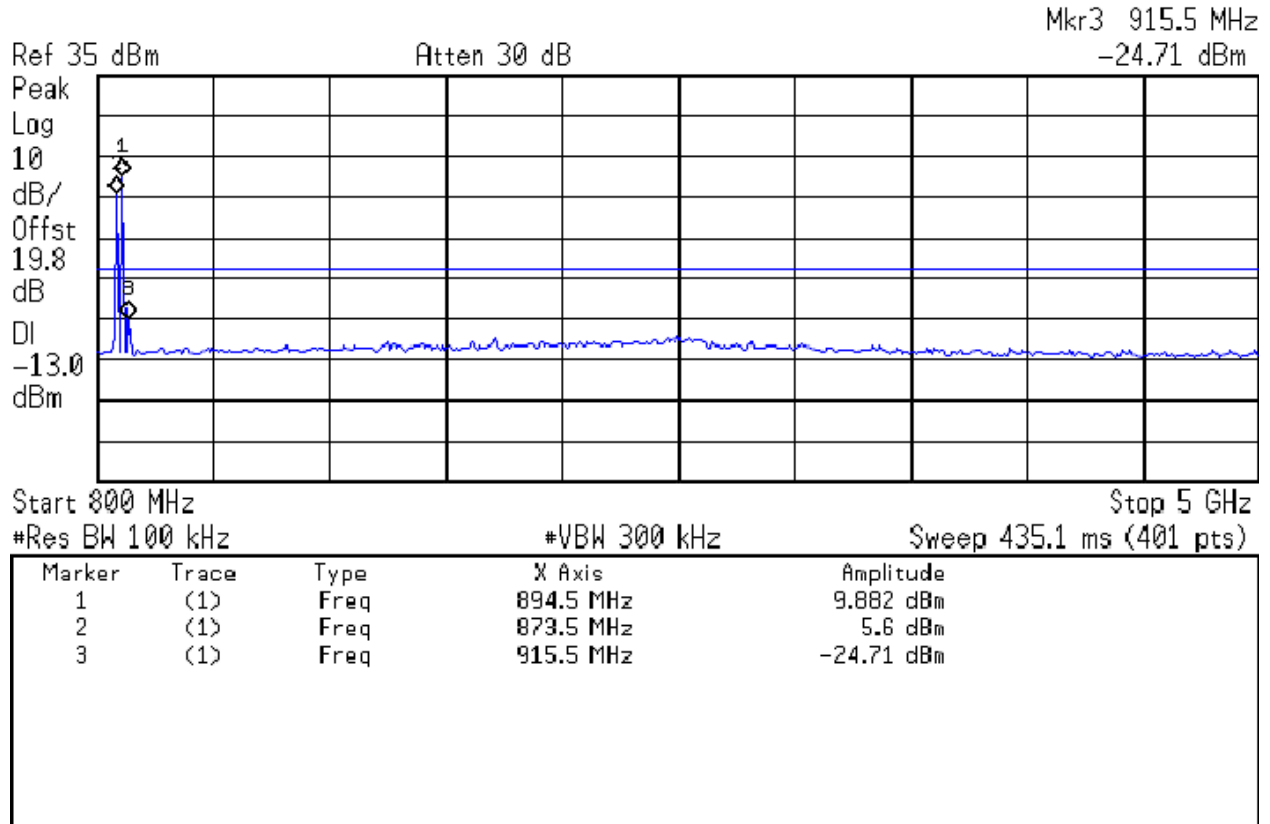





FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 1930 / 1990 MHz				

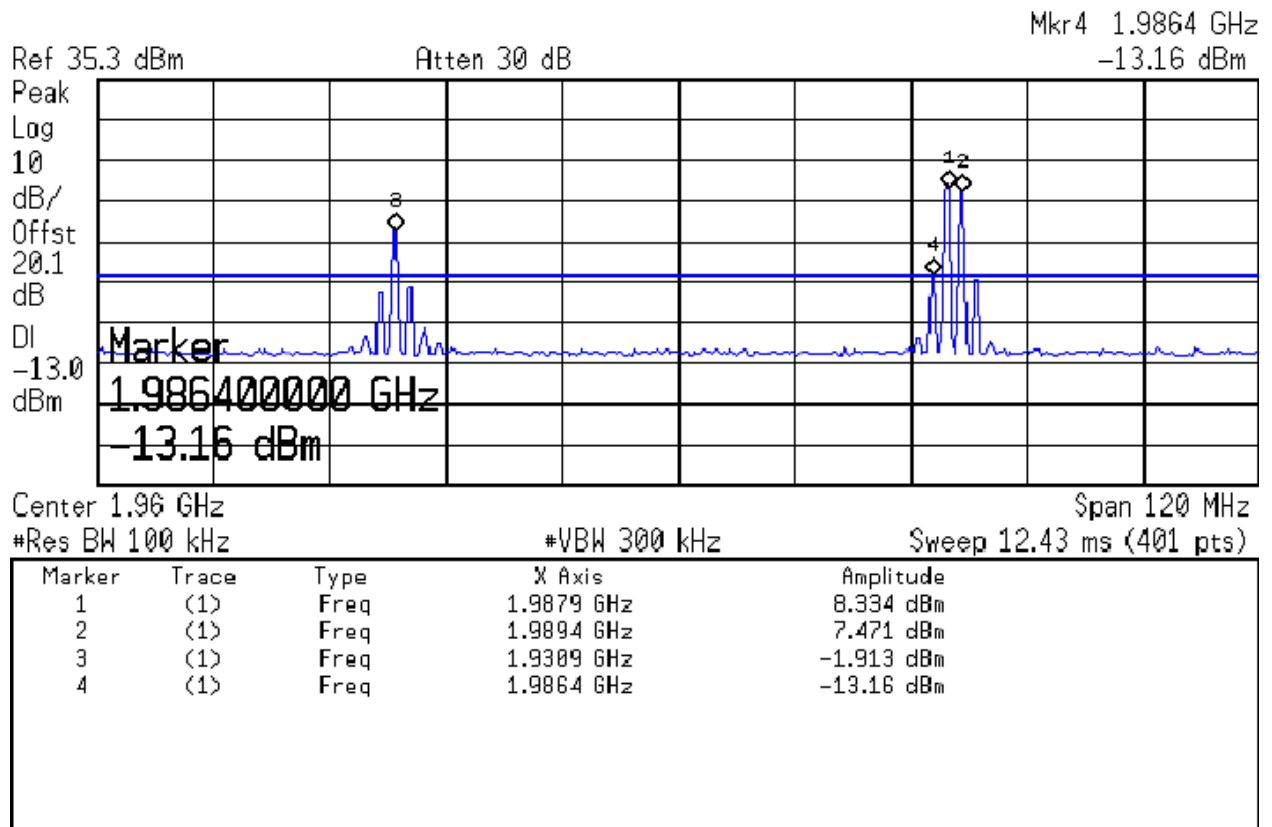



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 1930 / 1990 MHz				

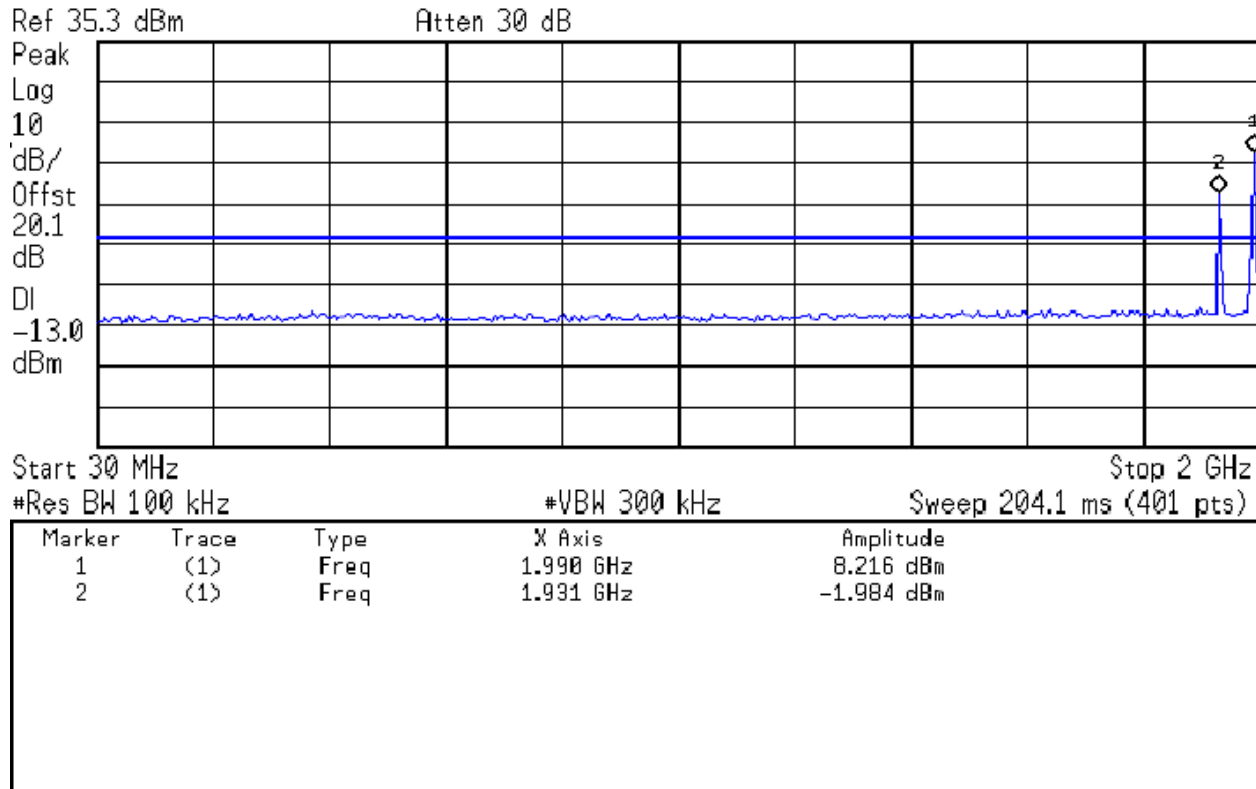



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 1930 / 1990 MHz				

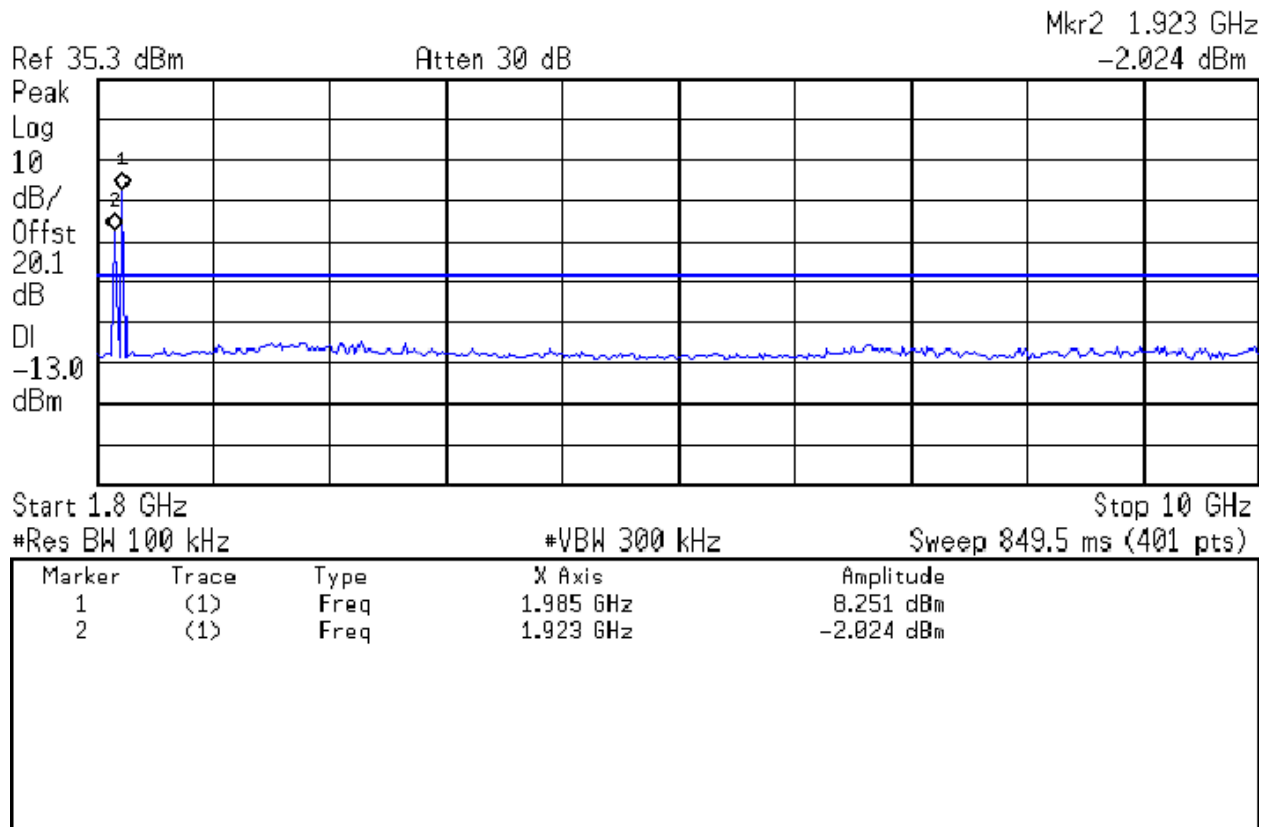



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 14 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CW - Input - 1930 / 1990 MHz				

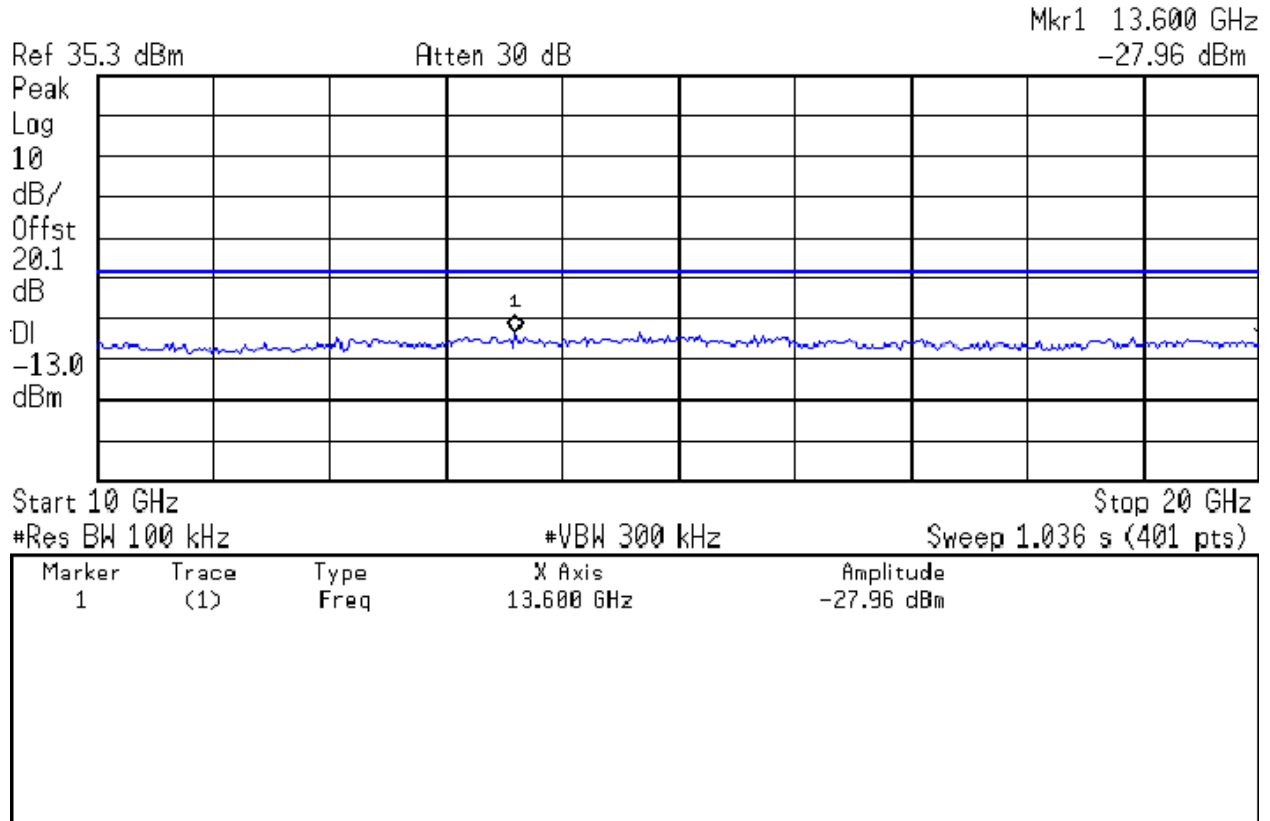

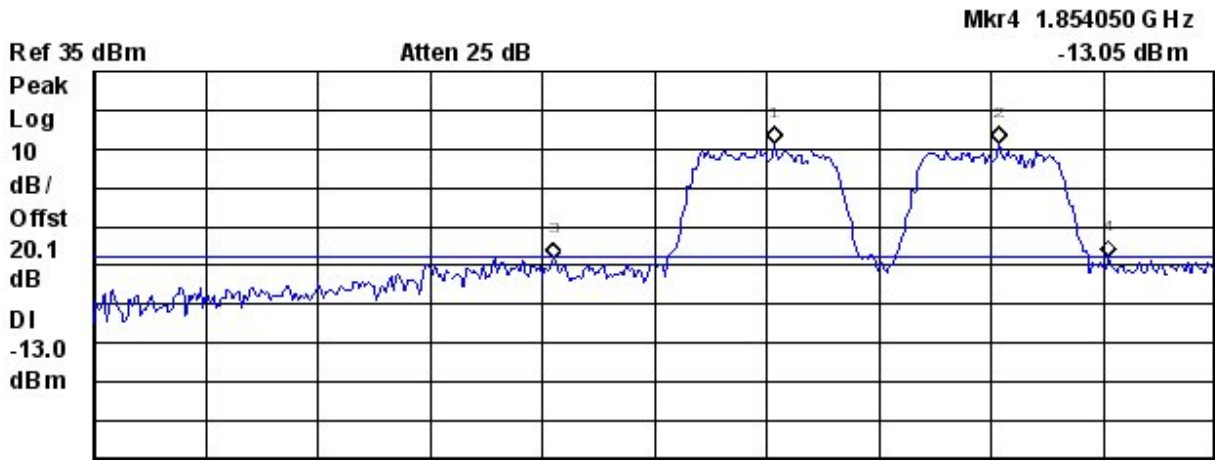


FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CDMA – Input – Lower edge				

Agilent 13:52:31 Apr 11, 2007




Center 1.85 GHz      Span 10 MHz  
 #Res BW 100 kHz      VBW 1 MHz      Sweep 4 ms (401 pts)

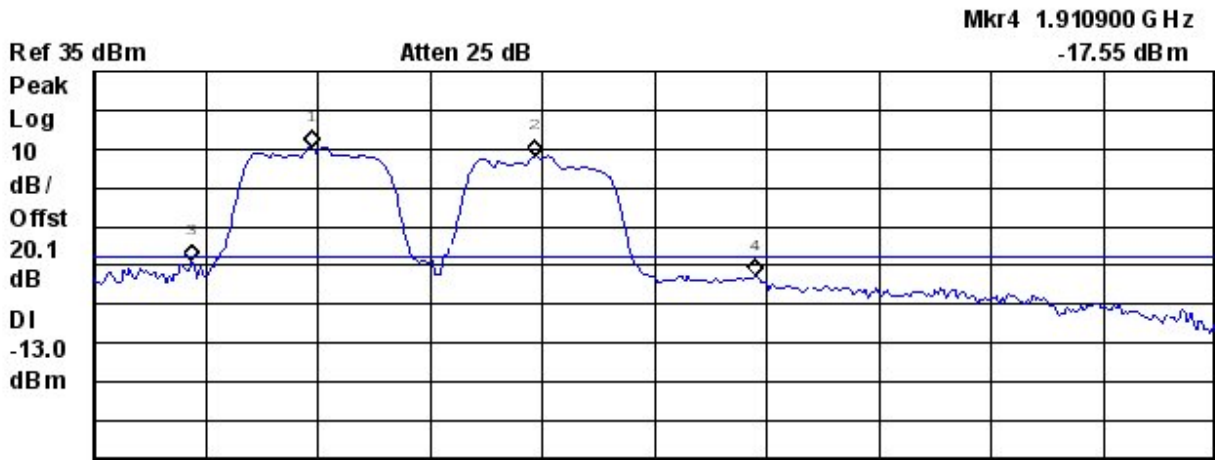
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.851075 GHz	16.32 dBm
2	(1)	Freq	1.853075 GHz	16.2 dBm
3	(1)	Freq	1.849100 GHz	-13.24 dBm
4	(1)	Freq	1.854050 GHz	-13.05 dBm



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - CDMA – Input – Upper edge				


Agilent 13:46:41 Apr 11, 2007



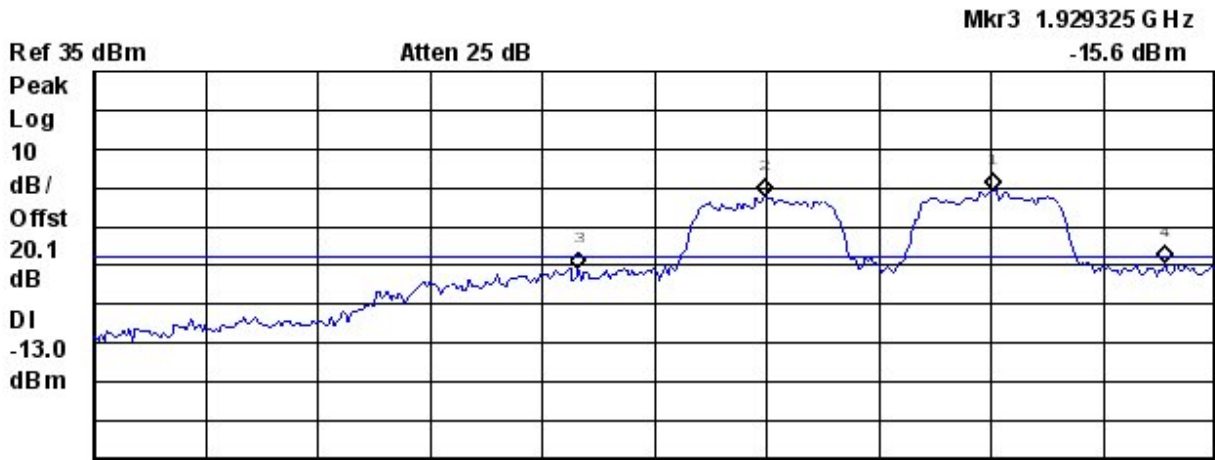
Center 1.91 GHz #Res BW 100 kHz VBW 1 MHz Sweep 4 ms (401 pts) Span 10 MHz

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.906950 GHz	15.45 dBm
2	(1)	Freq	1.908925 GHz	13.02 dBm
3	(1)	Freq	1.905875 GHz	-14.02 dBm
4	(1)	Freq	1.910900 GHz	-17.55 dBm

FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<h3>Inter-Modulation</h3>	
	DNB Job Number:	68119	Date:	11 Apr 2007
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Downlink			
	Signal Source - CDMA – Input – Lower edge			

Agilent 13:57:39 Apr 11, 2007

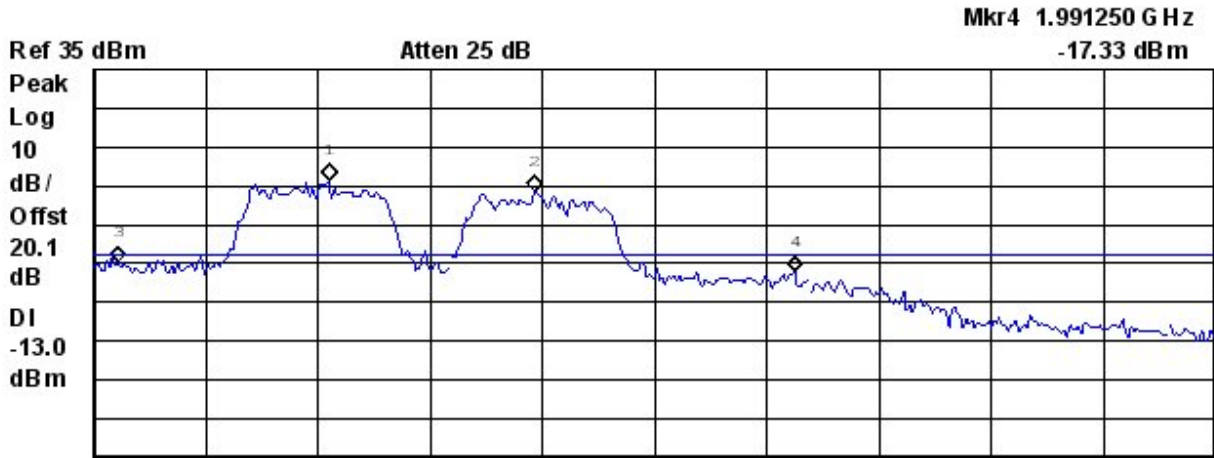


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.933025 GHz	4.282 dBm
2	(1)	Freq	1.930975 GHz	2.785 dBm
3	(1)	Freq	1.929325 GHz	-15.6 dBm
4	(1)	Freq	1.934550 GHz	-14.27 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - CDMA – Input – Upper edge				

Agilent 13:59:38 Apr 11, 2007

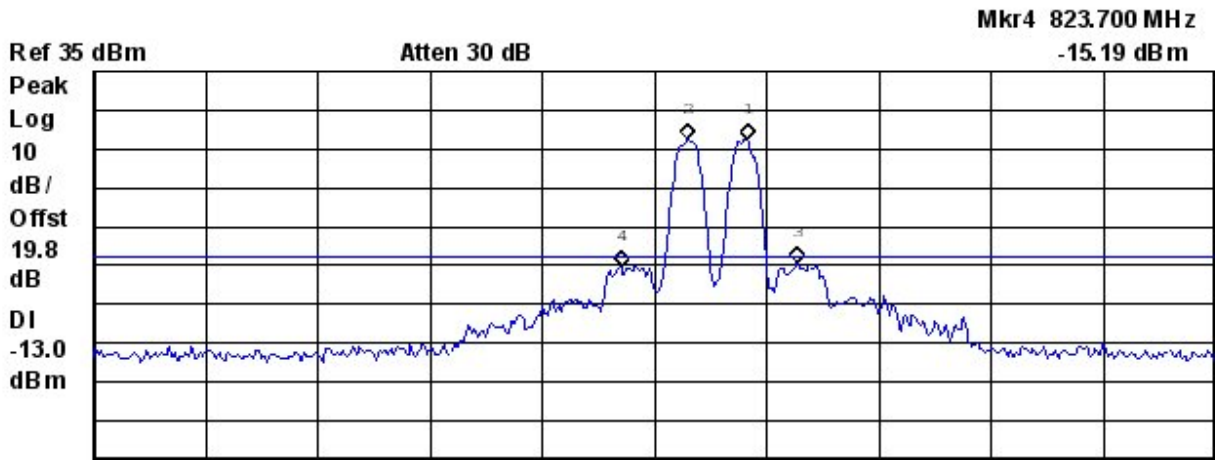


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.987100 G Hz	6.35 dBm
2	(1)	Freq	1.988925 G Hz	3.307 dBm
3	(1)	Freq	1.985225 G Hz	-14.83 dBm
4	(1)	Freq	1.991250 G Hz	-17.33 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - GSM - Input - Low Band - Low Edge				

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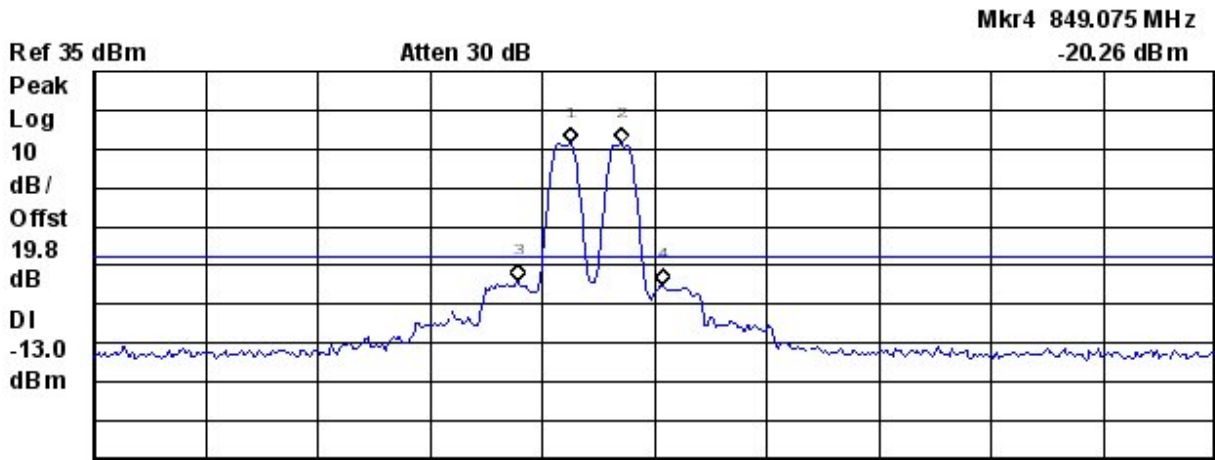


Center 824 MHz		Span 10 MHz		
#Res BW 30 kHz	VBW 300 kHz	Sweep 11.15 ms (401 pts)		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	824.825 MHz	17.46 dBm
2	(1)	Freq	824.300 MHz	17.16 dBm
3	(1)	Freq	825.275 MHz	-14.35 dBm
4	(1)	Freq	823.700 MHz	-15.19 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - GSM - Input - Low Band - Upper Edge				

Agilent 14:37:01 Apr 11, 2007

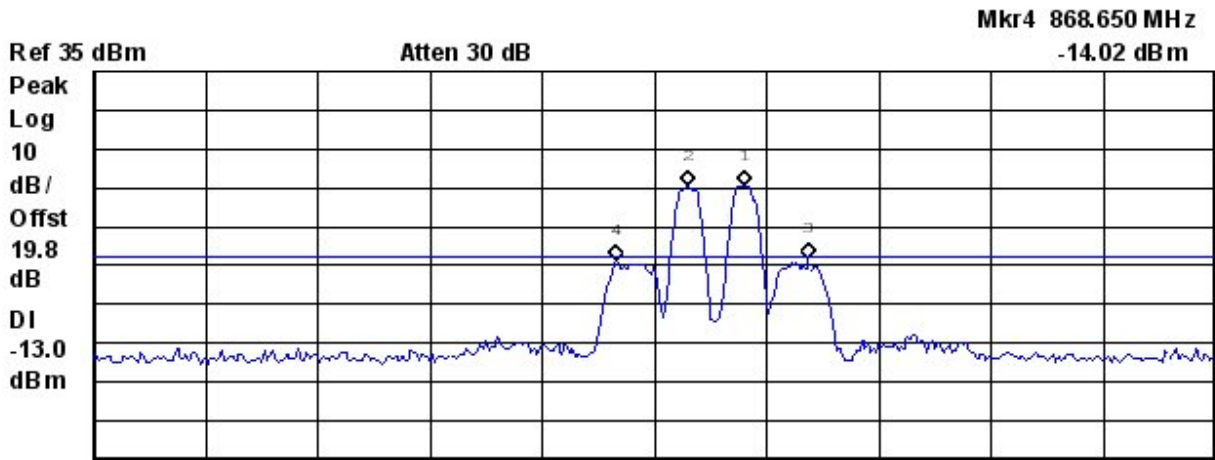


Center 849 MHz		Span 10 MHz		
#Res BW 30 kHz	VBW 300 kHz	Sweep 11.15 ms (401 pts)		
Ref 35 dBm	Atten 30 dB			
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	848.250 MHz	16.17 dBm
2	(1)	Freq	848.700 MHz	16.15 dBm
3	(1)	Freq	847.775 MHz	-19.12 dBm
4	(1)	Freq	849.075 MHz	-20.26 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - GSM - Input - Low Band - Lower Edge				


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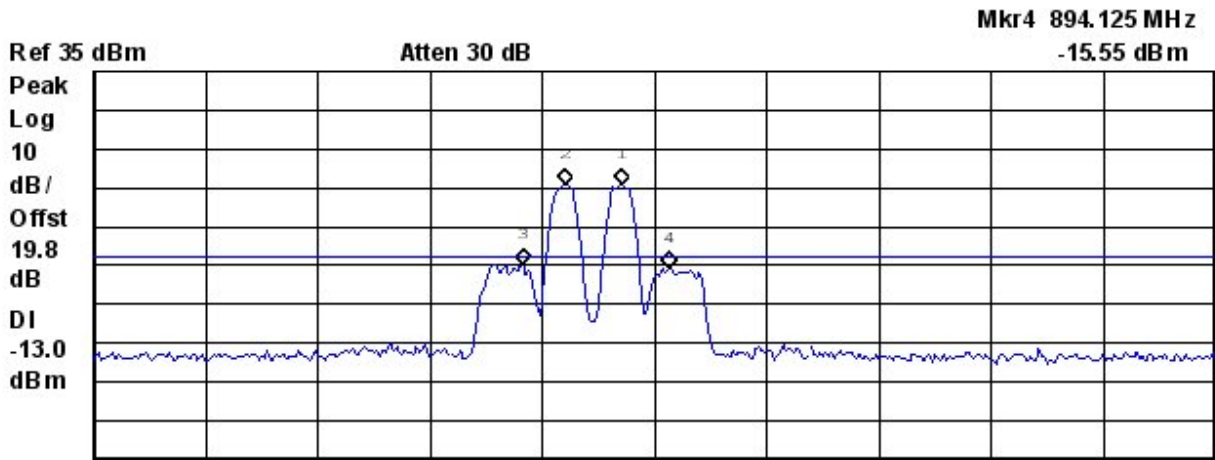
Center 869 MHz Span 10 MHz  
 #Res BW 30 kHz VBW 300 kHz Sweep 11.15 ms (401 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	869.800 MHz	5.376 dBm
2	(1)	Freq	869.300 MHz	5.229 dBm
3	(1)	Freq	870.375 MHz	-13.27 dBm
4	(1)	Freq	868.650 MHz	-14.02 dBm

FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - GSM - Input - Low Band - Upper Edge				

Agilent 14:48:25 Apr 11, 2007

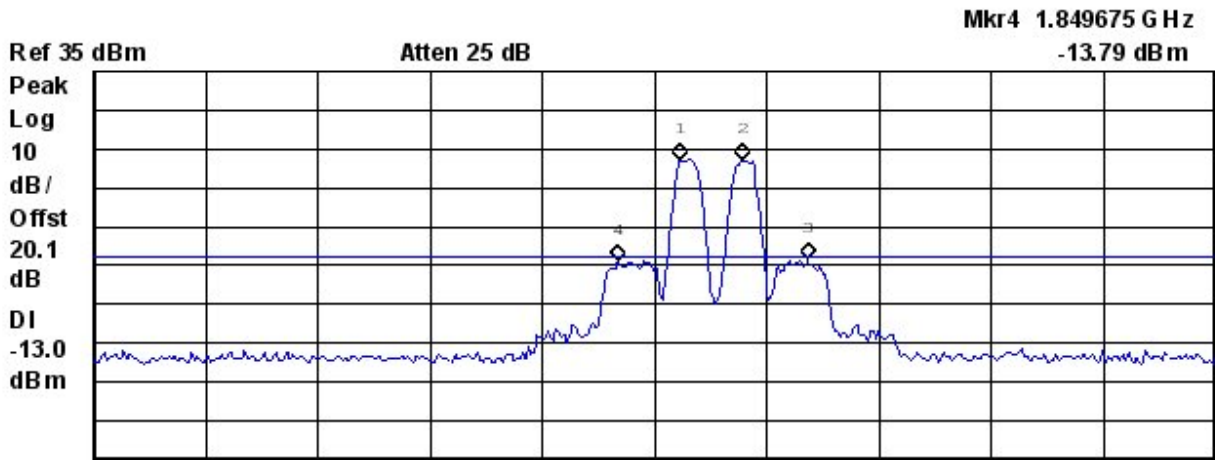


Center 894 MHz		Span 10 MHz		
#Res BW 30 kHz	VBW 300 kHz	Sweep 11.15 ms (401 pts)		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	893.700 MHz	5.954 dBm
2	(1)	Freq	893.200 MHz	5.932 dBm
3	(1)	Freq	892.825 MHz	-14.72 dBm
4	(1)	Freq	894.125 MHz	-15.55 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - GSM - Input - Hi Band - Lower Edge				


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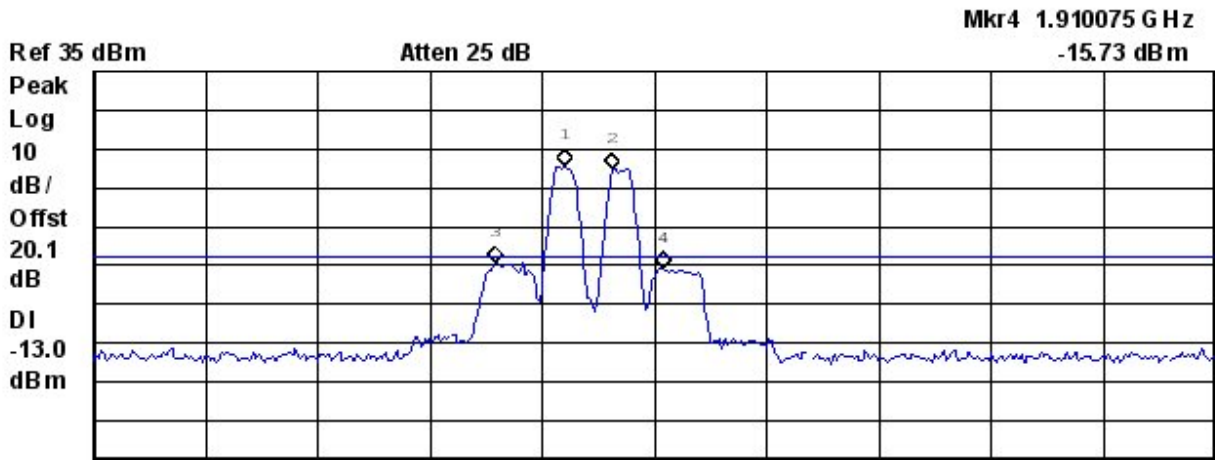
Center 1.85 GHz		Span 10 MHz		
#Res BW 30 kHz	VBW 300 kHz	Sweep 11.15 ms (401 pts)		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.850225 GHz	12.23 dBm
2	(1)	Freq	1.850775 GHz	11.91 dBm
3	(1)	Freq	1.851375 GHz	-13.21 dBm
4	(1)	Freq	1.849675 GHz	-13.79 dBm



FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - GSM - Input - Hi Band - Upper Edge				

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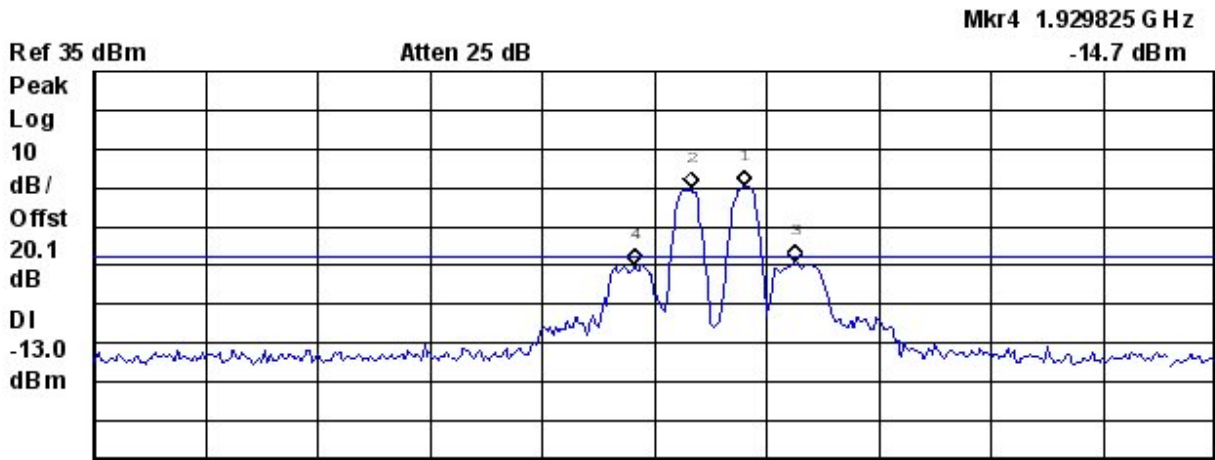


Ref 35 dBm		Atten 25 dB		Mkr4 1.910075 GHz	
				-15.73 dBm	
Center 1.91 GHz		VBW 300 kHz		Span 10 MHz	
#Res BW 30 kHz				Sweep 11.15 ms (401 pts)	
Marker	Trace	Type	X Axis	Amplitude	
1	(1)	Freq	1.909200 GHz	10.39 dBm	
2	(1)	Freq	1.909625 GHz	9.796 dBm	
3	(1)	Freq	1.908575 GHz	-14.2 dBm	
4	(1)	Freq	1.910075 GHz	-15.73 dBm	

FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - GSM - Input - Hi Band - Lower Edge				

Agilent 14:09:27 Apr 11, 2007



Center 1.93 GHz		Span 10 MHz		
#Res BW 30 kHz	VBW 300 kHz	Sweep 11.15 ms (401 pts)		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.930800 GHz	5.512 dBm
2	(1)	Freq	1.930325 GHz	4.625 dBm
3	(1)	Freq	1.931250 GHz	-13.81 dBm
4	(1)	Freq	1.929825 GHz	-14.7 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - GSM - Input - Hi Band - Upper Edge				

Agilent 14:04:53 Apr 11, 2007




Center 1.99 GHz Span 10 MHz  
 #Res BW 30 kHz VBW 300 kHz Sweep 11.15 ms (401 pts)

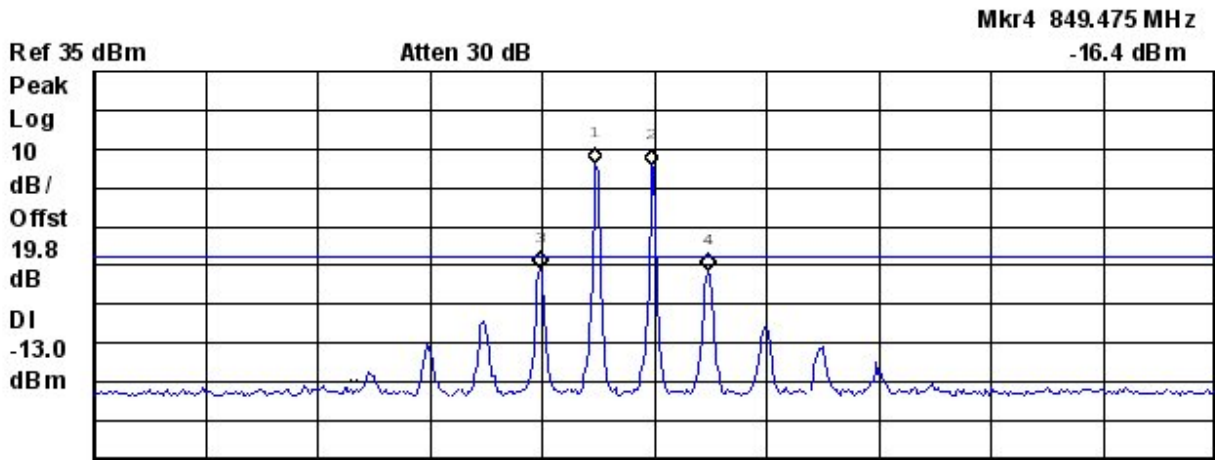
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.989275 GHz	5.689 dBm
2	(1)	Freq	1.989800 GHz	5.474 dBm
3	(1)	Freq	1.988775 GHz	-14.38 dBm
4	(1)	Freq	1.990175 GHz	-14.82 dBm



FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - TDMA – Input – Low Band – Upper Edge				

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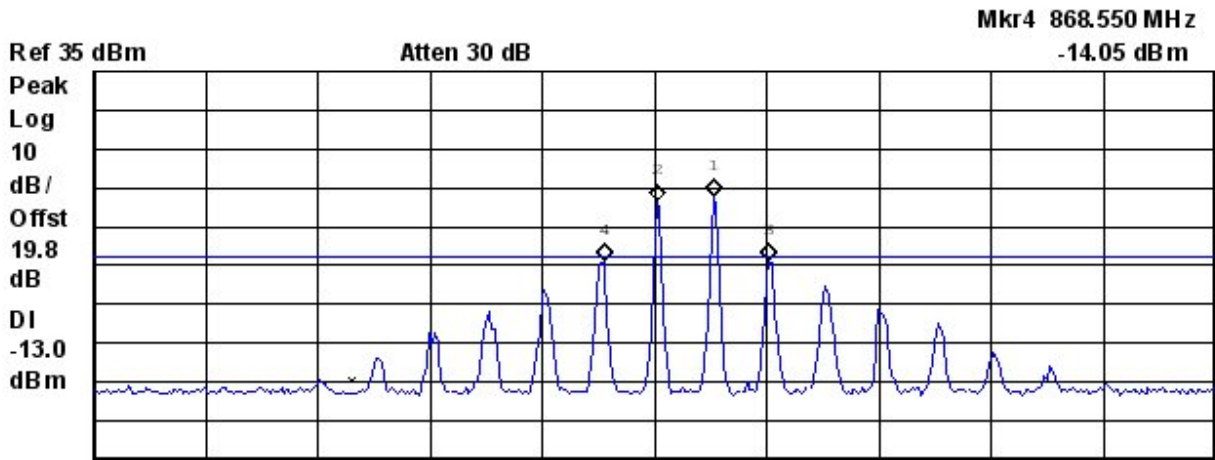


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	848.475 MHz	11 dBm
2	(1)	Freq	848.975 MHz	10.51 dBm
3	(1)	Freq	847.975 MHz	-15.88 dBm
4	(1)	Freq	849.475 MHz	-16.4 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - TDMA – Input – Low Band – Lower Edge				

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Center 869 MHz      Span 10 MHz  
 #Res BW 1 kHz      VBW 10 kHz      Sweep 10.03 s (401 pts)

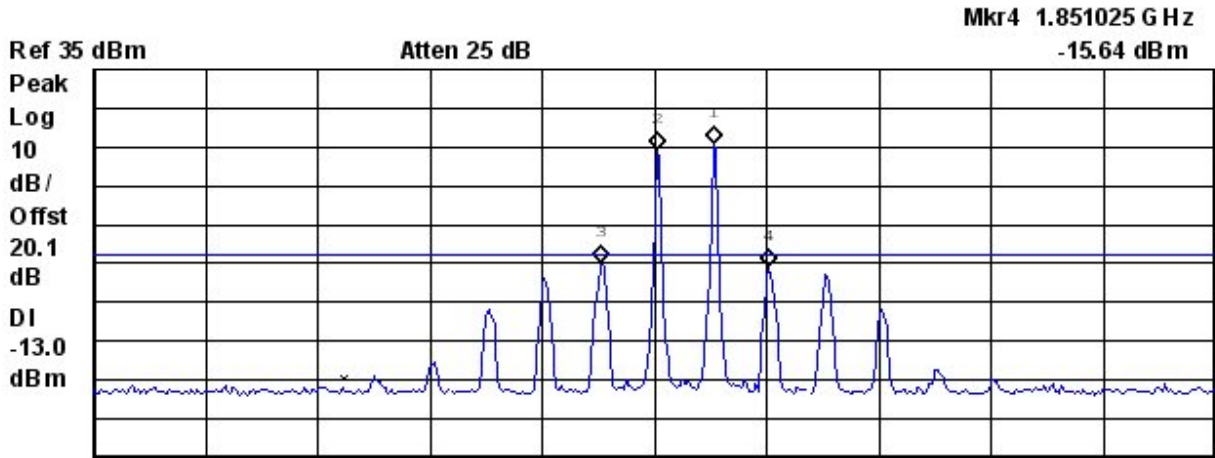
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	868.525 MHz	2.841 dBm
2	(1)	Freq	869.025 MHz	1.607 dBm
3	(1)	Freq	870.025 MHz	-13.76 dBm
4	(1)	Freq	868.550 MHz	-14.05 dBm



FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - TDMA – Input – Hi Band – Lower Edge				


Agilent 13:38:03 Apr 11, 2007



Center 1.85 GHz		Span 10 MHz		
#Res BW 1 kHz	VBW 10 kHz	Sweep 10.03 s (401 pts)		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.850525 GHz	15.73 dBm
2	(1)	Freq	1.850025 GHz	14.61 dBm
3	(1)	Freq	1.849525 GHz	-15 dBm
4	(1)	Freq	1.851025 GHz	-15.64 dBm



FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Uplink Signal Source - TDMA – Input – Hi Band – Upper Edge				

Agilent 13:39:59 Apr 11, 2007

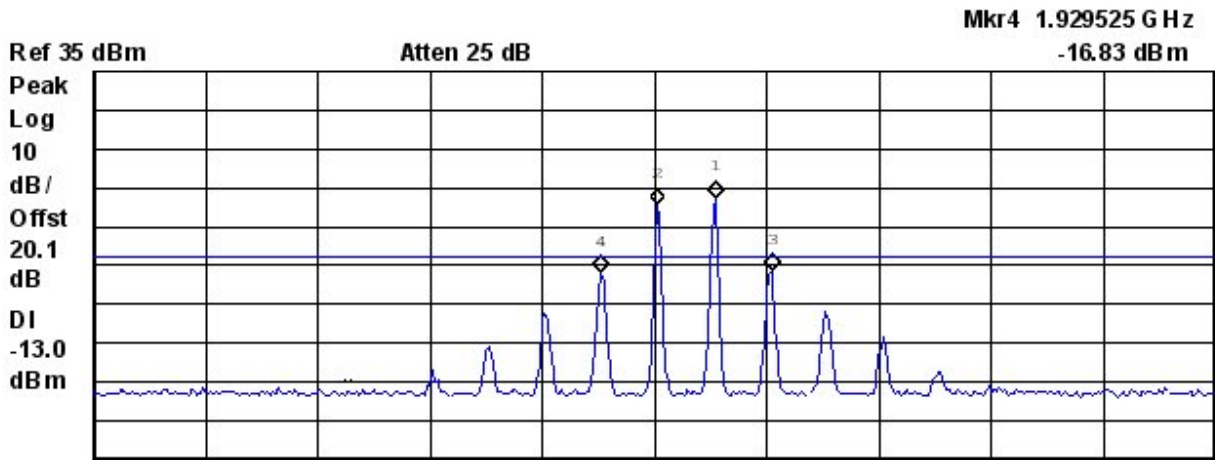


Center 1.91 GHz		Span 10 MHz		
#Res BW 1 kHz		Sweep 10.03 s (401 pts)		
		VBW 10 kHz		
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.909500 G Hz	8.272 dBm
2	(1)	Freq	1.910000 G Hz	5.31 dBm
3	(1)	Freq	1.909000 G Hz	-17.07 dBm
4	(1)	Freq	1.910500 G Hz	-21.52 dBm

FIGURE 6: OCCUPIED BANDWIDTH


	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - TDMA – Input – Hi Band – Lower Edge				

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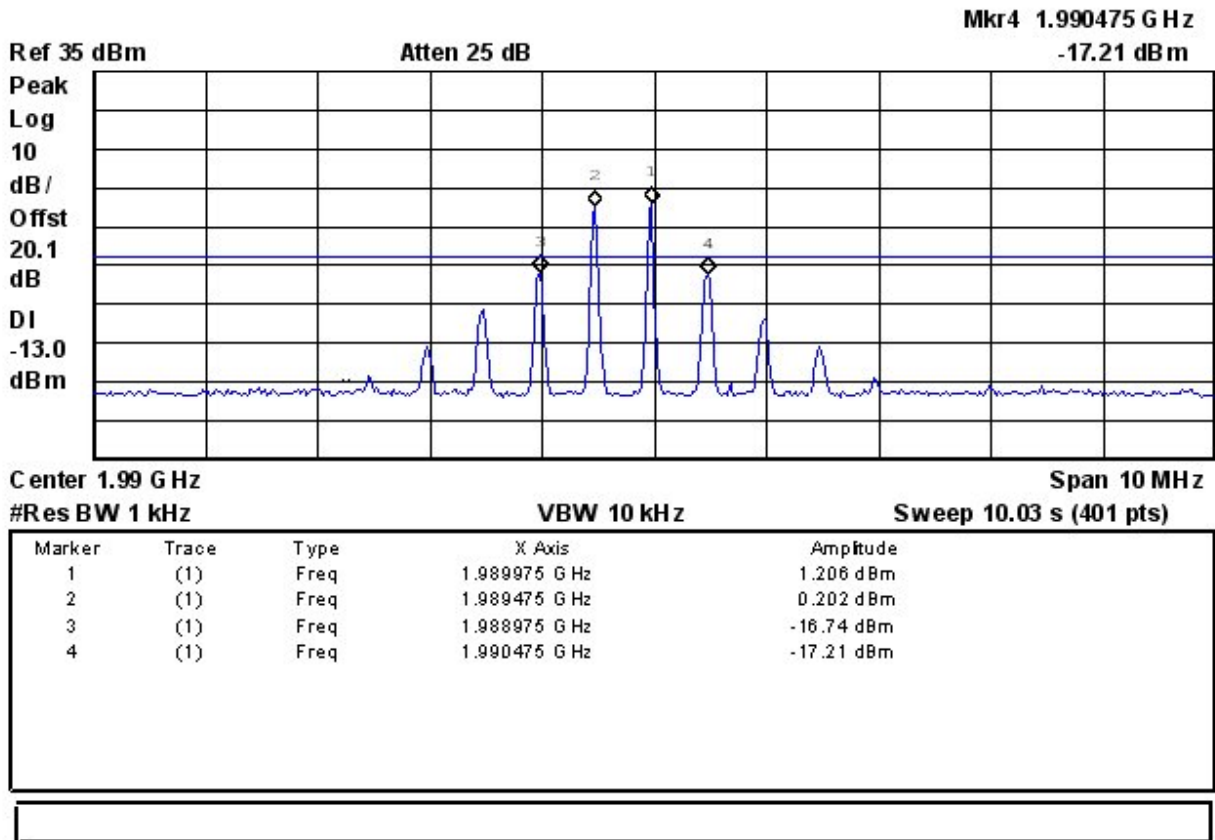


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.930550 G Hz	2.327 dBm
2	(1)	Freq	1.930025 G Hz	0.567 dBm
3	(1)	Freq	1.931050 G Hz	-16.05 dBm
4	(1)	Freq	1.929525 G Hz	-16.83 dBm

FIGURE 6: OCCUPIED BANDWIDTH

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Inter-Modulation</b>	
	DNB Job Number: 68119	Date: 11 Apr 2007	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier Downlink Signal Source - TDMA – Input – Hi Band – Upper Edge				

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**2.1051 Spurious Emissions at Antenna Terminals (IC RSS-131 Clause 4.4)**

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Definition:

Conducted Spurious Emissions are emissions at the antenna terminals on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communication desired. The reduction in the level of these spurious emissions will not affect the quality of the information being transmitted.

Conducted Spurious Emissions shall be attenuated below the maximum level of the carrier frequency in accordance with the following formula:

$$-13\text{dB} = \text{Measured Power} - (43 + 10 \log_{10}(\text{Rated Power}))$$

Test Method: Per EIA RS 152-B, Paragraph 4 as modified below.

Connect the equipment as shown in FIGURE 1.


Adjust the drive source to produce FM modulation. Adjust the Spectrum Analyzer to display the Modulated Carrier.

Scan the frequency spectrum from the lowest radio frequency generated in the equipment through the 10<sup>th</sup> harmonic of the carrier frequency.

Test Results: See Plots

All spurious emissions at the antenna terminals are below the IC/FCC specifications

Figure 7: Conducted Spurious Emissions at Antenna Terminals, Uplink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Uplink GSM 824.180 MHz				

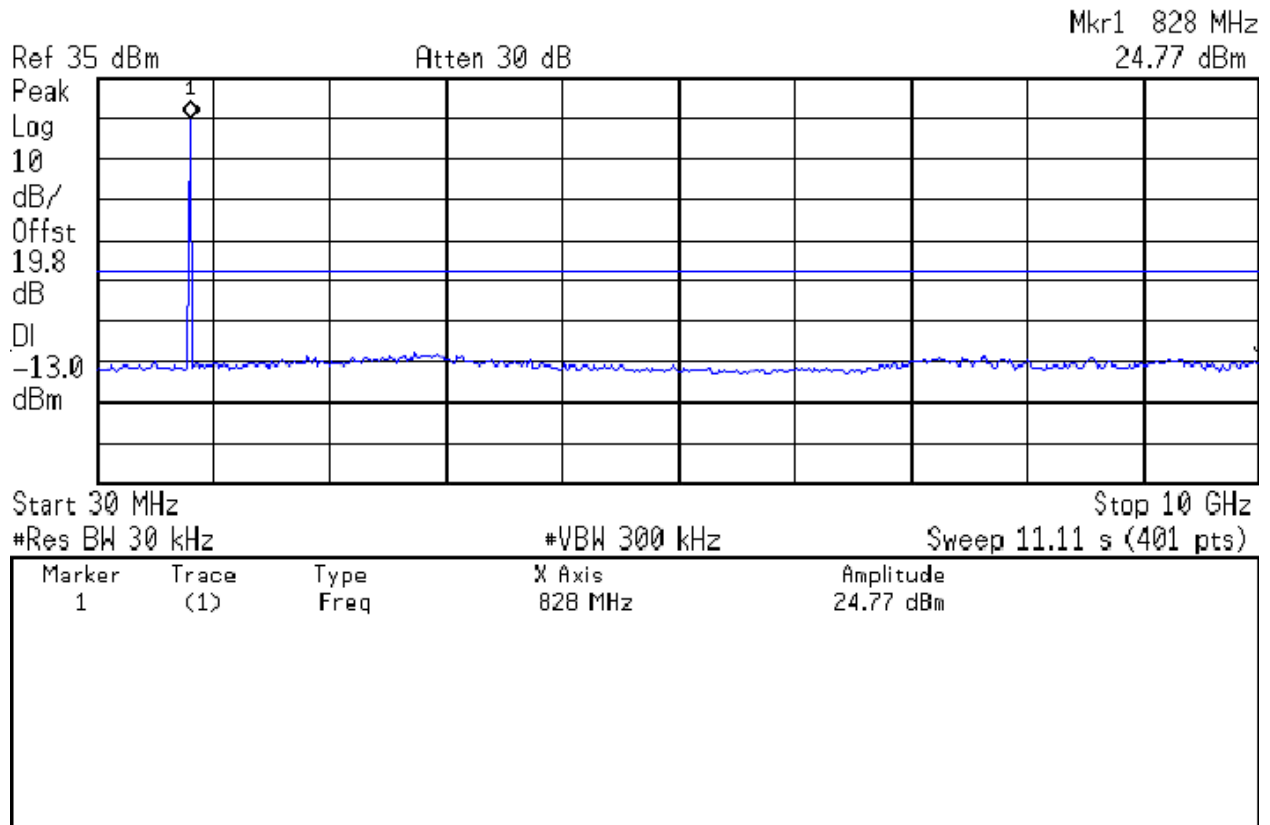





























Figure 7: Conducted Spurious Emissions at Antenna Terminals, Uplink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNB Job Number: 68119	Date: 16 Aug 2006		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier				
	Uplink CDMA 1851 MHz			

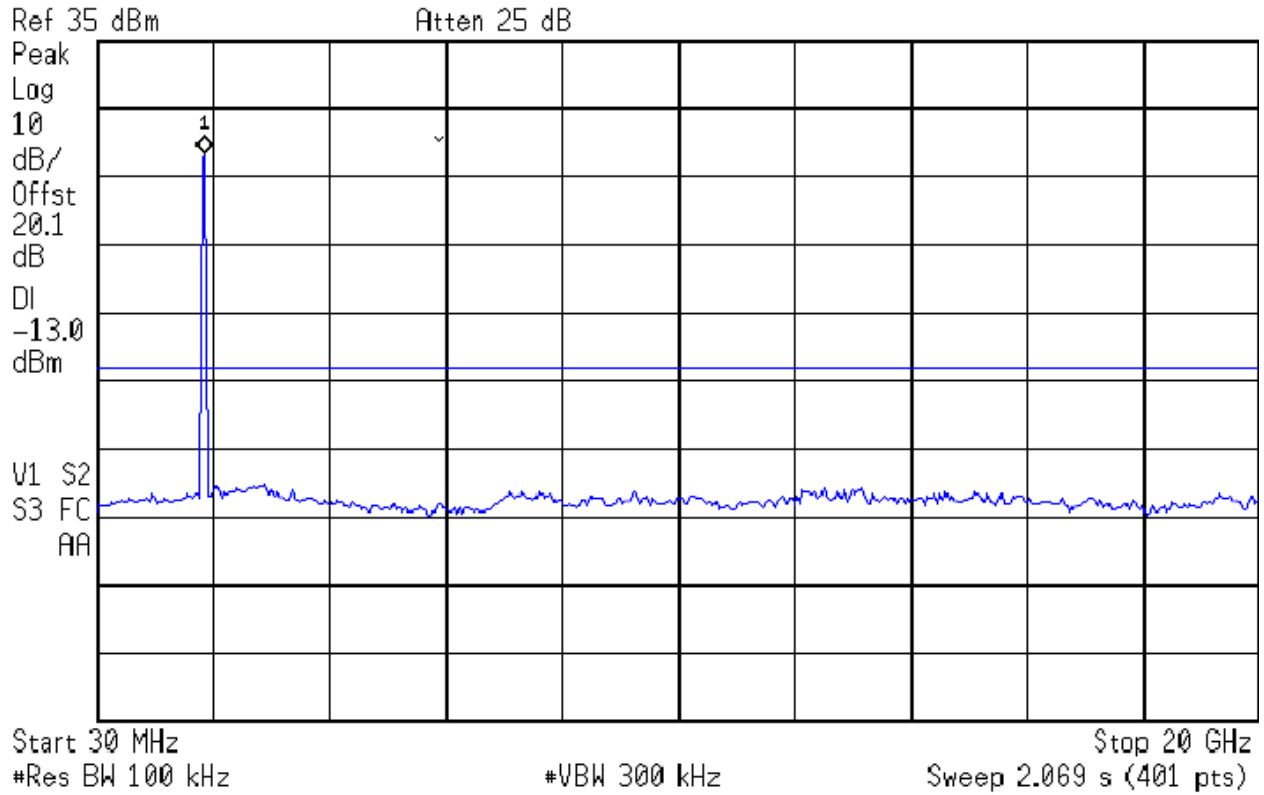









Figure 7: Conducted Spurious Emissions at Antenna Terminals, Downlink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink GSM 881.5 MHz				

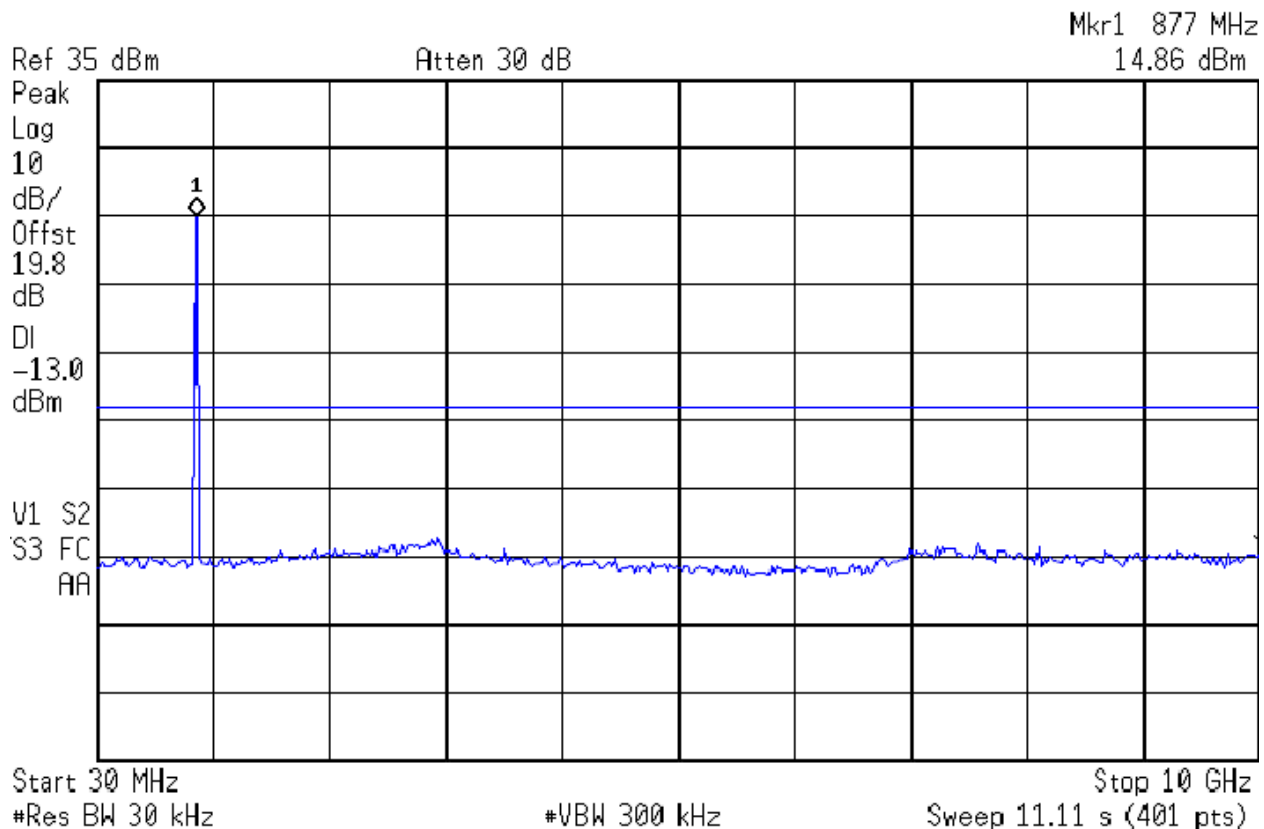














Figure 7: Conducted Spurious Emissions at Antenna Terminals, Downlink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNB Job Number:	68119	Date:	15 Aug 2006
Customer:	Janizary Holdings, Inc.			<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24
Model Number:	IVWA819			
Description:	RF amplifier			
	Downlink TDMA 881.5 MHz			

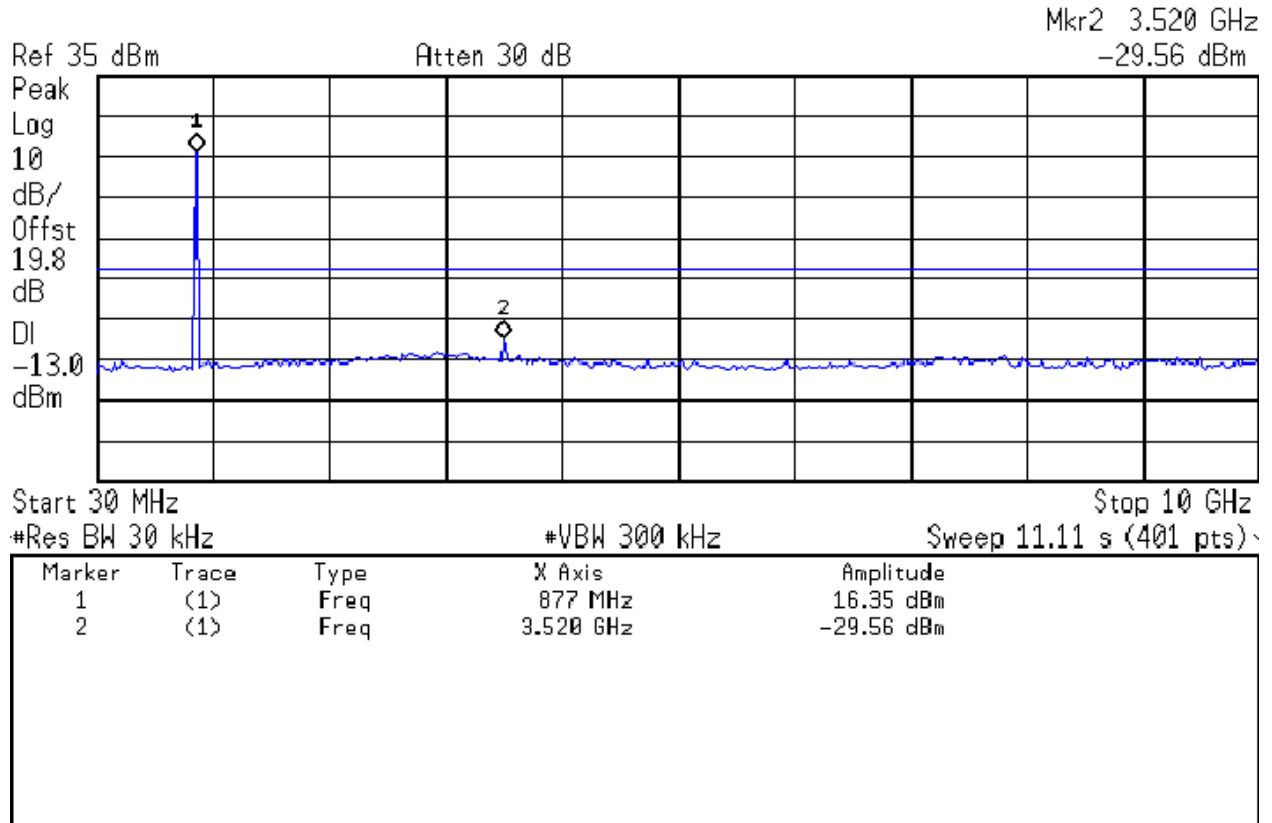



Figure 7: Conducted Spurious Emissions at Antenna Terminals, Downlink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNB Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.				
Model Number: IVWA819				
Description: RF amplifier  Downlink TDMA 893.980 MHz				

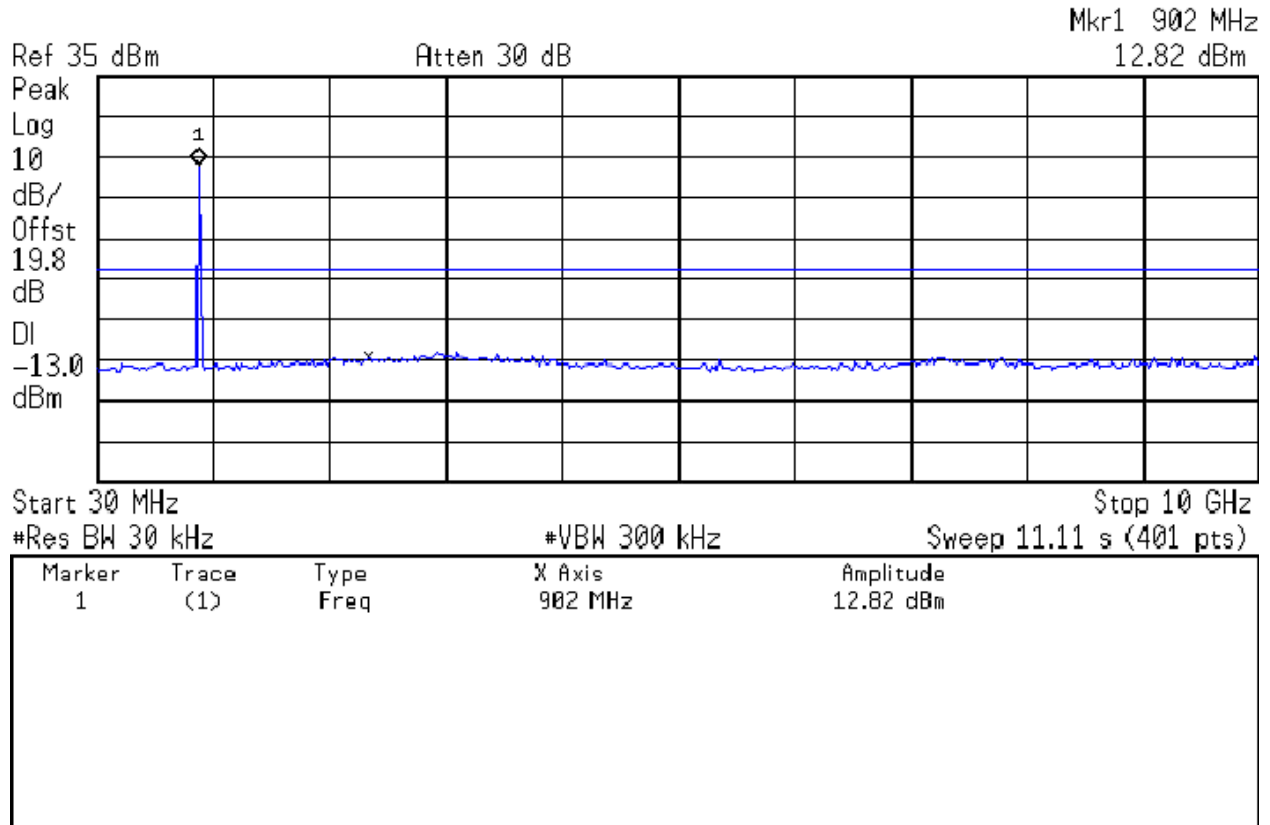







Figure 7: Conducted Spurious Emissions at Antenna Terminals, Downlink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		<b>Antenna Conducted Spurious</b>	
	DNR Job Number: 68119	Date: 15 Aug 2006	<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	
Customer: Janizary Holdings, Inc.	Model Number: IVWA819			
Description: RF amplifier	Downlink TDMA 1989.980 MHz			

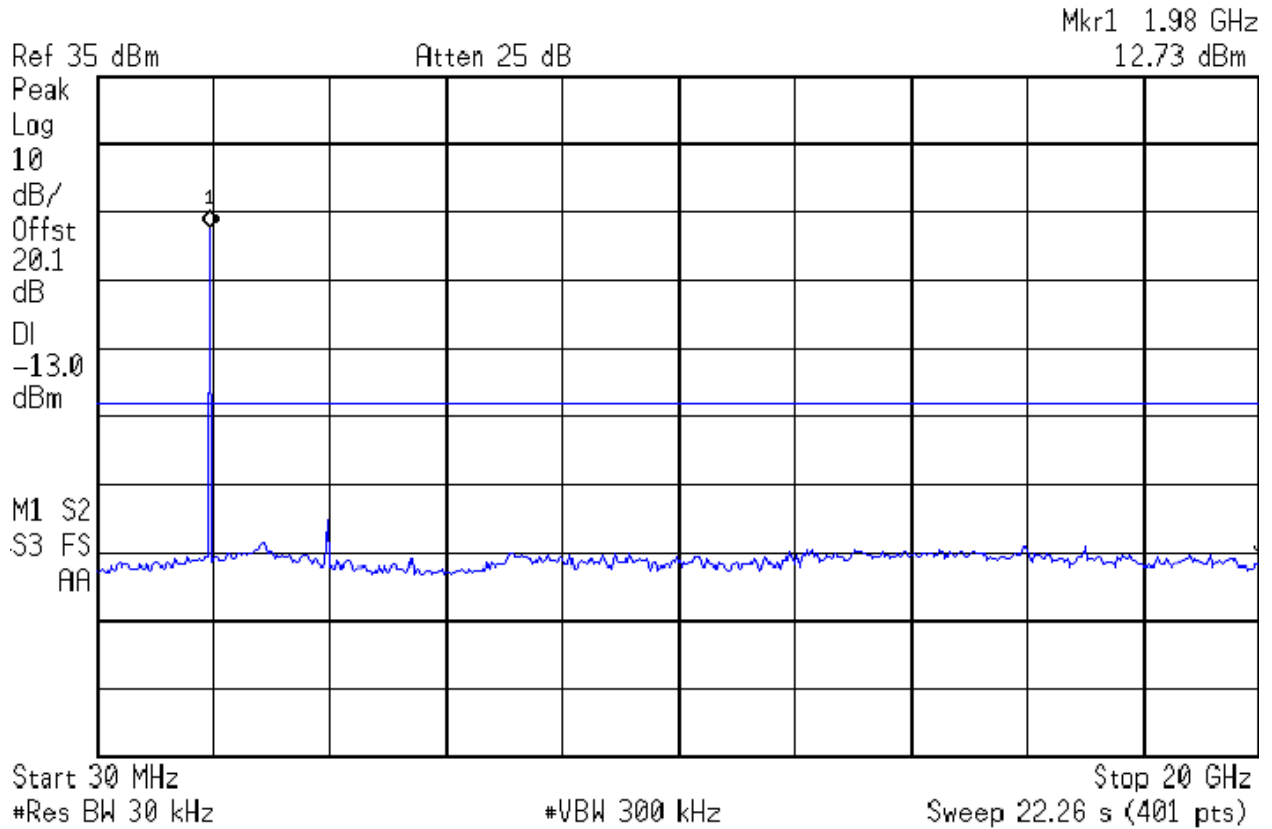

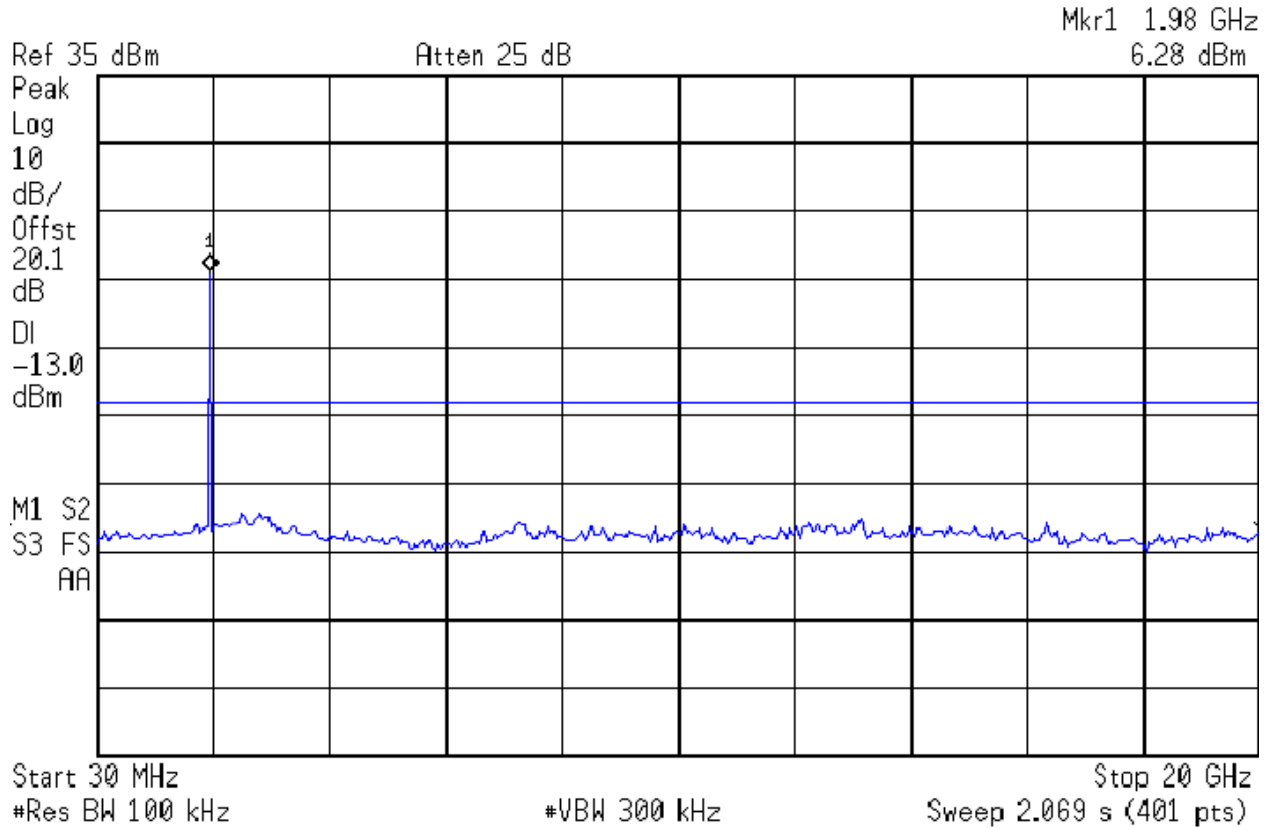






Figure 7: Conducted Spurious Emissions at Antenna Terminals, Downlink.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	<b>Antenna Conducted Spurious</b>	
DNB Job Number:	68119	Date:	16 Aug 2006
Customer:	Janizary Holdings, Inc.		
Model Number:	IVWA819		
Description:	RF amplifier		
	Downlink CDMA 1960 MHz		
		<b>Conformance Standards</b> [X] IC RSS-131 [X] FCC Part 22 [X] FCC Part 24	





**2.1053 Field Strength of Spurious Radiation (IC RSS-131 Clause 4.4)**

---

Definition:

Emissions from the equipment when connected into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communication desired. The reduction in the level of these spurious emissions will not affect the quality of the information being transmitted.


Test Method: Per TIA /EIA 603.

Connect the equipment and follow the procedure described in paragraph 2.2.1.12. Measure the amplitude of each spurious radiated signal through the 10<sup>th</sup> harmonic. The spurious signals are then measured on the 3 meter range. First the EUT is measured using a tuned reference dipole below 1GHz and a double ridge guide Horn antenna above 1GHz. Then a dipole to dipole (or drg to drg) measurement is conducted to determine the actual power at each harmonic being generated by the EUT. If the DRG antenna is used the appropriate gain factor for the antenna is added for the final measurement. If no noticeable emission can be observed the ground floor is recorded in the data sheets.

Test Results: All readings were at the spectrum analyzer ground floor above the fundamental.

All radiated spurious emissions are below the IC/FCC Specifications.


FIGURE 8: RADIATED FIELD STRENGTH OF SPURIOUS EMISSIONS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	<b>Radiated Spurious</b>	
DNB Job Number:	68119	Date:	17 Aug 2006
Customer:	Janizary Holdings, Inc.		
Model Number:	IVWA819		
Description:	RF amplifier		
	Uplink 836.5MHz		
<b>Conformance Standards</b>			
[X] IC RSS-131			
[X] FCC Part 22			
[X] FCC Part 24			

Harmonics	Freq In MHz	Antenna Polar	dBm Reading	-13dB Limit	Margin
2nd	1673.0*	H	-58.96	-13	-45.96
	1673.0*	V	-58.12	-13	-45.12
3rd	2509.5*	H	-56.85	-13	-43.85
	2509.5*	V	-54.80	-13	-41.80
4th	3346.0*	H	-56.88	-13	-43.88
	3346.0*	V	-57.44	-13	-44.44
5th	4182.5*	H	-57.77	-13	-44.77
	4182.5*	V	-57.50	-13	-44.50
6th	5019.0*	H	-57.04	-13	-44.04
	5019.0*	V	-56.99	-13	-43.99
7th	5855.5*	H	-56.75	-13	-43.75
	5855.5*	V	-56.54	-13	-43.54
8th	6692.0*	H	-56.92	-13	-43.92
	6692.0*	V	-57.79	-13	-44.79
9th	7528.5*	H	-54.78	-13	-41.78
	7528.5*	V	-55.12	-13	-42.12
10th	8365.0*	H	-54.94	-13	-41.94
	8365.0*	V	-55.48	-13	-42.48

\* Measurement made at instrument ground floor – no discernible reading


FIGURE 8: RADIATED FIELD STRENGTH OF SPURIOUS EMISSIONS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	<b>Radiated Spurious</b>	
DNB Job Number:	68119	Date:	17 Aug 2006
Customer:	Janizary Holdings, Inc.		
Model Number:	IVWA819		
Description:	RF amplifier		
	Downlink 881.5MHz		
<b>Conformance Standards</b>			
[X] IC RSS-131			
[X] FCC Part 22			
[X] FCC Part 24			

Harmonics	Freq In MHz	Antenna Polar	dBm Reading	-13dB Limit	Margin
2nd	1763.0	H	-53.48*	-13	-40.48
	1763.0	V	-57.79*	-13	-44.79
3rd	2644.5	H	-37.30	-13	-24.30
	2644.5	V	-53.34	-13	-40.34
4th	3526.0	H	-55.96*	-13	-42.96
	3526.0	V	-56.47*	-13	-43.47
5th	4407.5	H	-56.21*	-13	-43.21
	4407.5	V	-55.70*	-13	-42.70
6th	5289.0	H	-54.63*	-13	-41.63
	5289.0	V	-54.56*	-13	-41.56
7th	6170.5	H	-56.33*	-13	-43.33
	6170.5	V	-55.03*	-13	-42.03
8th	7052.0	H	-53.85*	-13	-40.85
	7052.0	V	-54.17*	-13	-41.17
9th	7933.5	H	-53.77*	-13	-40.77
	7933.5	V	-54.11*	-13	-41.11
10th	8815.0	H	-53.47*	-13	-40.47
	8815.0	V	-54.26*	-13	-41.26

\* Measurement made at instrument ground floor – no discernible reading


FIGURE 8: RADIATED FIELD STRENGTH OF SPURIOUS EMISSIONS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	<b>Radiated Spurious</b>	
DNB Job Number:	68119	Date:	17 Aug 2006
Customer:	Janizary Holdings, Inc.		
Model Number:	IVWA819		
Description:	RF amplifier		
	Uplink – 1880 MHz		
<b>Conformance Standards</b>			
[X] IC RSS-131			
[X] FCC Part 22			
[X] FCC Part 24			

Harmonics	Freq In MHz	Antenna Polar	dBm Reading	-13dB Limit	Margin
2nd	3760*	H	-55.01	-13	-42.01
	3760*	V	-55.45	-13	-42.45
3rd	5640*	H	-54.12	-13	-41.12
	5640*	V	-55.30	-13	-42.30
4th	7520*	H	-53.26	-13	-40.26
	7520*	V	-53.99	-13	-40.99
5th	9400*	H	-53.77	-13	-40.77
	9400*	V	-53.93	-13	-40.93
6th	11280*	H	-53.55	-13	-40.55
	11280*	V	-52.85	-13	-39.55
7th	13160*	H	-51.07	-13	-38.07
	13160*	V	-50.93	-13	-37.93
8th	15040*	H	-49.28	-13	-36.28
	15040*	V	-50.26	-13	-37.26
9th	16920*	H	-50.70	-13	-37.70
	16920*	V	-50.15	-13	-37.15
10th	18800*	H	-55.62	-13	-42.62
	18800*	V	-55.34	-13	-42.34

\* Measurement made at instrument ground floor – no discernible reading

FIGURE 8: RADIATED FIELD STRENGTH OF SPURIOUS EMISSIONS, UPLINK.

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	<b>Radiated Spurious</b>	
DNB Job Number:	68119	Date:	17 Aug 2006
Customer:	Janizary Holdings, Inc.		
Model Number:	IVWA819		
Description:	RF amplifier		
	Downlink – 1960 MHz		
<b>Conformance Standards</b>			
[X] IC RSS-131			
[X] FCC Part 22			
[X] FCC Part 24			

Harmonics	Freq In MHz	Antenna Polar	dBm Reading	-13dB Limit	Margin
2nd	3920*	H	-54.30	-13	-41.30
	3920*	V	-55.42	-13	-42.42
3rd	5880*	H	-54.69	-13	-41.69
	5880*	V	-54.57	-13	-41.57
4th	7840*	H	-53.78	-13	-40.78
	7840*	V	-52.68	-13	-39.68
5th	9800*	H	-52.72	-13	-39.72
	9800*	V	-53.34	-13	-40.34
6th	11760*	H	-53.01	-13	-40.01
	11760*	V	-52.83	-13	-39.83
7th	13720*	H	-50.23	-13	-37.23
	13720*	V	-50.91	-13	-37.91
8th	15680*	H	-48.32	-13	-35.32
	15680*	V	-48.18	-13	-35.18
9th	17640*	H	-51.63	-13	-38.63
	17640*	V	-52.19	-13	-39.19
10th	19600*	H	-57.17	-13	-44.17
	19600*	V	-57.65	-13	-44.65

\* Measurement made at instrument ground floor – no discernible reading

## RADIATED EMISSIONS

---

Definition:

Emissions which emanate from the EUT.

Test Method: FCC Part 15 Class B (CISPR 22)


To measure radiated emissions, the EUT was set up on the 3 meter open air test site. The EUT is placed on a wooden Table, which rests upon a wooden turntable. The top of the table is one meter above the ground, and the turntable can be rotated 360 degrees. For each frequency measured, the antenna is raised and lowered for both horizontal and vertical polarities to obtain the maximum reading on the analyzer. The turntable is also rotated throughout the 360 degrees in azimuth to determine the position of the maximum emissions. The applicable frequency range is searched using the antennas listed below. The respective antenna and preamplifier were connected to an HP 8568B Spectrum Analyzer. Preamplifiers were used for all ranges to achieve the needed dynamic range.

Test Results:

All readings were below the expectable limit.



FIGURE 9: RADIATED EMISSIONS.

		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704				<b>Radiated Emissions</b>											
DNB Job Number:		68119				Date:			16 Aug 2006			<b>Conformance Standards</b>  [X] FCC Part 15					
Customer:		Janizary Holdings, Inc.															
Model Number:		IVWA819															
Description:		RF amplifier															
FREQ	METER	Correction Factors					in dBuV/m			in uV/m			Positions				
		Bcn	Log	Cbl	Amp	Dis	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt	
30.423	30.2	12.5	0.	0.6	-24.4	0	18.9	40.0	-21.1	9	100	-91	PK	178	H	3.75	
84.083	35.4	8.9	0	1.2	-24.2	0	21.3	40.0	-18.7	12	100	-88	PK	360	H	3.75	
167.934	30.6	12.6	0	1.9	-24.2	0	20.9	43.5	-22.6	11	150	-139	PK	360	H	3.75	
248.683	30.3	0	12.2	2.3	-24.3	0	20.5	46.0	-25.5	11	200	-189	PK	0	H	4.00	
469.048	29.2	0	17.7	3.5	-24.7	0	25.7	46.0	-20.3	19	200	-181	PK	36	H	3.75	
897.175	31.3	0	23.0	5.5	-25.2	0	34.6	46.0	-11.4	54	200	-146	PK	205	H	1.98	
47.471	38.8	10.1	0	0.8	-24.3	0	25.4	40.0	-14.6	19	100	-81	PK	30	V	1.46	
118.893	33.2	11.0	0	1.5	-24.2	0	21.5	43.5	-22.0	12	150	-138	PK	70	V	1.66	
183.133	39.0	13.2	0	2.0	-24.2	0	30.0	43.5	-13.5	32	150	-118	PK	92	V	1.48	
248.190	30.2	0	12.2	2.3	-24.3	0	20.4	46.0	-25.6	10	200	-190	PK	205	V	1.29	
468.560	27.8	0	17.7	3.5	-24.7	0	24.3	46.0	-21.7	16	200	-184	PK	0	V	1.45	
899.600	29.7	0	23.1	5.5	-25.2	0	33.1	46.0	-12.9	45	200	-155	PK	166	V	1.24	

## 2.1055 Measurement of Frequency Stability (IC RSS-131)

---

The EUT is a power amplifier and contains no circuitry for generating or stabilizing the RF signal. The driver will be responsible for this task.

**2.1057 Frequency Spectrum to be Investigated**

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The Frequency was searched from the lowest radio frequency generated in the equipment through the 10<sup>th</sup> harmonic of the carrier frequency.

## RF Exposure

---

The IVWA819 (800 / 1900 MHz) dual band RF Compensator is operated as a signal booster as defined in 2.1091(b) based on its design and installation. The compensator is installed in such a way that it is physically secured and is generally located more than 20 cm from the end-user. This information is included in the user manual. It is suggested that the antenna be installed such that there is at least 20 cm of separation between user and the antenna.

**RF Exposure – MPE Calculations**

---

Input

Transmitter Power: 785mW @ 824-849MHz (Uplink)  
 42.0mW @ 869-894MHz (Downlink)  
 272mW @ 1850-1910MHz (Uplink)  
 17.4mW @ 1930-1990MHz (Downlink)

Antenna Gain: 6 dBi all cases

Cable loss: 1.5 dB @ 824–849 MHz and 869-894MHz  
 2.5 dB @ 1850–1910 MHz and 1930-1990MHz

Frequency range: 824-849MHz and 1850-1910MHz (Uplink)  
 869-894MHz and 1930-1990MHz (Downlink)

Assumptions

1. A single ¼ wavelength radiating antenna is assumed.
2. Closest exposure distance is assumed to be 20 cm
3. Using the formula Level 1/Limit1 + Level2/Limit2 to show predicted total RF exposure if both bands are operating simultaneously, result must be less than 1.

Where: Limit 1 is the limit in the uplink band  
 Limit 2 is the limit in the downlink band  
 Level 1 is the calculated maximum RF exposure in the uplink band  
 Level 2 is the calculated maximum RF exposure in the downlink band

824-894 Band (Uplink and Downlink)

Occupational/Controlled Exposure = 0.184416 is less than 1 = compliant  
 General Population/Uncontrolled Exposure = 0.922662 is less than 1 = compliant

1850-1990 Band (Uplink and Downlink)

Occupational/Controlled Exposure = 0.009835 is less than 1 = compliant  
 General Population/Uncontrolled Exposure = 0.049204 is less than 1 = compliant

## RF Exposure – MPE Calculations

---

### Calculations for Uplink

The following results shall be assumed to be accurate for the far-field only. These predictions will over-estimate power density in the near-field. Based on the use of a ¼ wavelength radiator, a distance of 20 cm is considered to be in the far-field for all cases.

$$S = PG/4*\pi*R^2$$

@ 824 – 849 MHz

P is 785 mW

G is 4.5 dBi (Antenna gain – loss) or  $10^{(4.5/10)}$  or 2.818 Numerical

R is 20 cm

$$\underline{\underline{S = 0.440\text{mW/cm}^2}}$$

For Occupational/Controlled Exposure

From 300 to 1500 MHz, power density limit is  $f/300 \text{ mW/cm}^2$

@ 824 MHz, power density limit is **2.747 mW/cm<sup>2</sup> for 6 minutes.**

For General Population/Uncontrolled Exposure

From 300 to 1500 MHz, power density limit is  $f/1500 \text{ mW/cm}^2$

@ 824 MHz, Power density limit is **0.549 mW/cm<sup>2</sup> for 30 minutes.**

Conclusion: Meets MPE limits

@ 1850 – 1910 MHz

P is 272 mW

G is 3.5 dBi (Antenna gain – loss) or  $10^{(3.5/10)}$  or 2.24 Numerical

R is 20 cm

$$\underline{\underline{S = 0.121205\text{mW/cm}^2}}$$

For Occupational/Controlled Exposure

From 1,500 to 100,000 MHz, power density limit is **5 mW/cm<sup>2</sup> for 6 minutes.**

For General Population/Uncontrolled Exposure

From 1,500 to 100,000 MHz, power density limit is **1 mW/cm<sup>2</sup> for 30 minutes.**

Conclusion: Meets MPE limits

## RF Exposure – MPE Calculations

---

### Calculations for Downlink

The following results shall be assumed to be accurate for the far-field only. These predictions will over-estimate power density in the near-field. Based on the use of a ¼ wavelength radiator, a distance of 20 cm is considered to be in the far-field for all cases.

$$S = PG/4*PI*R^2$$

@ 869 – 894 MHz

P is 42 mW

G is 4.5 dBi (Antenna gain – loss) or  $10^{(4.5/10)}$  or 2.818 Numerical

R is 20 cm

$$\underline{S = 0.024mW/cm^2}$$

For Occupational/Controlled Exposure

From 300 to 1500 MHz, power density limit is  $f/300$  mW/cm<sup>2</sup>

@ 869 MHz, power density limit is **2.897 mW/cm<sup>2</sup> for 6 minutes.**

For General Population/Uncontrolled Exposure

From 300 to 1500 MHz, power density limit is  $f/1500$  mW/cm<sup>2</sup>

@ 869 MHz, Power density limit is **0.579 mW/cm<sup>2</sup> for 30 minutes.**

Conclusion: Meets MPE limits

@ 1930 – 1990 MHz

P is 17.4 mW

G is 3.5 dBi (Antenna gain – loss) or  $10^{(3.5/10)}$  or 2.24 Numerical

R is 20 cm

$$\underline{S = 0.007754mW/cm^2}$$

For Occupational/Controlled Exposure

From 1,500 to 100,000 MHz, power density limit is **5 mW/cm<sup>2</sup> for 6 minutes.**

For General Population/Uncontrolled Exposure

From 1,500 to 100,000 MHz, power density limit is **1 mW/cm<sup>2</sup> for 30 minutes.**

Conclusion: Meets MPE limits

**Appendix A**

**Photographs**

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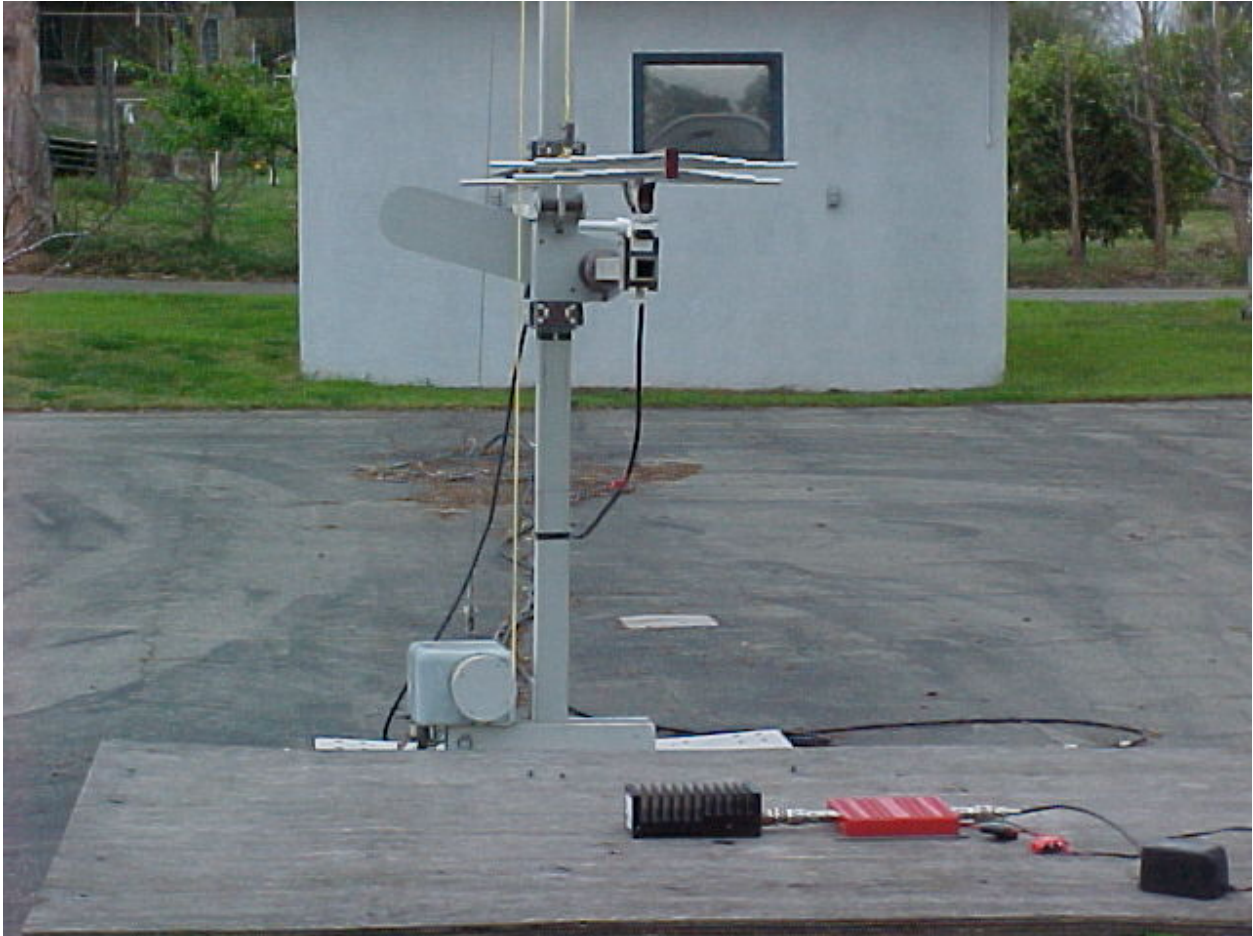
# PHOTOS: RADIATED EMISSIONS: BICON

Notes:



# PHOTOS: RADIATED EMISSIONS: LOG

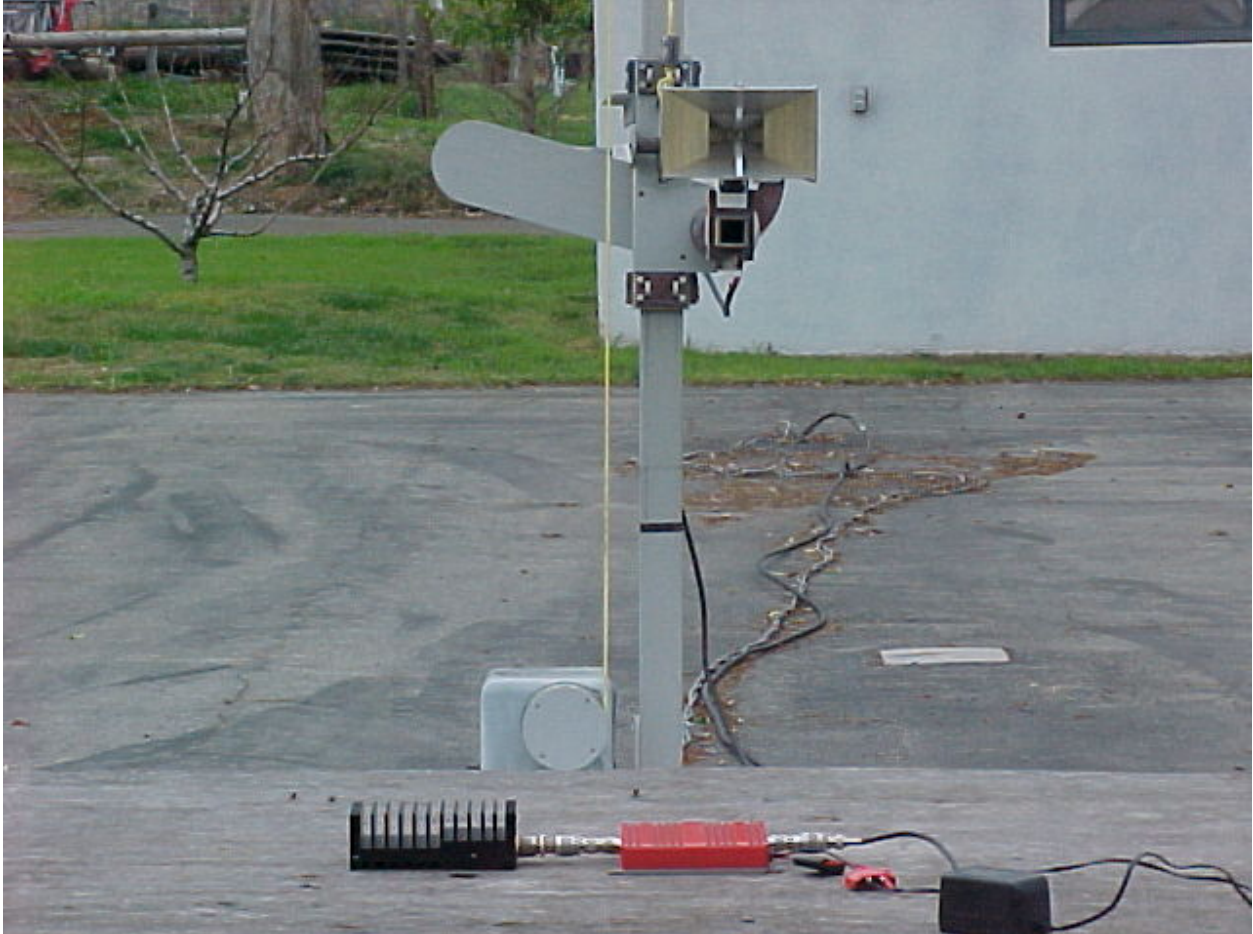
Notes:



## PHOTOS: RADIATED FIELD STRENGTH OF SPURIOUS EMISSIONS

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Notes:



**PHOTO: RF POWER OUTPUT, EMISSIONS LIMITATIONS  
GSM/TDMA, OCCUPIED BANDWIDTH  
GSM/TDMA, CONDUCTED SPURIOUS  
EMISSIONS AT ANTENNA TERMINALS**

Notes:

