SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24
Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The antenna power conducted emissions were measured with the EUT set in receive mode. The measurements were made using a direct connection between each of the RF outputs of the EUT and the spectrum analyzer. The spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/23/06
Customer:	Radioframe Networks, Inc.			Temperature:	24°C
Attendees:	Dean Busch			Humidity:	41%
Project:	None			Barometric Pres.:	29.93
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.111: 2006	ANSI C63.4 2003

COMMENTS

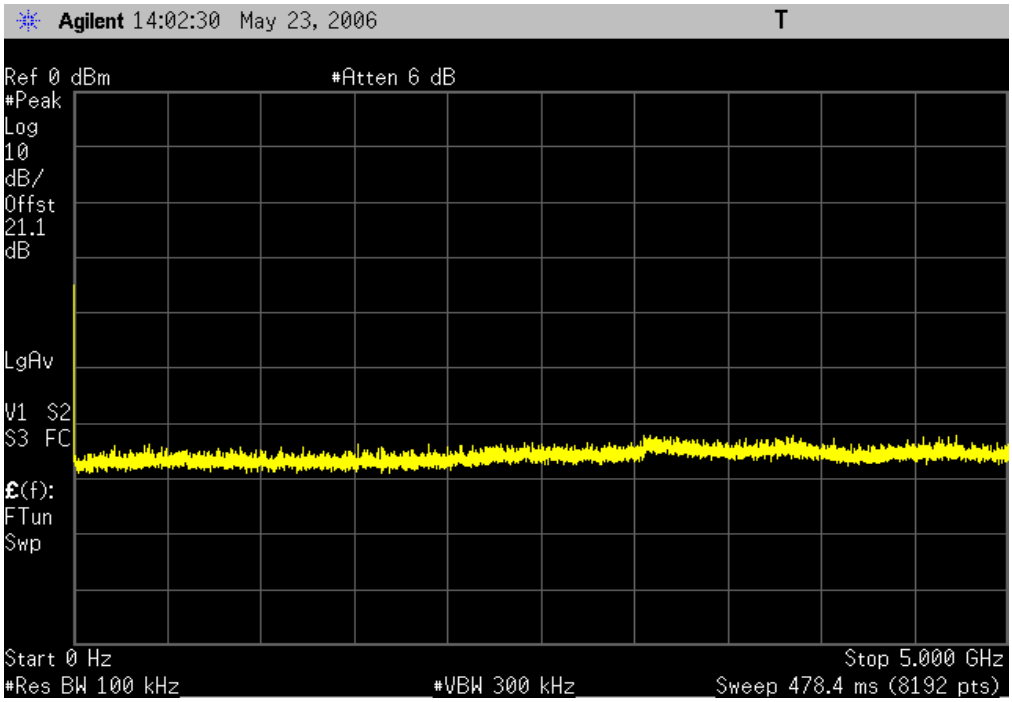
800MHz Band

DEVIATIONS FROM TEST STANDARD

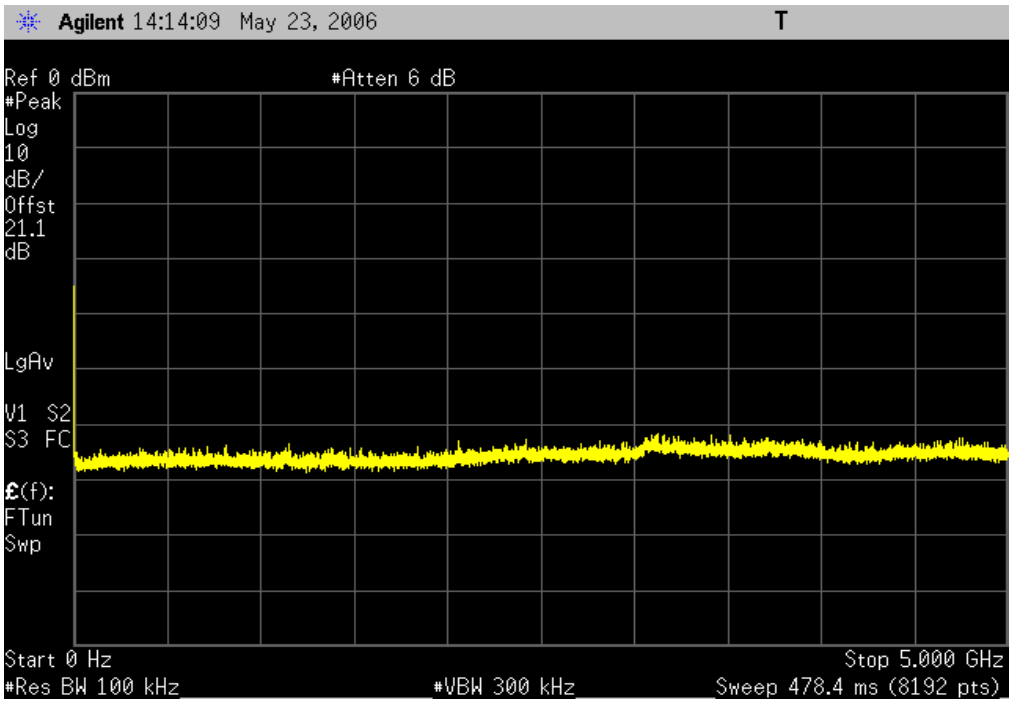
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
RX1 port	< -60 dBm	≤ -57 dBm	Pass
RX2 port	< -60 dBm	≤ -57 dBm	Pass
RX3 port	< -60 dBm	≤ -57 dBm	Pass

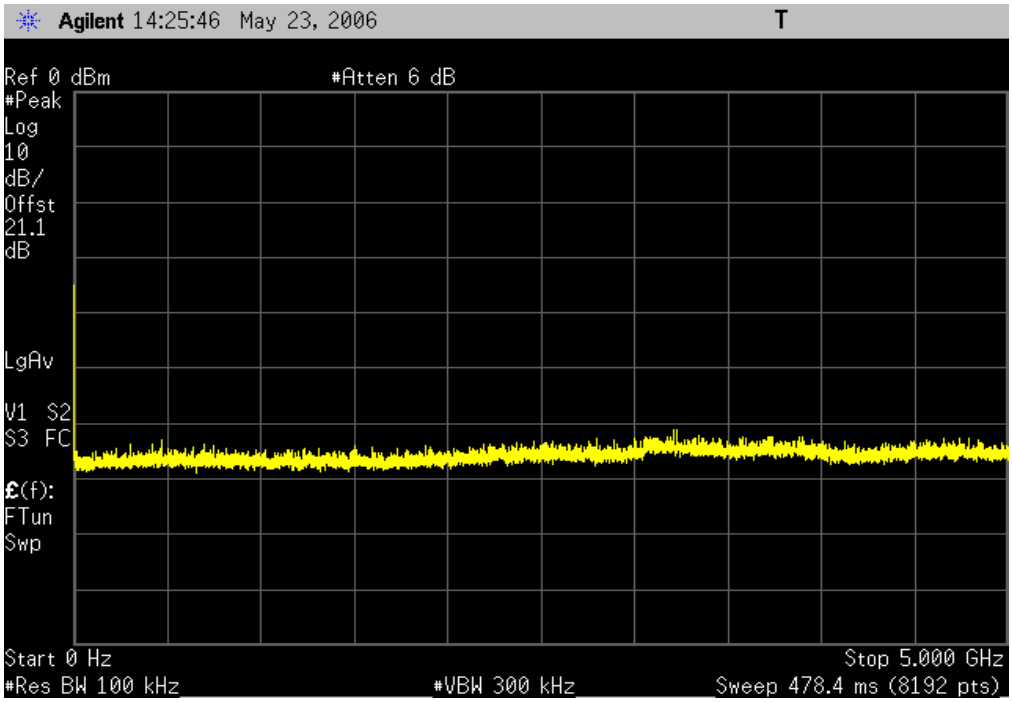
RX1 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



RX2 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



RX3 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 9 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/18/06
Customer:	Radioframe Networks, Inc.			Temperature:	24°C
Attendees:	Dean Busch			Humidity:	35%
Project:	None			Barometric Pres.:	29.99
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

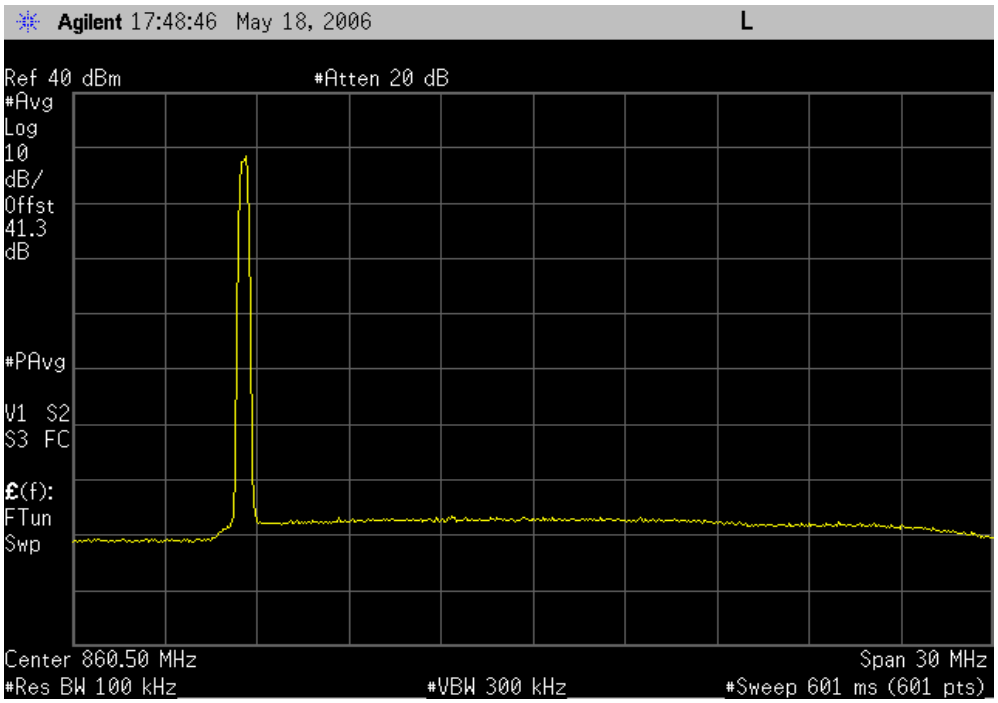
800MHz Band, High Power Level

DEVIATIONS FROM TEST STANDARD

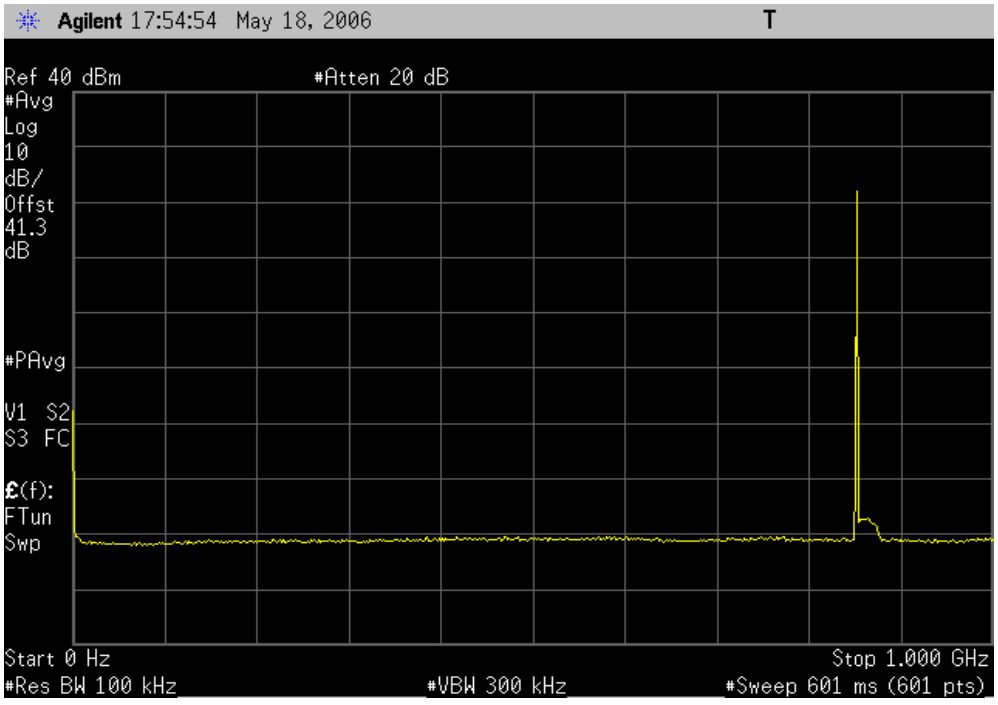
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
High Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, In Band	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass
12 Channel Intermods, In Band, Lower group			

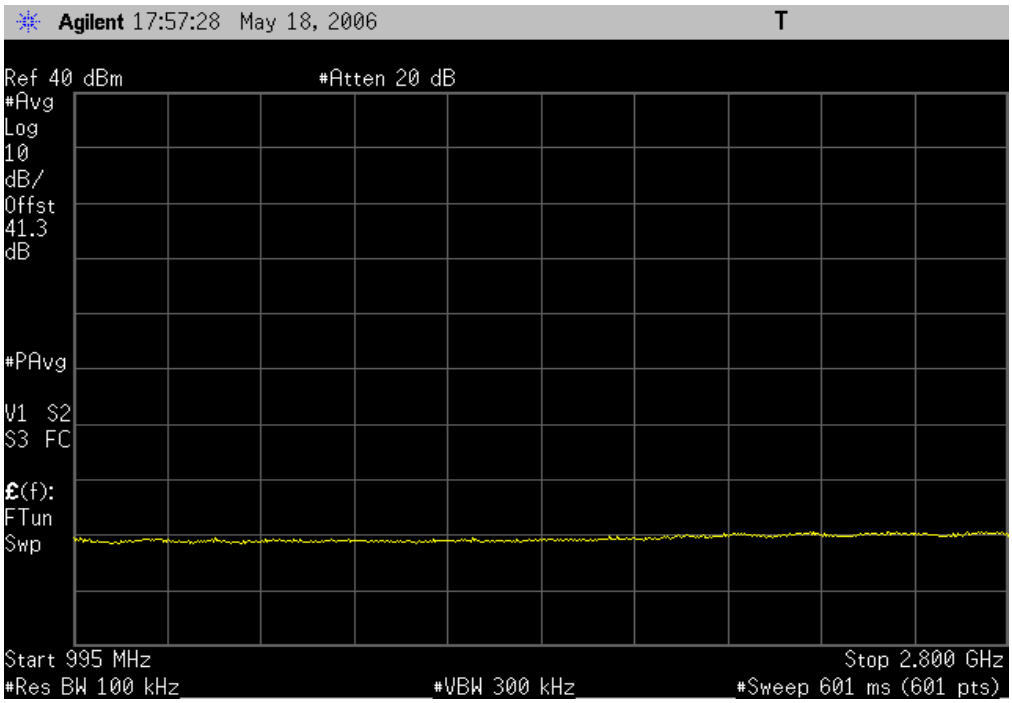
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



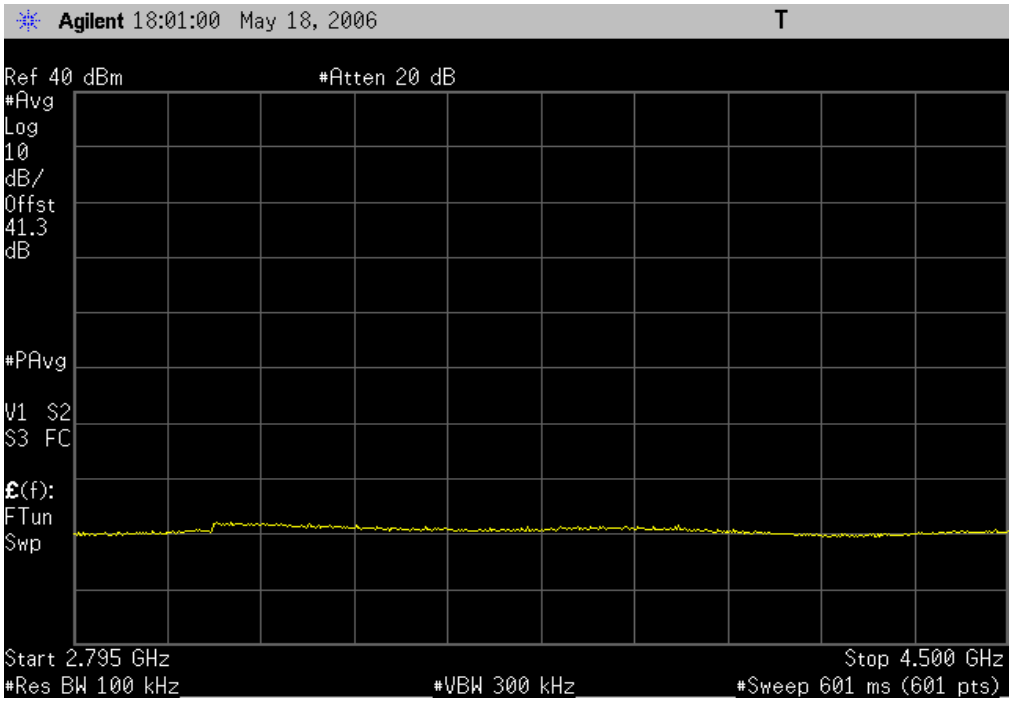
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



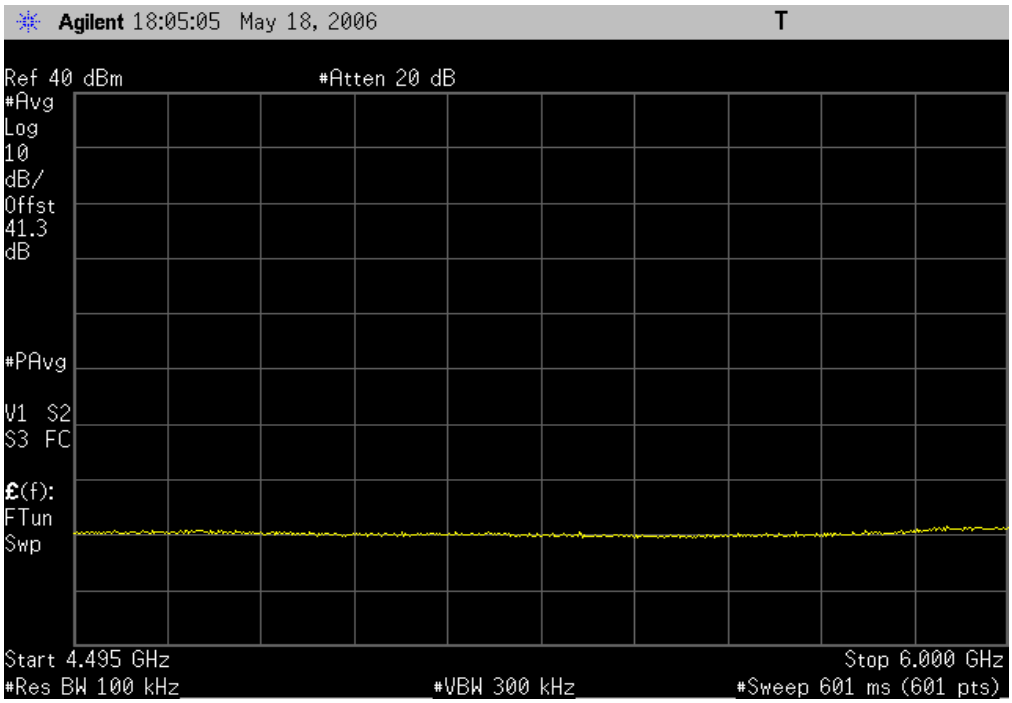
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



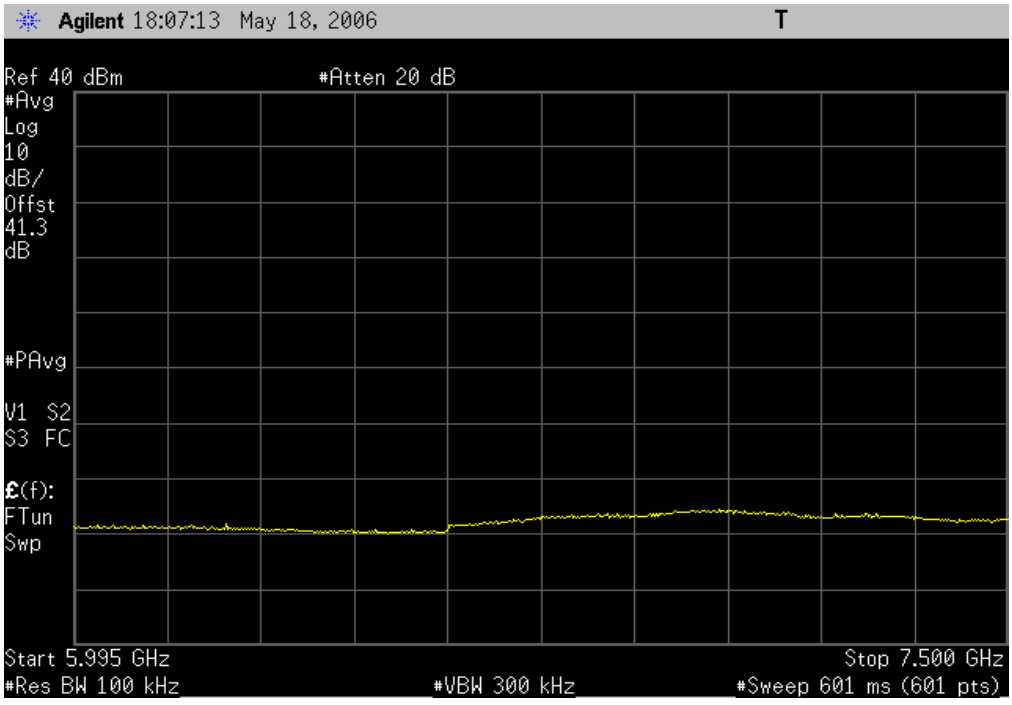
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



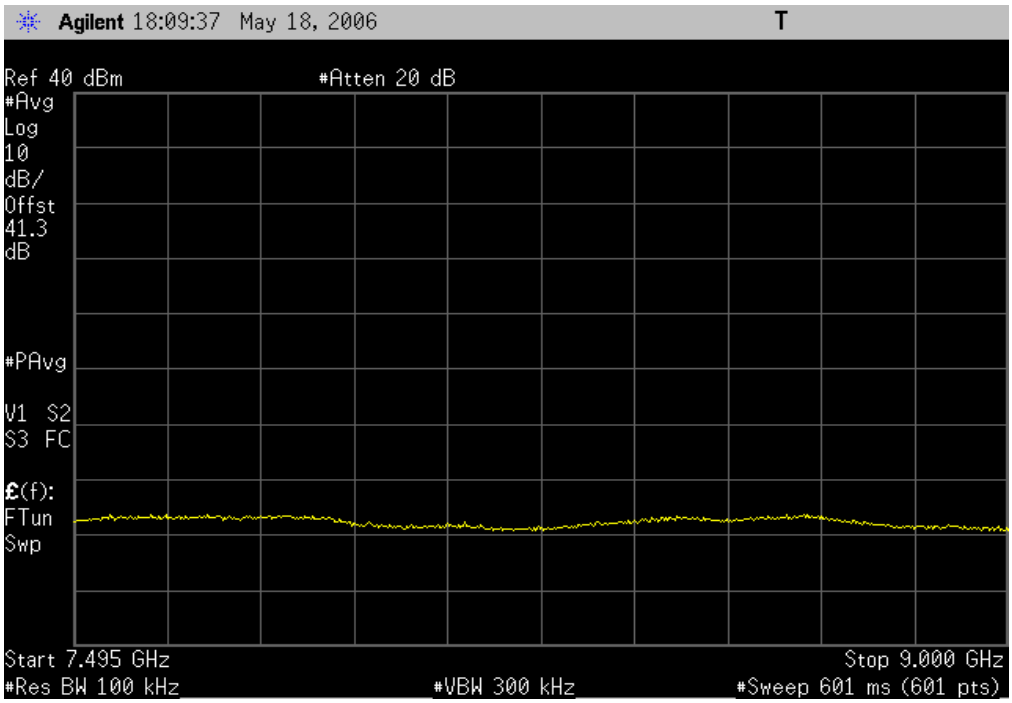
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



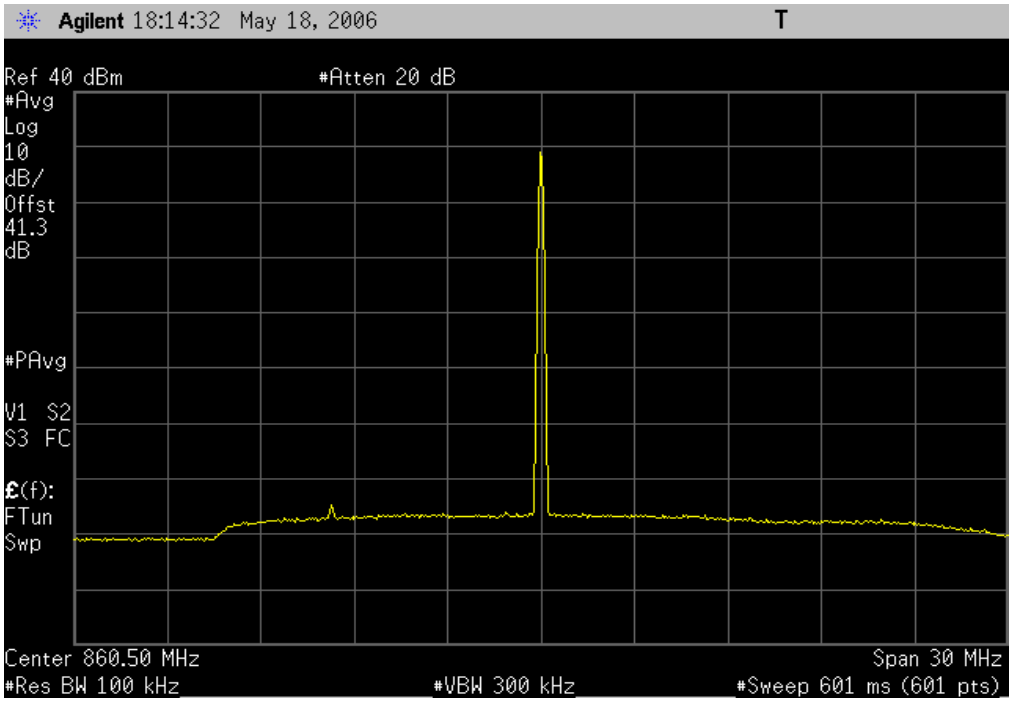
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Low Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

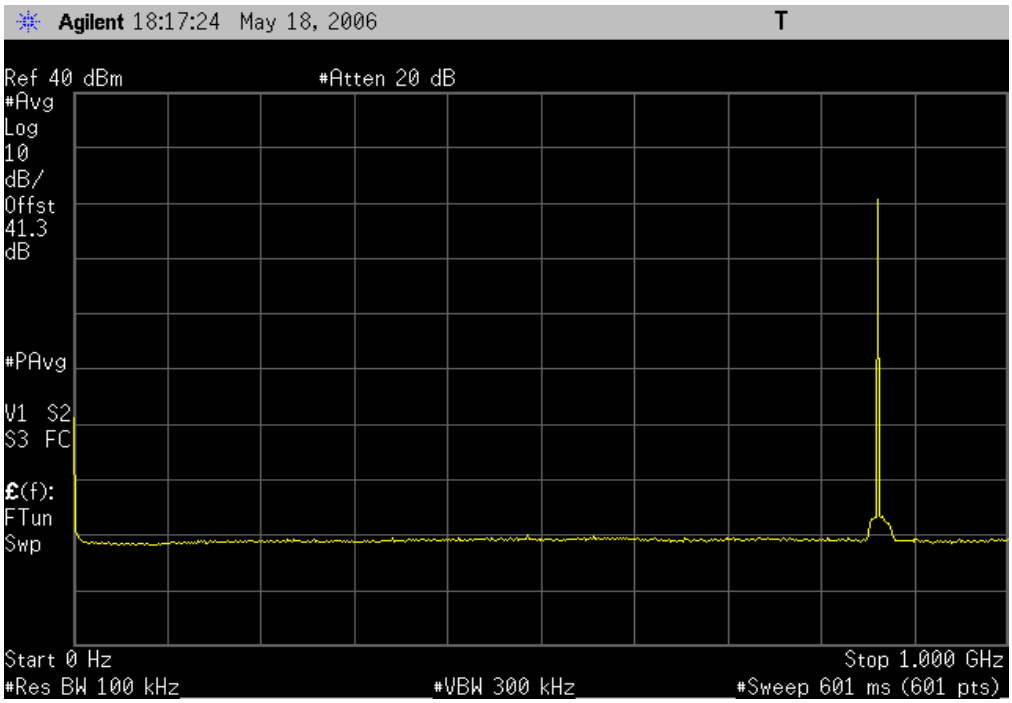


Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

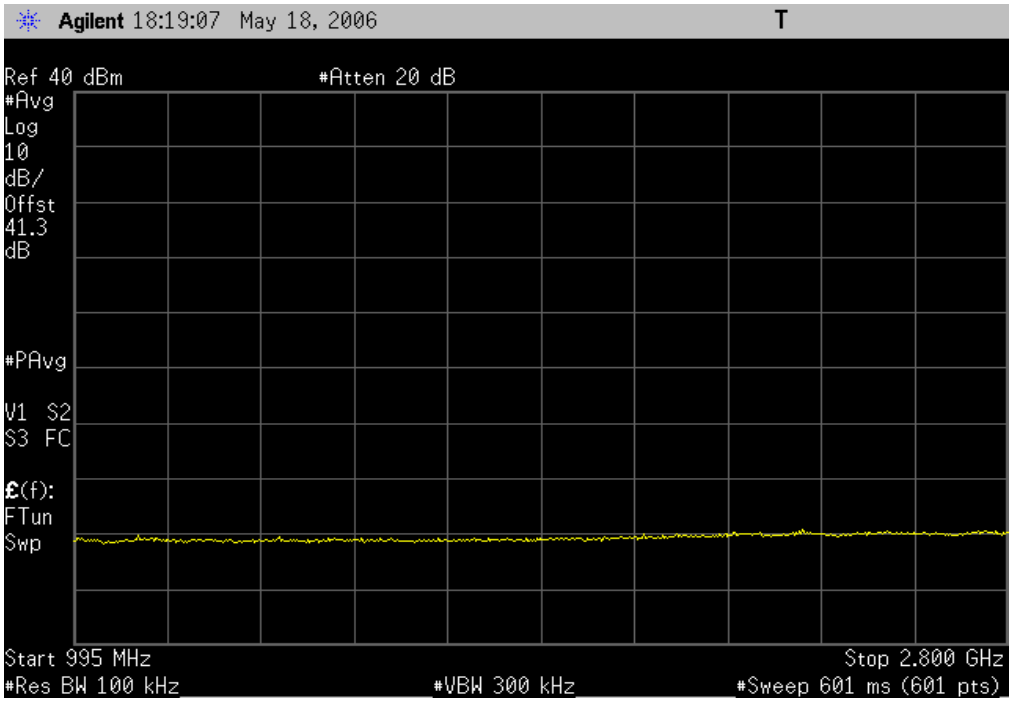


Spurious Emissions at Antenna Terminals

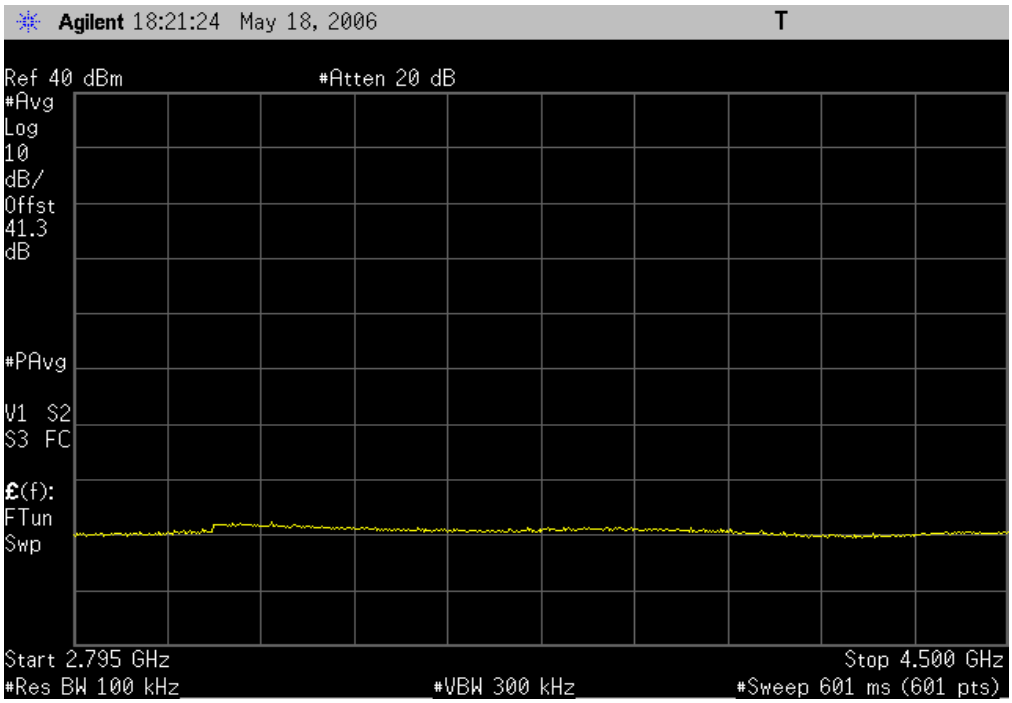
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



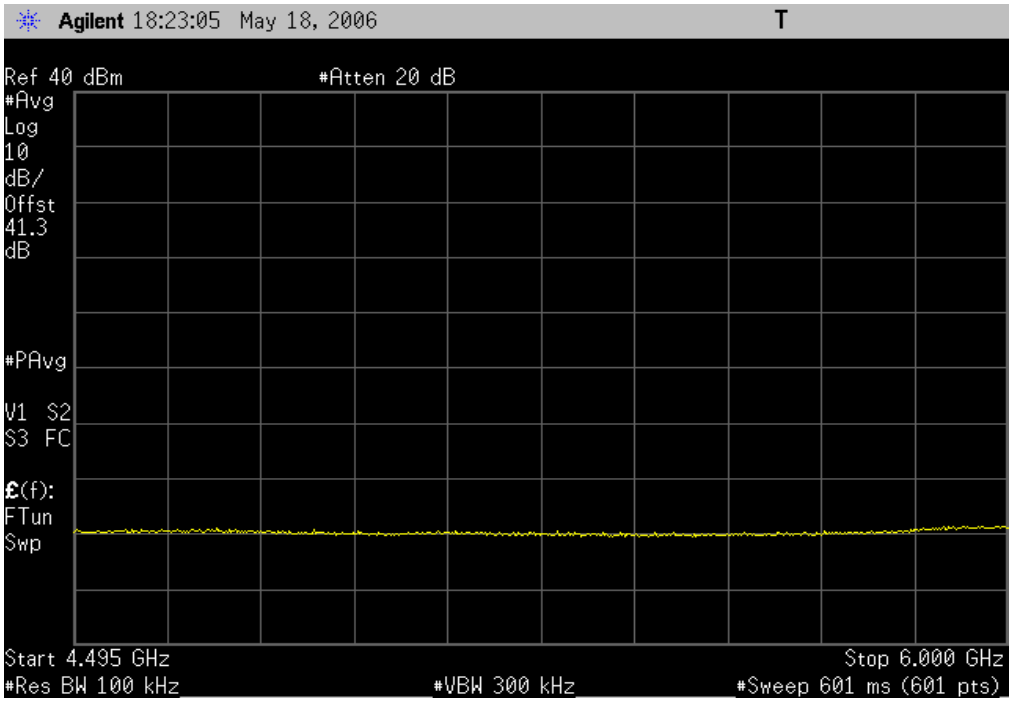
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



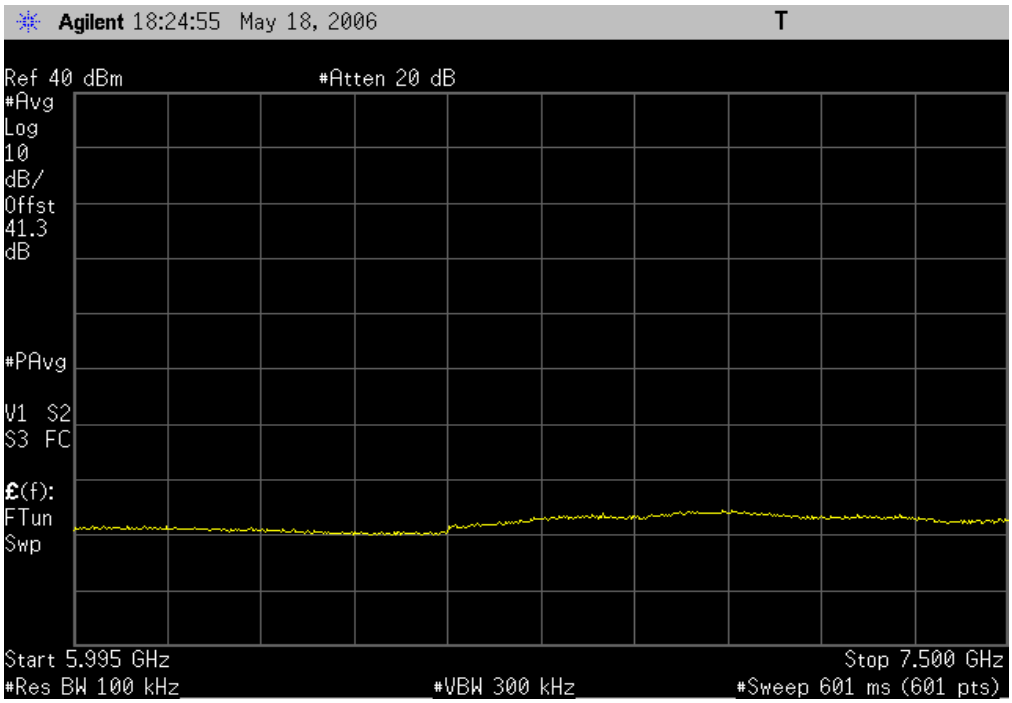
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



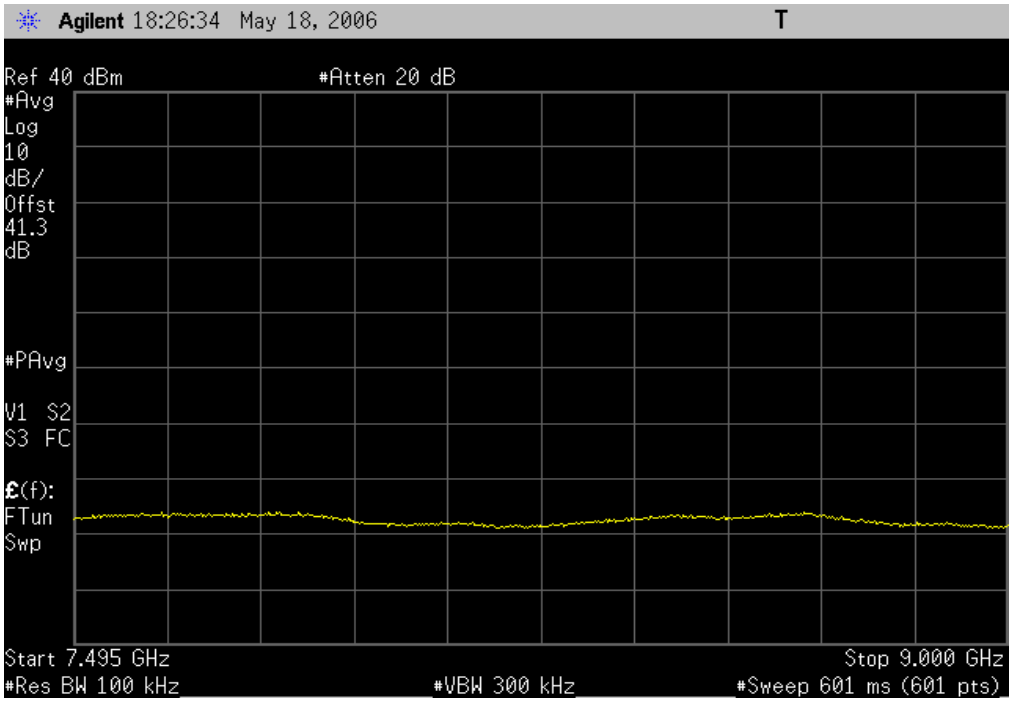
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

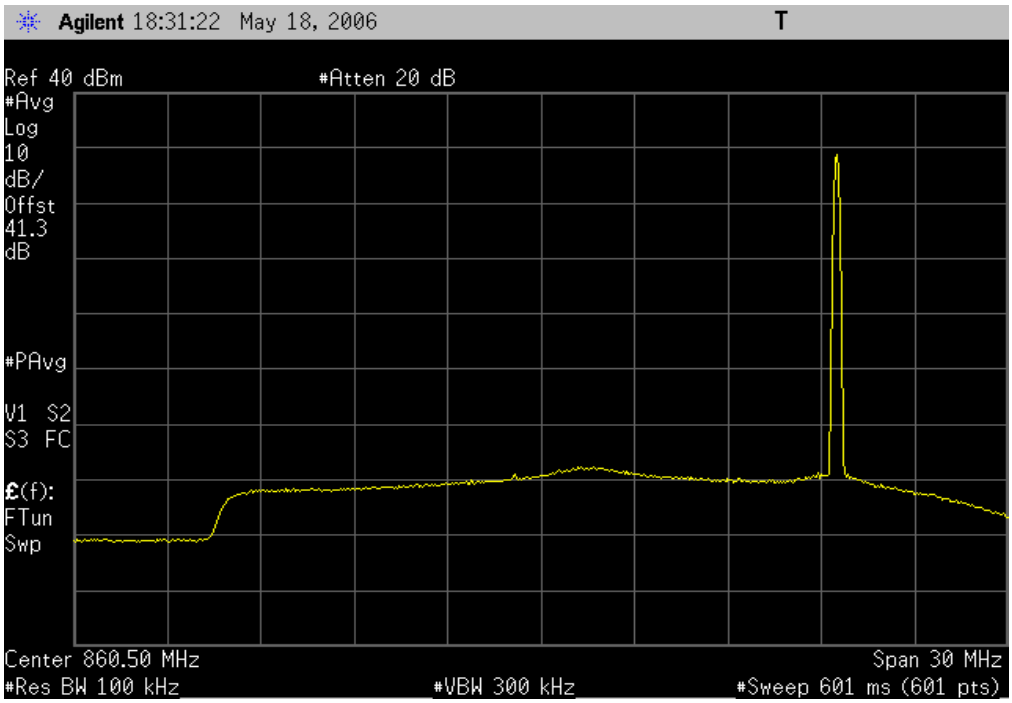


Mid Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

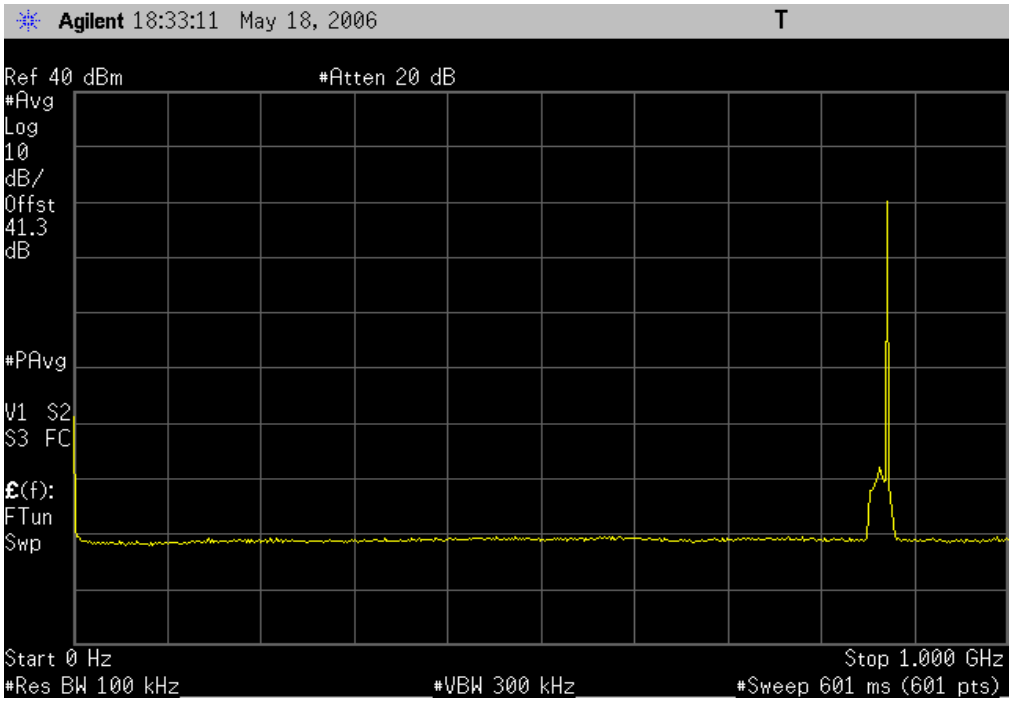


Spurious Emissions at Antenna Terminals

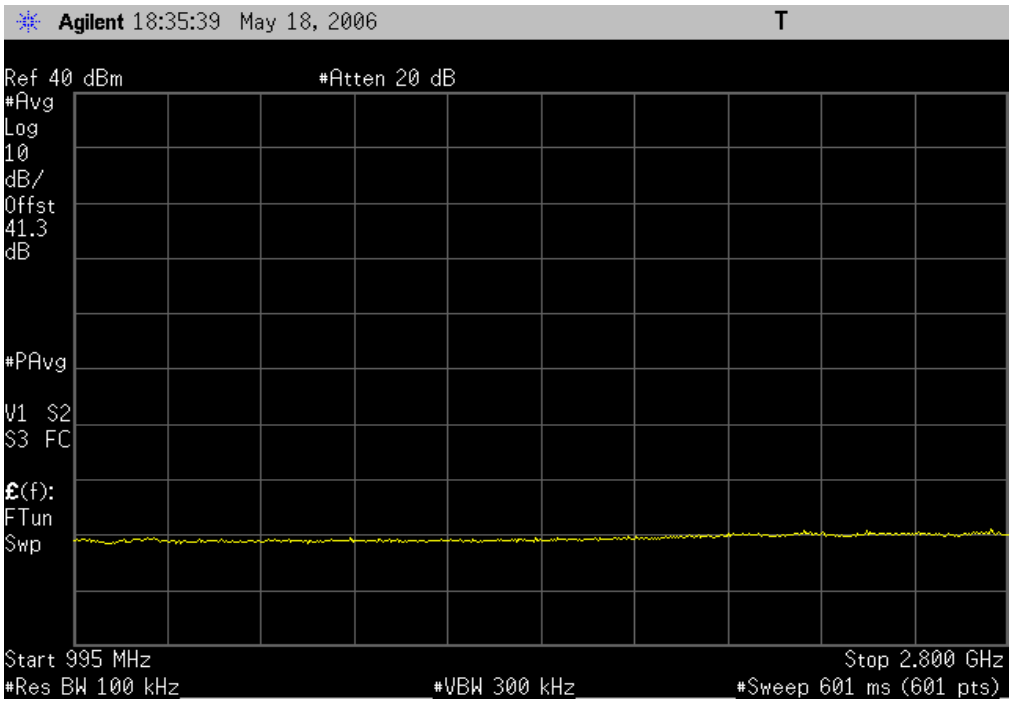
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



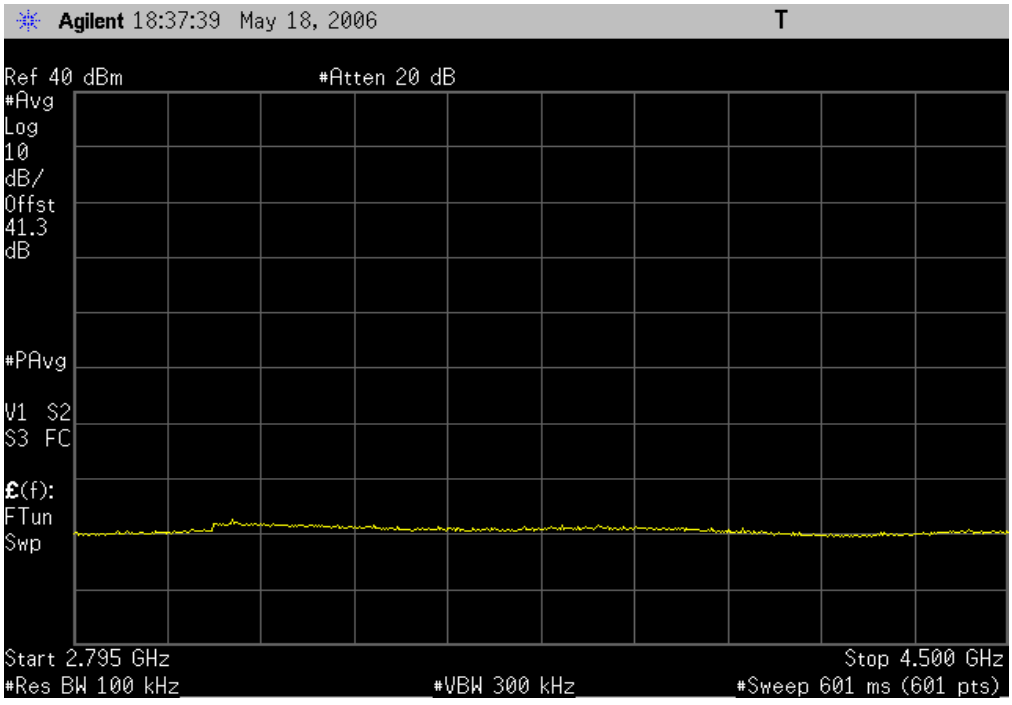
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



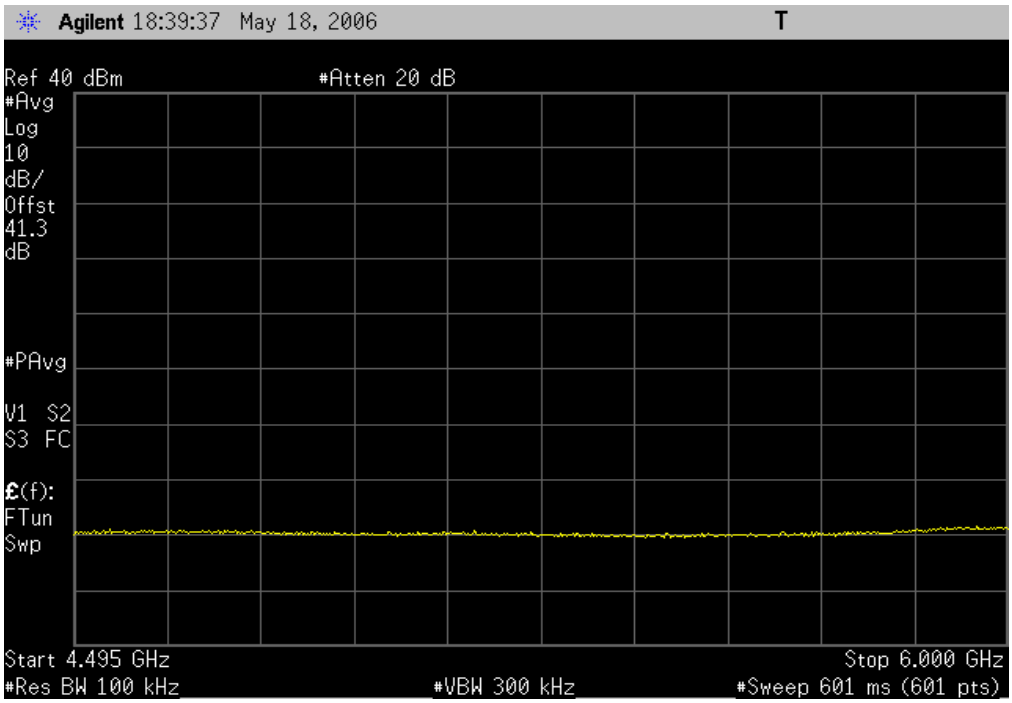
High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



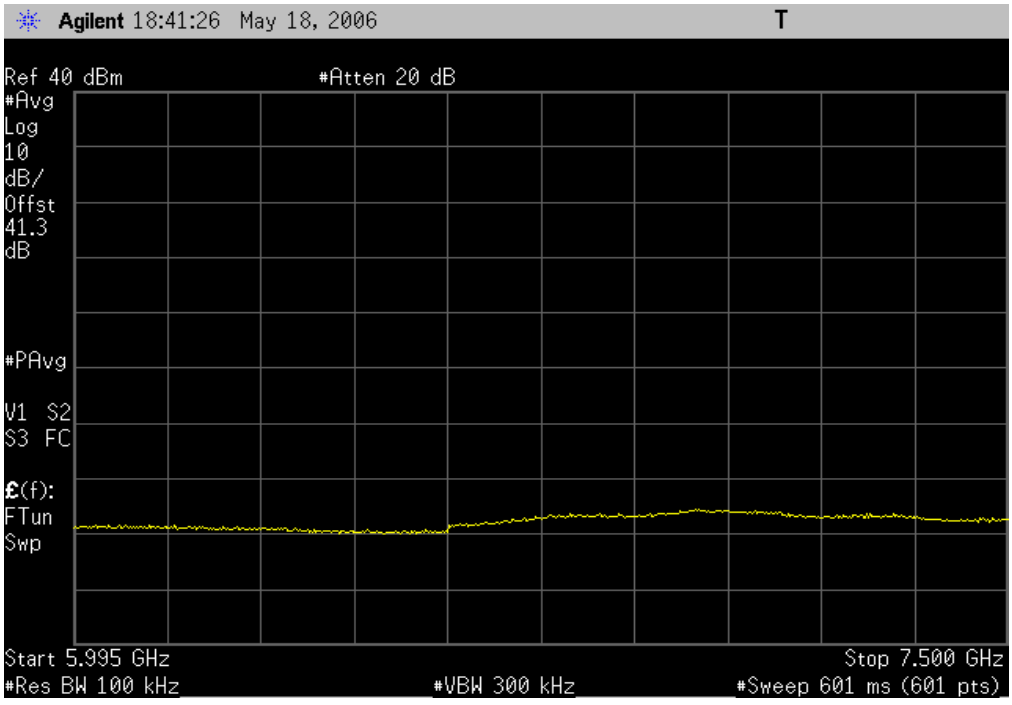
High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

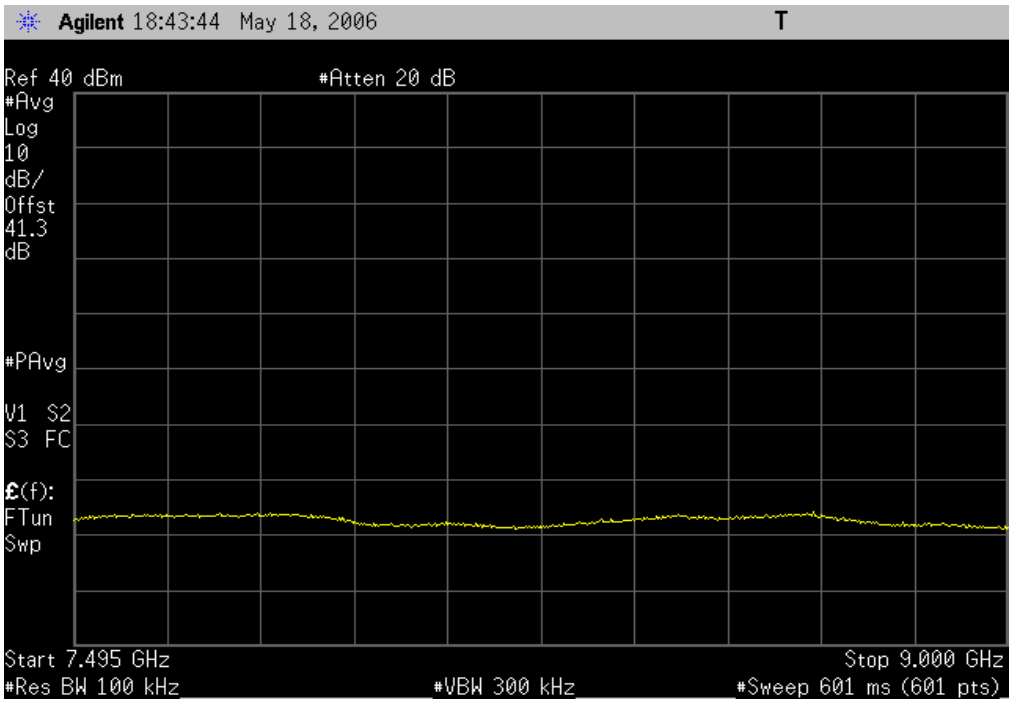


High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

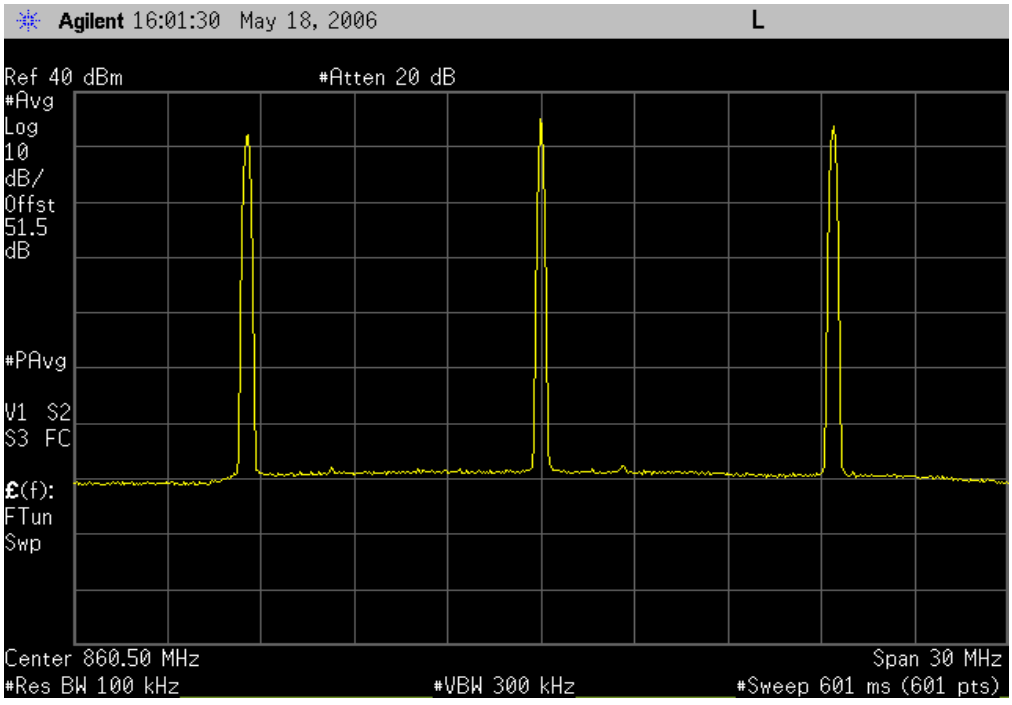


Spurious Emissions at Antenna Terminals

High Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

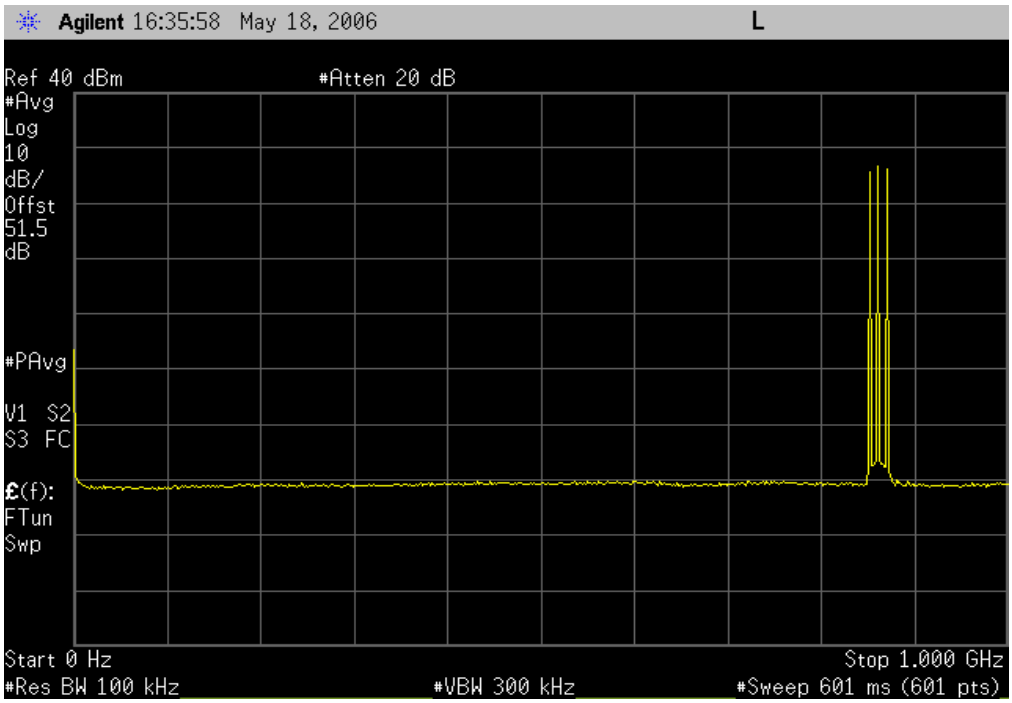


12 Channel Intermods, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

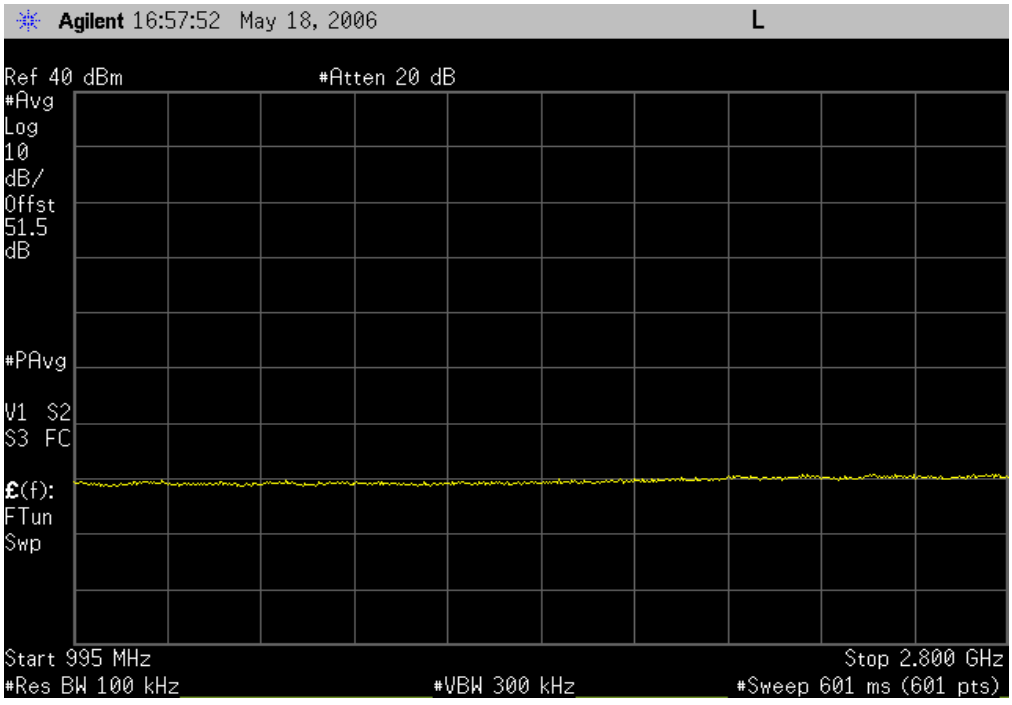


Spurious Emissions at Antenna Terminals

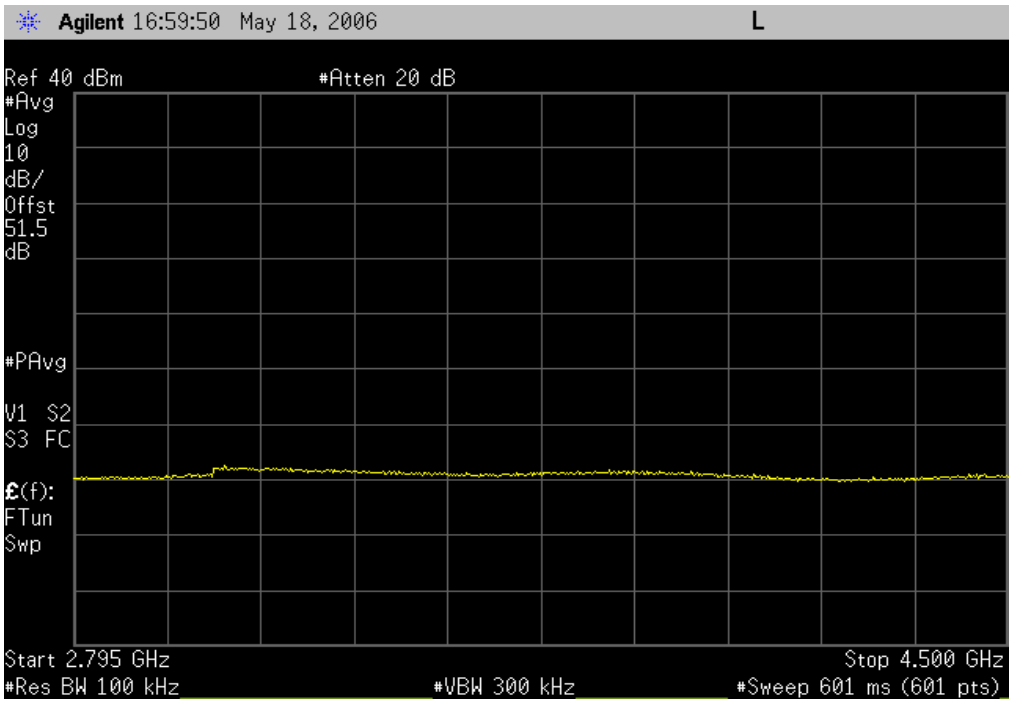
12 Channel Intermods, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



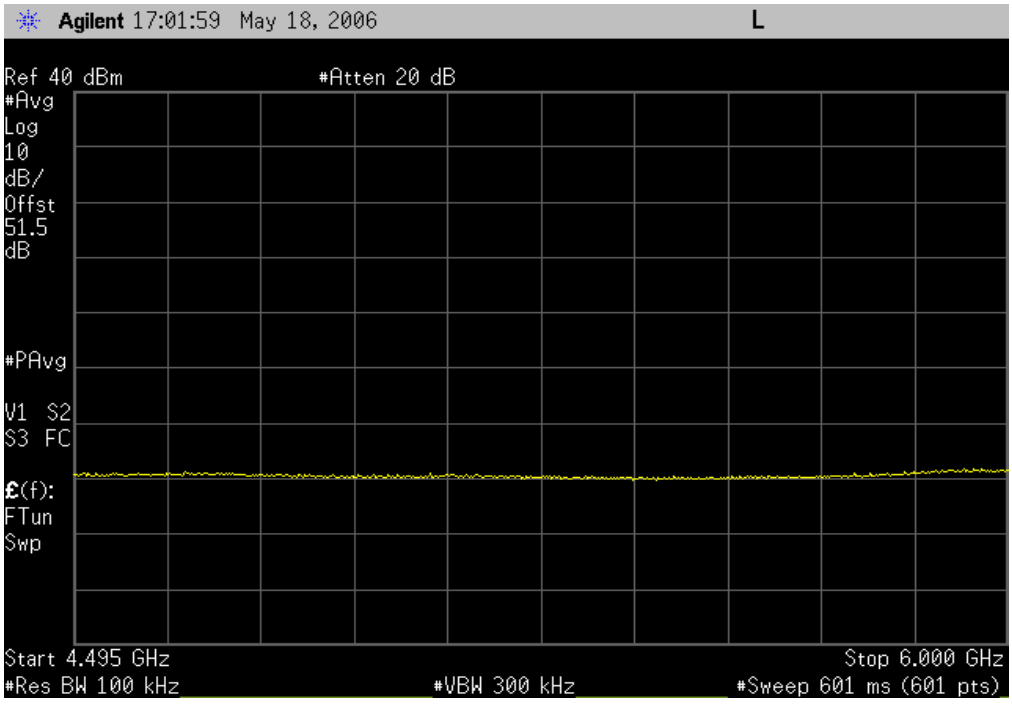
12 Channel Intermods, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



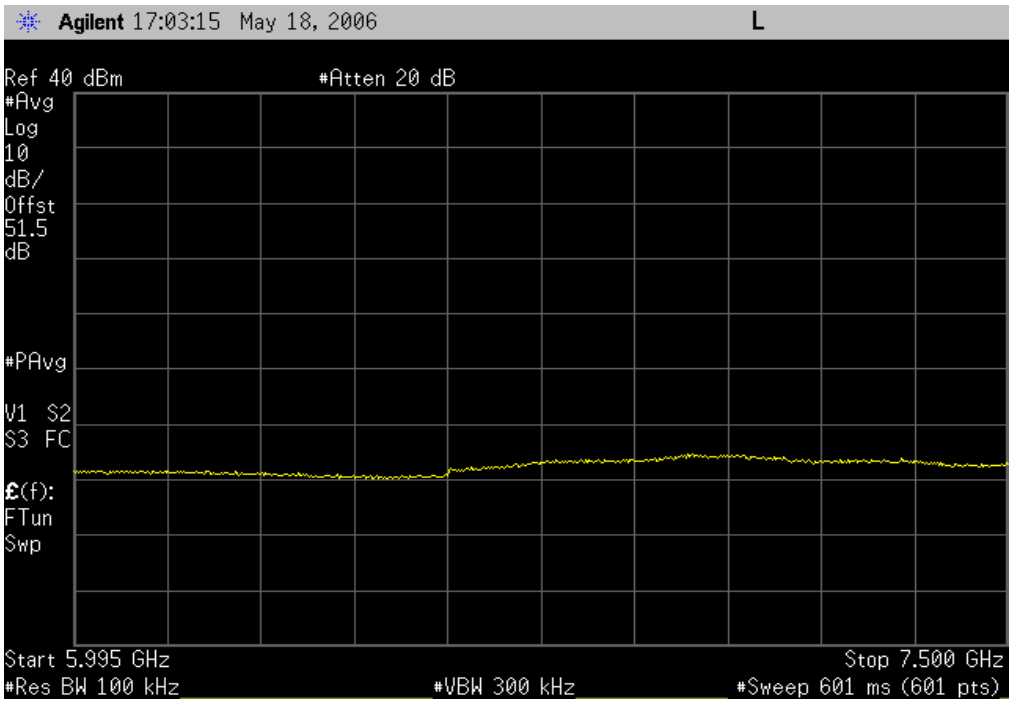
12 Channel Intermods, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



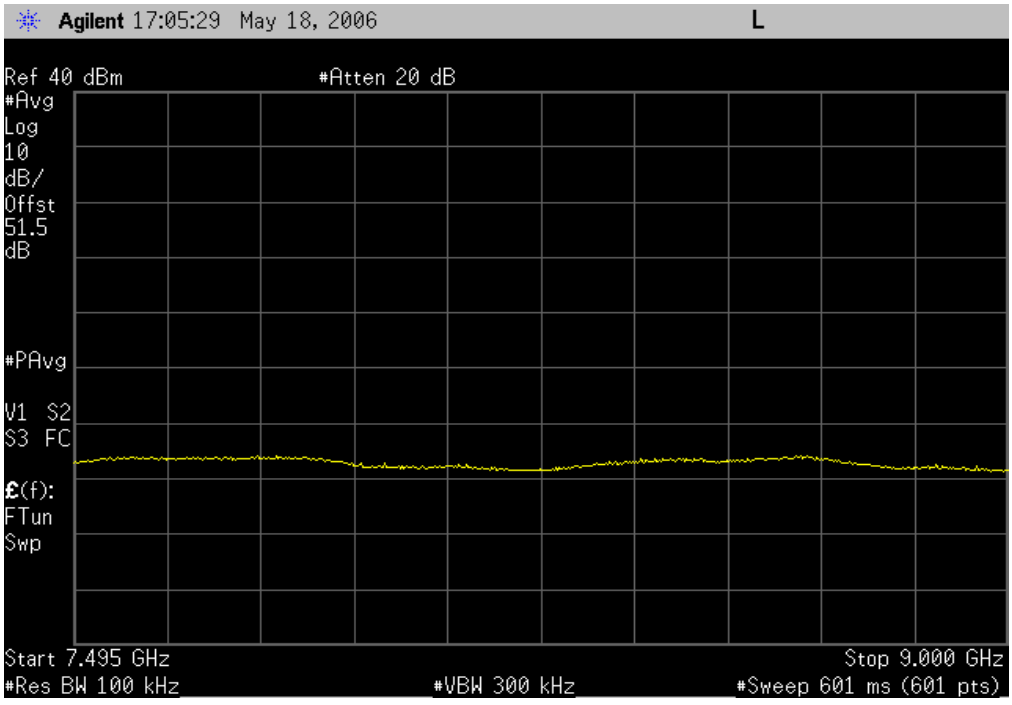
12 Channel Intermods, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



12 Channel Intermods, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



12 Channel Intermods, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 9 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/18/06
Customer:	Radioframe Networks, Inc.			Temperature:	24°C
Attendees:	Dean Busch			Humidity:	35%
Project:	None			Barometric Pres.:	29.99
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

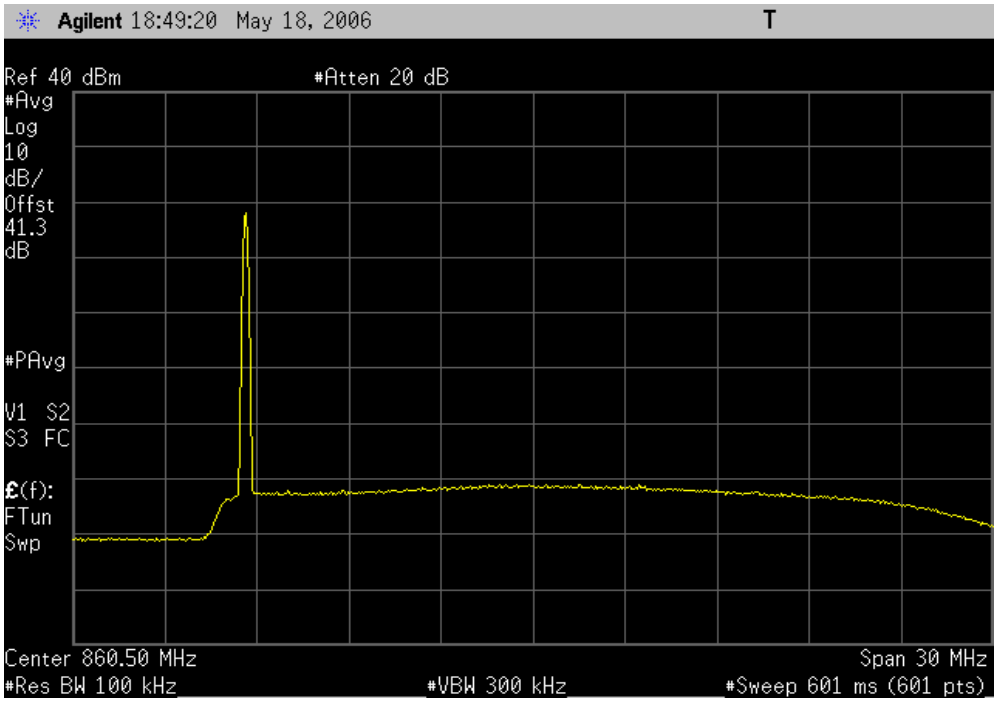
800MHz Band, Low Power Level

DEVIATIONS FROM TEST STANDARD

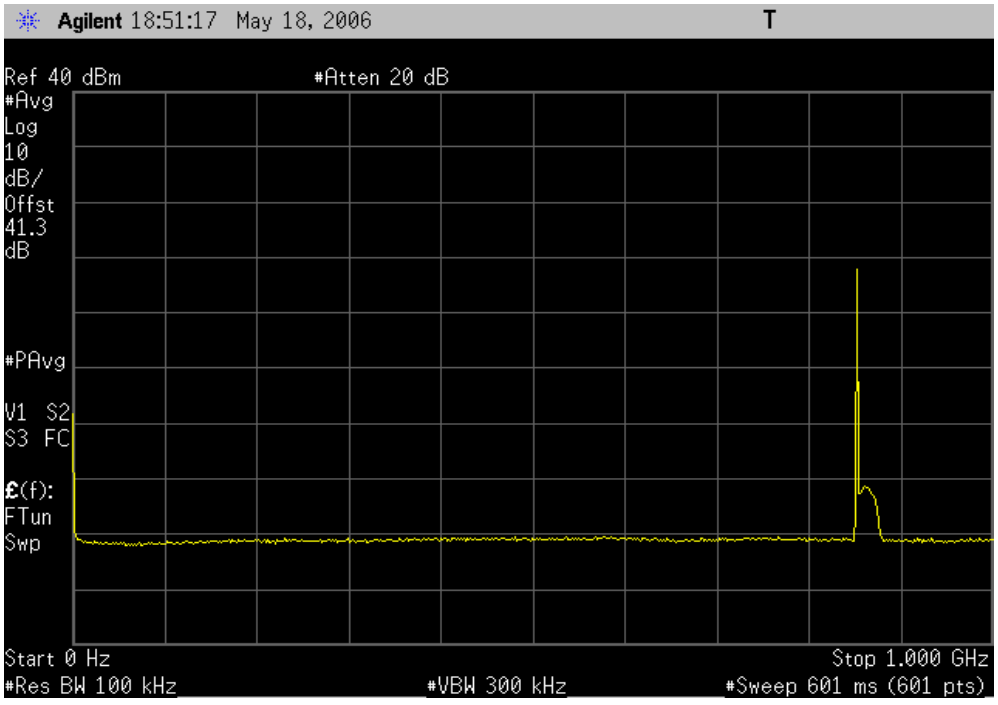
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495MHz-9.0GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 7.495MHz-9.0GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
High Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495MHz-9.0GHz	< -30 dBm	≤ -13 dBm	Pass

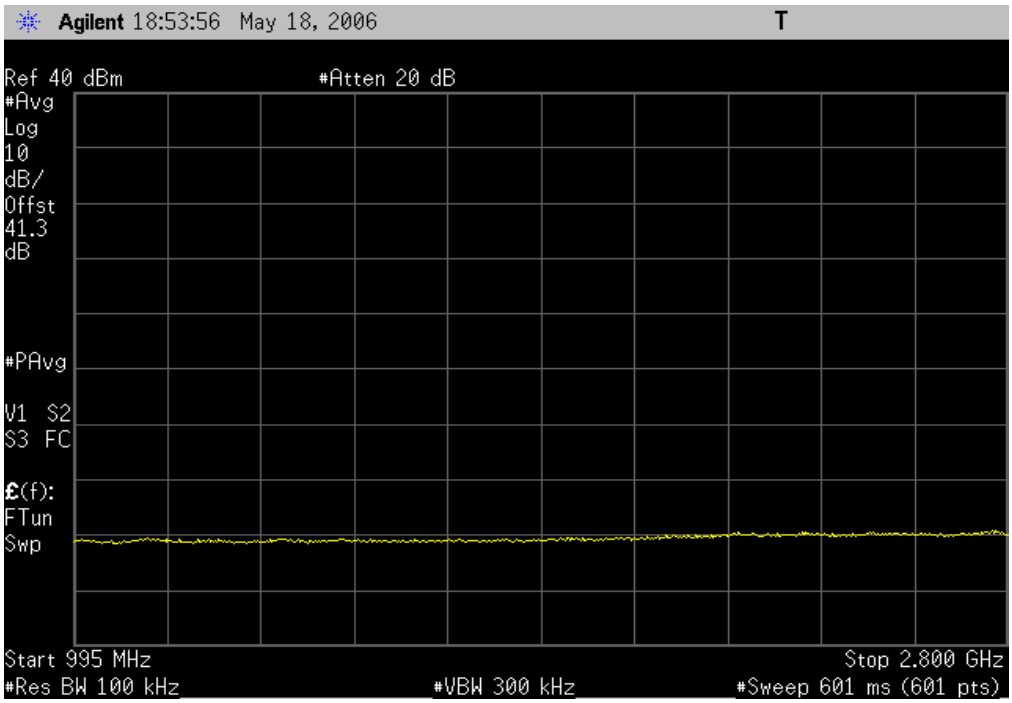
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



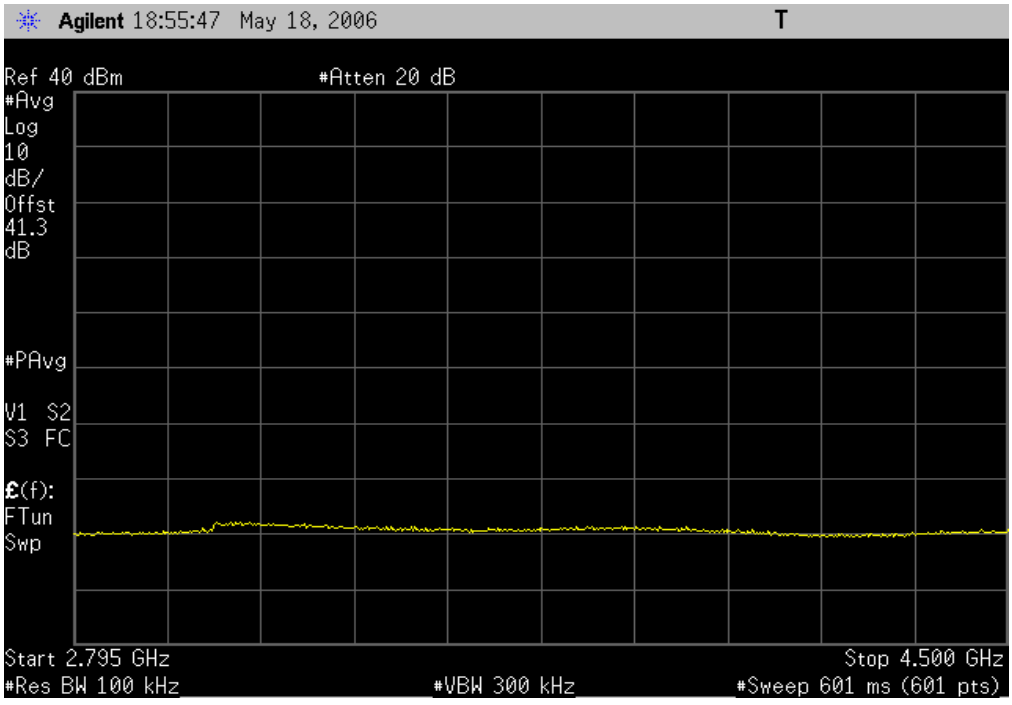
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



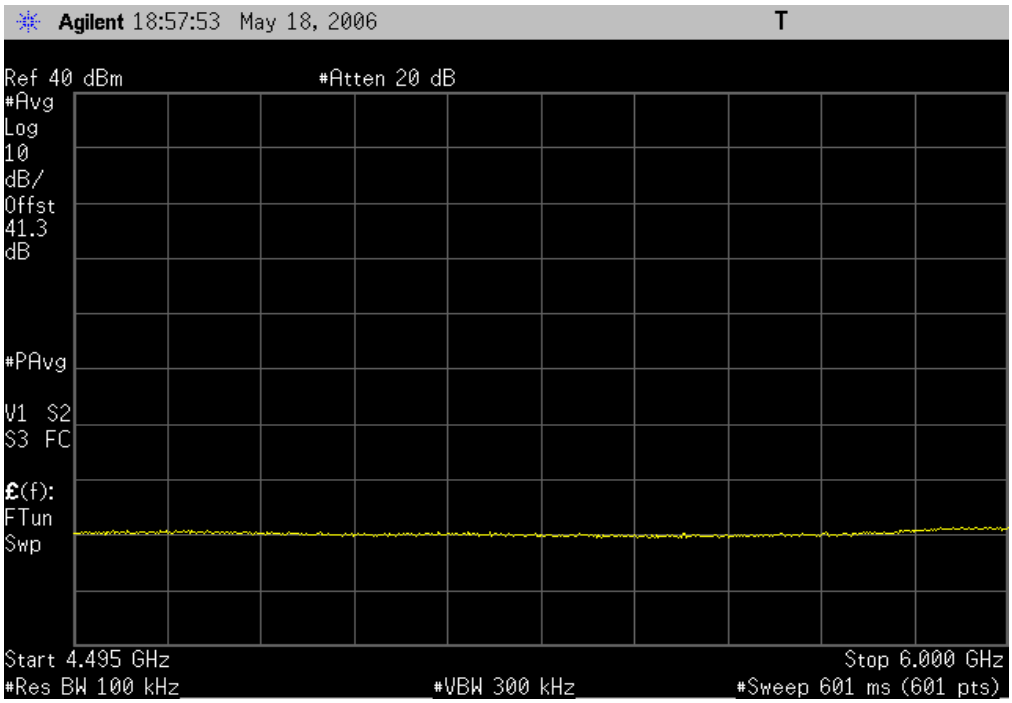
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



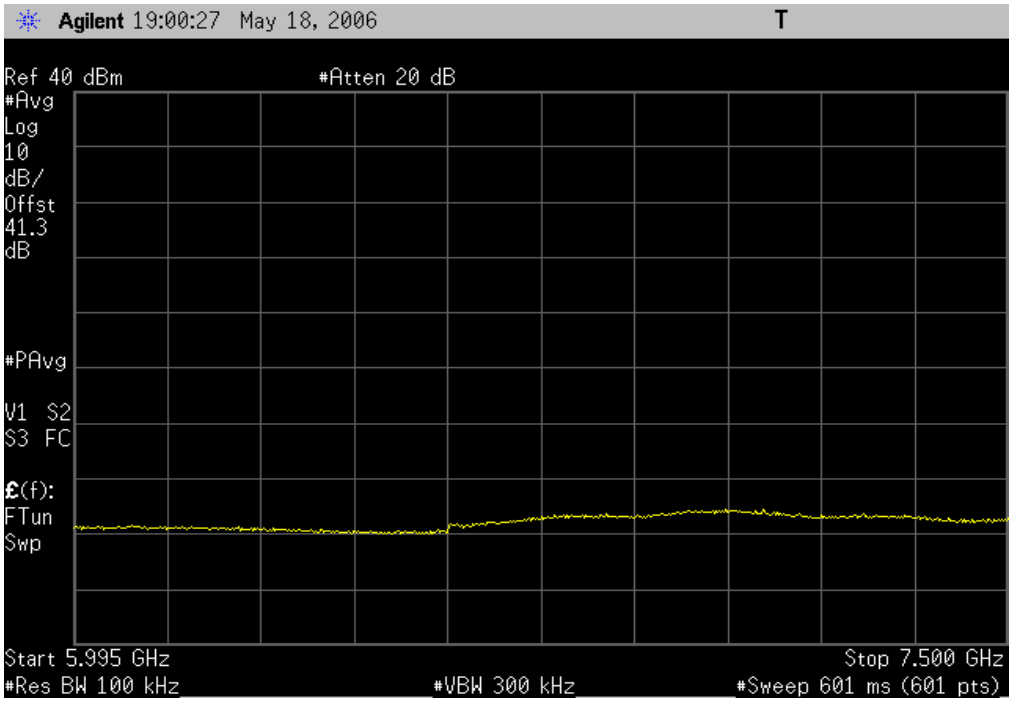
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



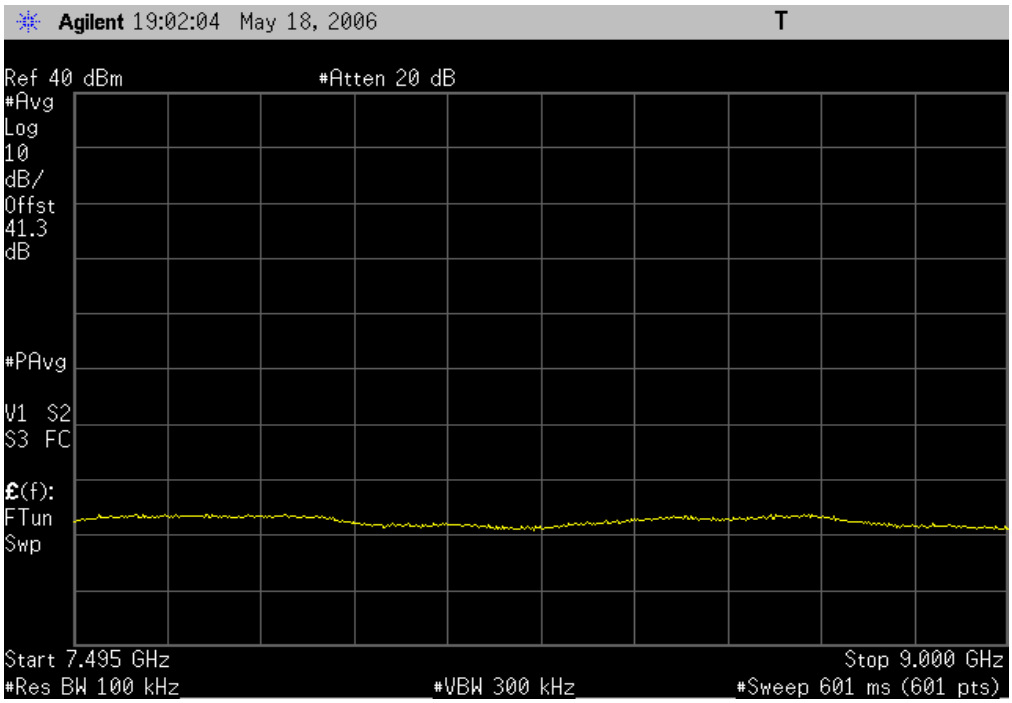
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



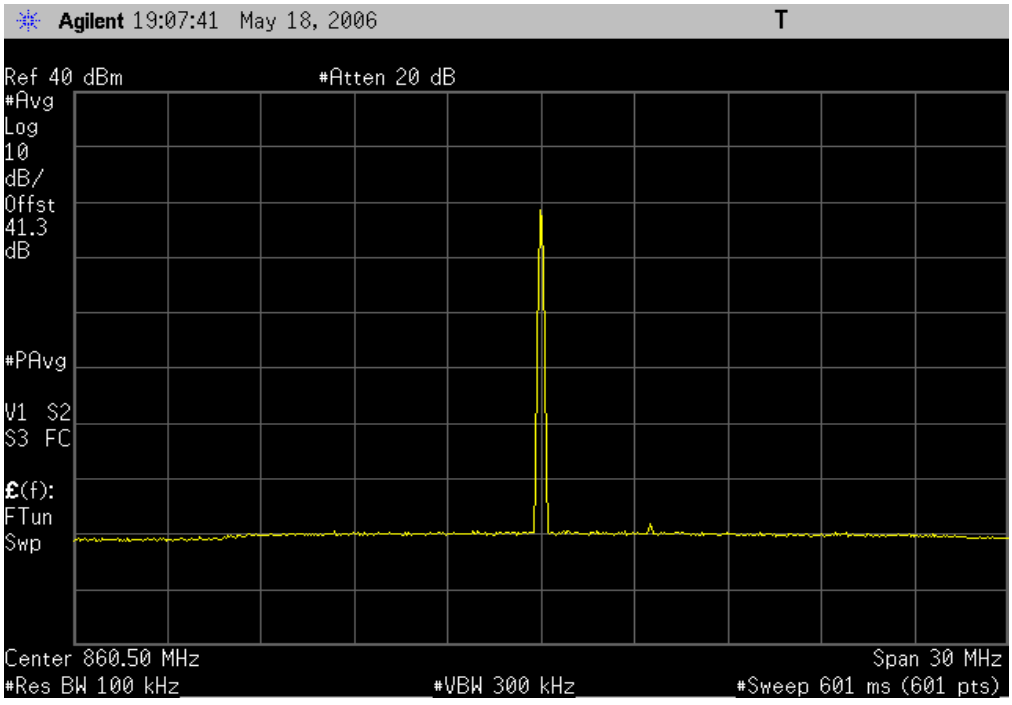
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



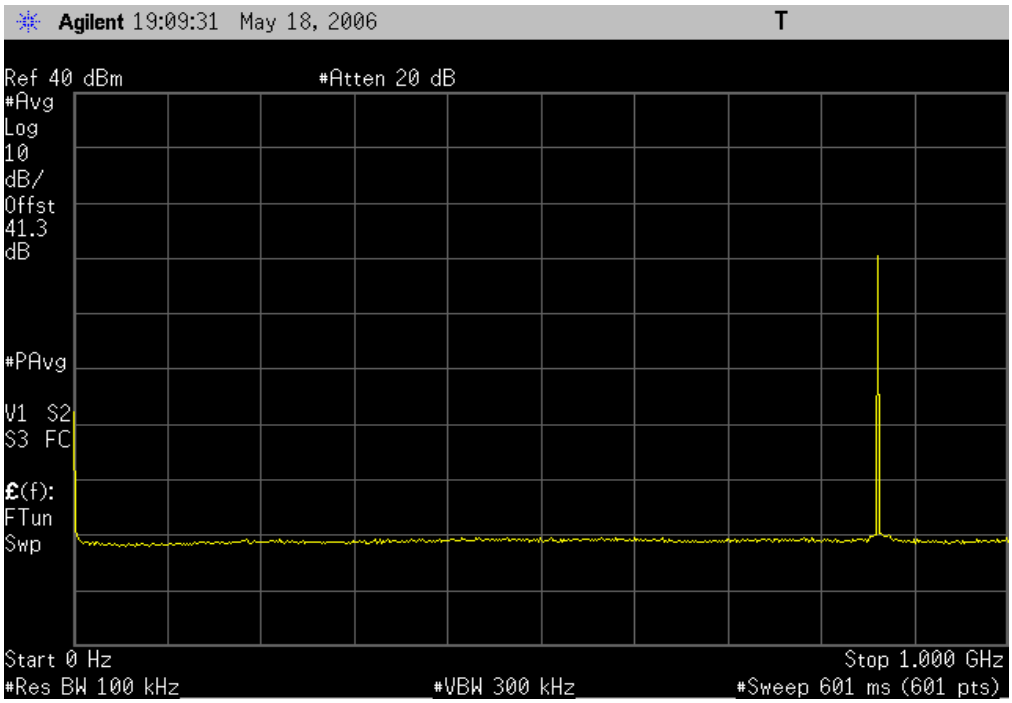
Low Channel, 7.495MHz-9.0GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



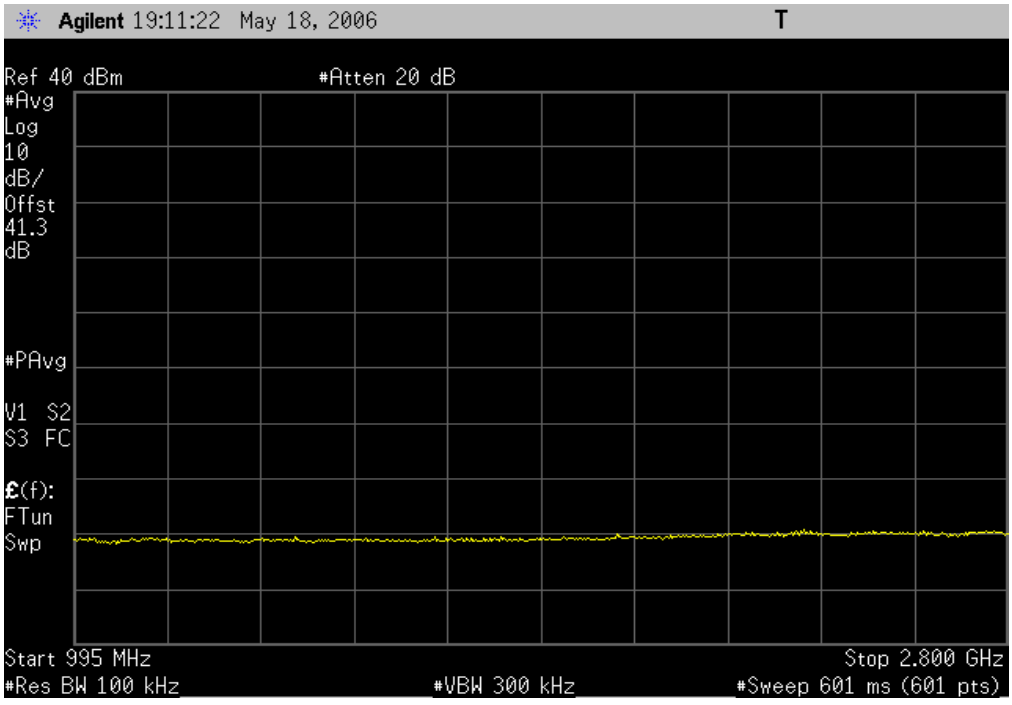
Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



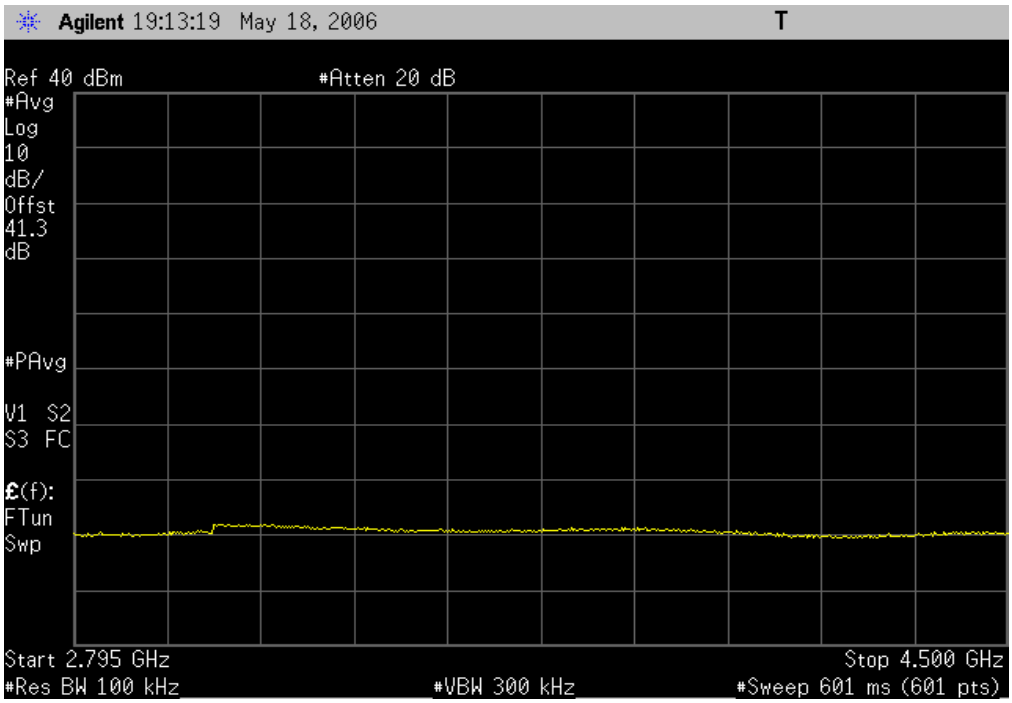
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



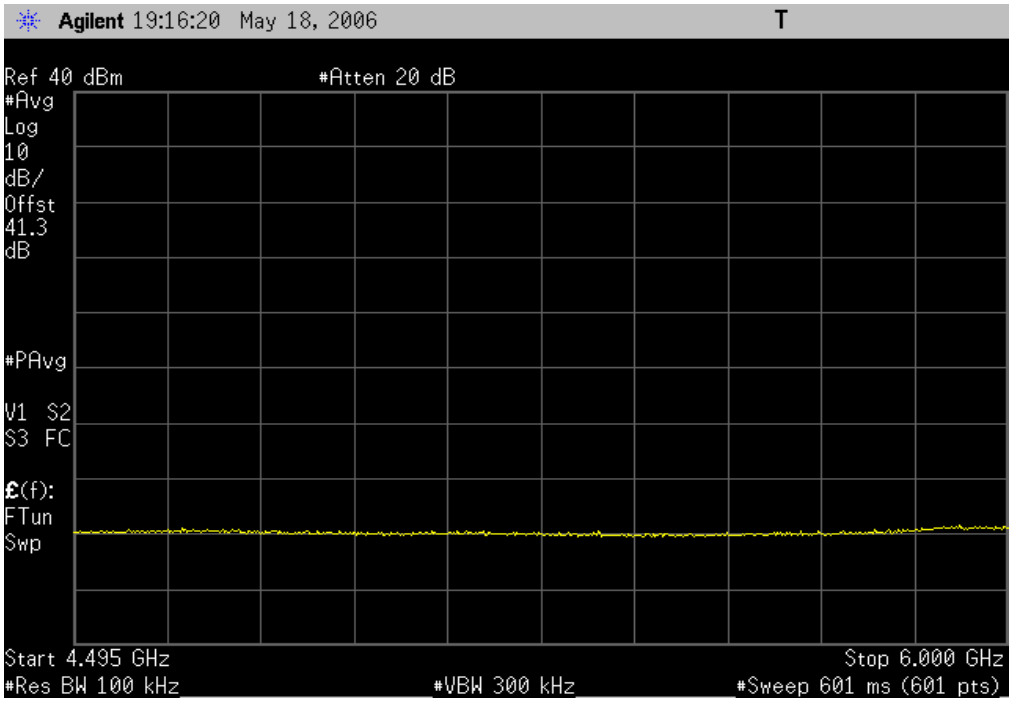
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



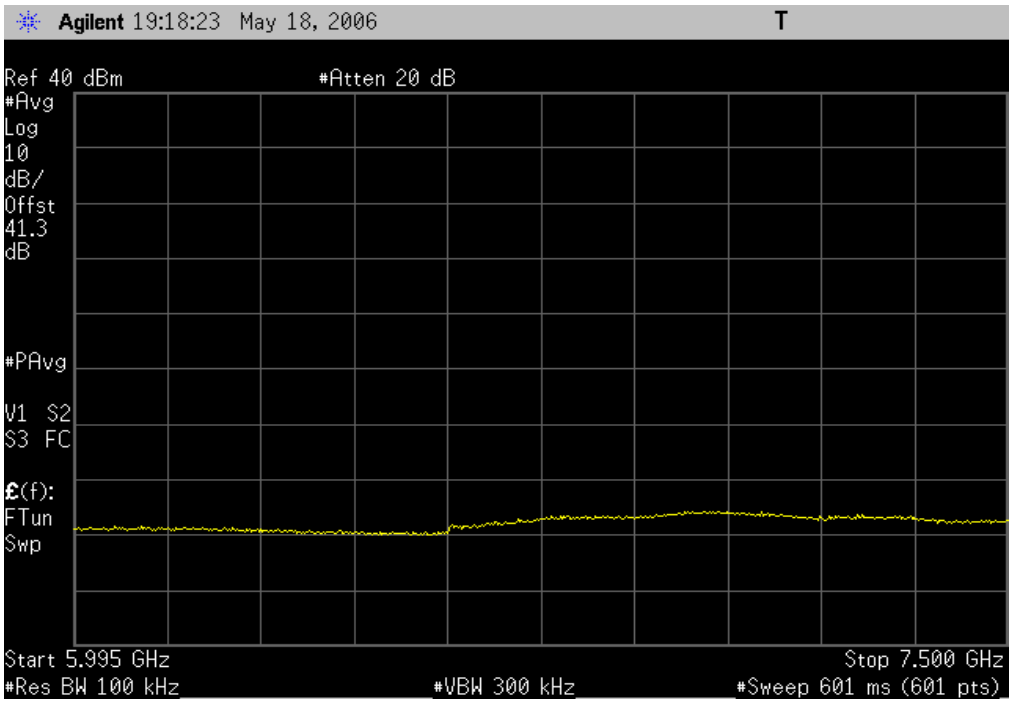
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



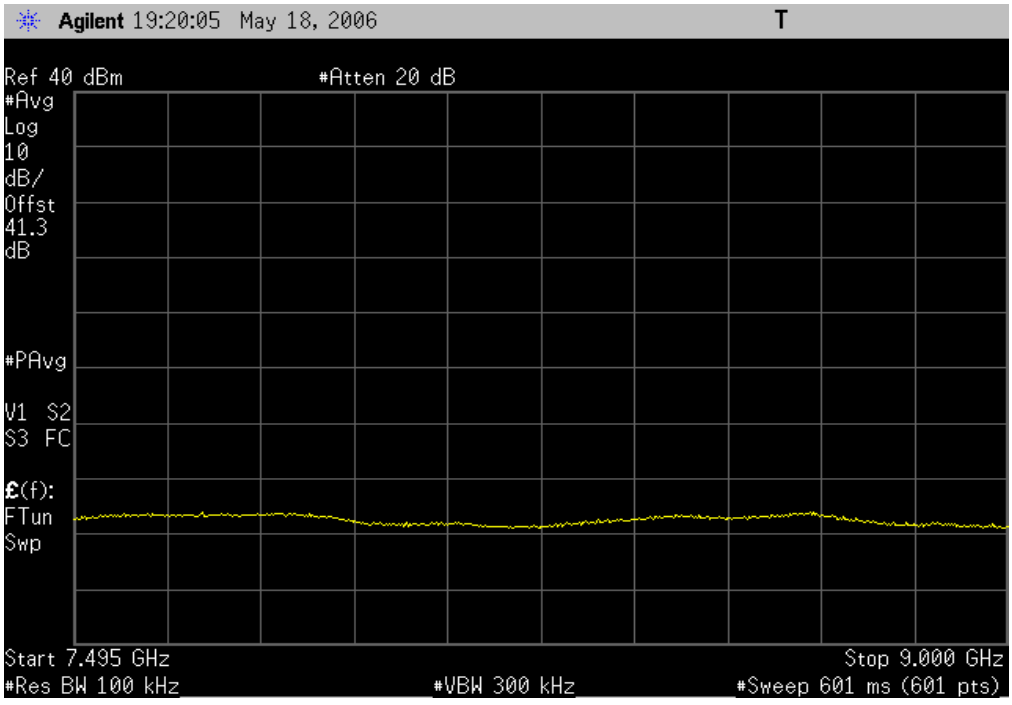
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



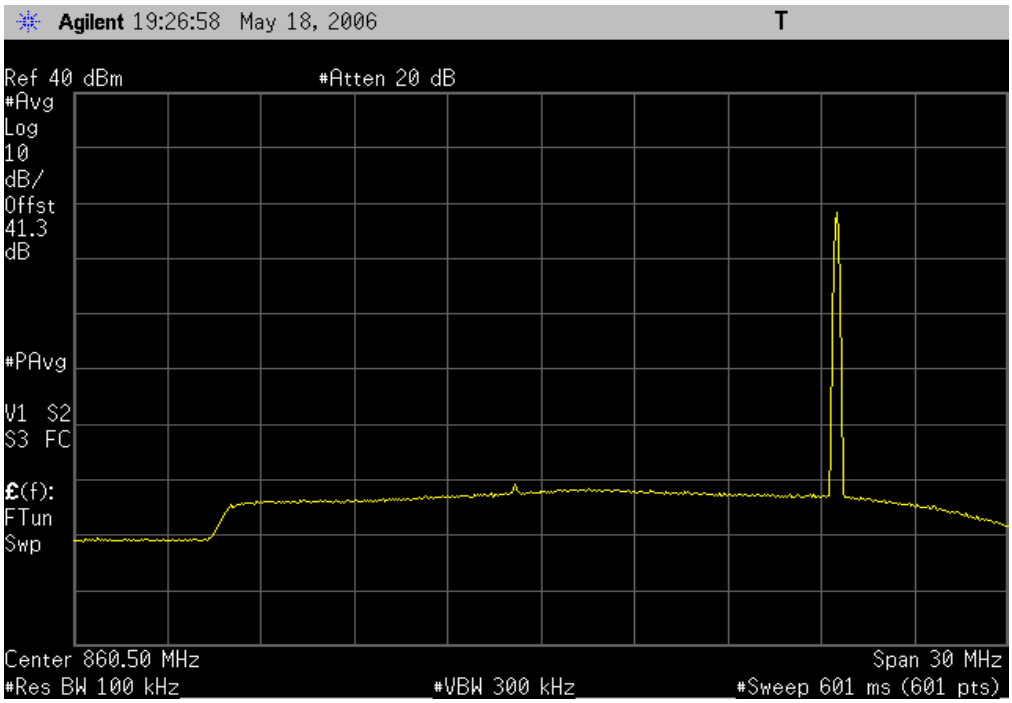
Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



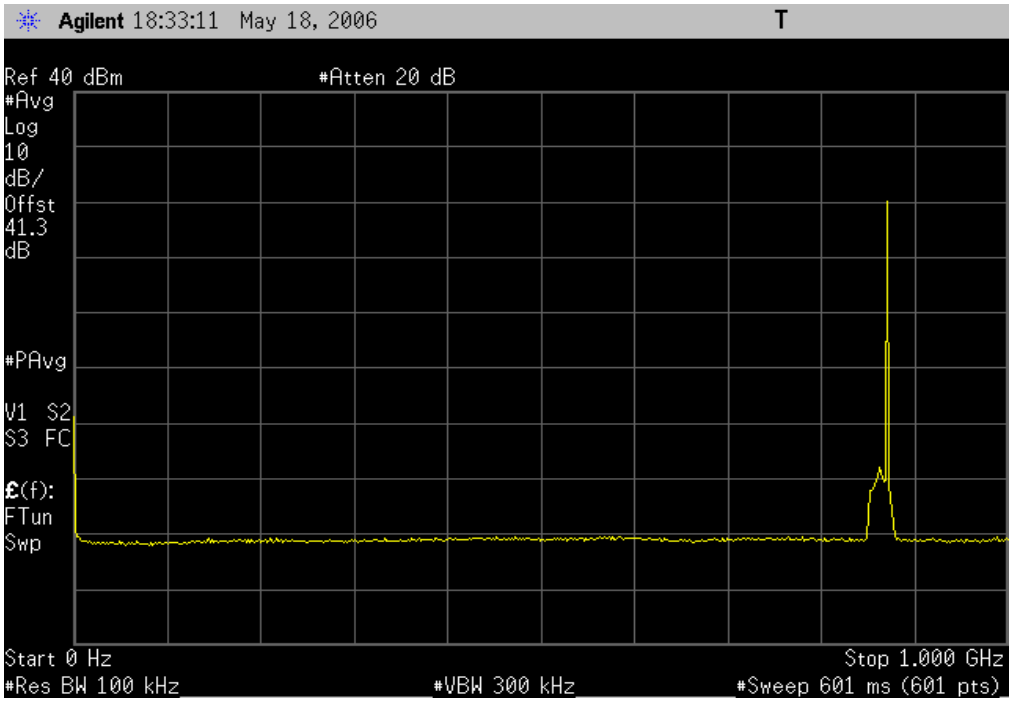
Mid Channel, 7.495MHz-9.0GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



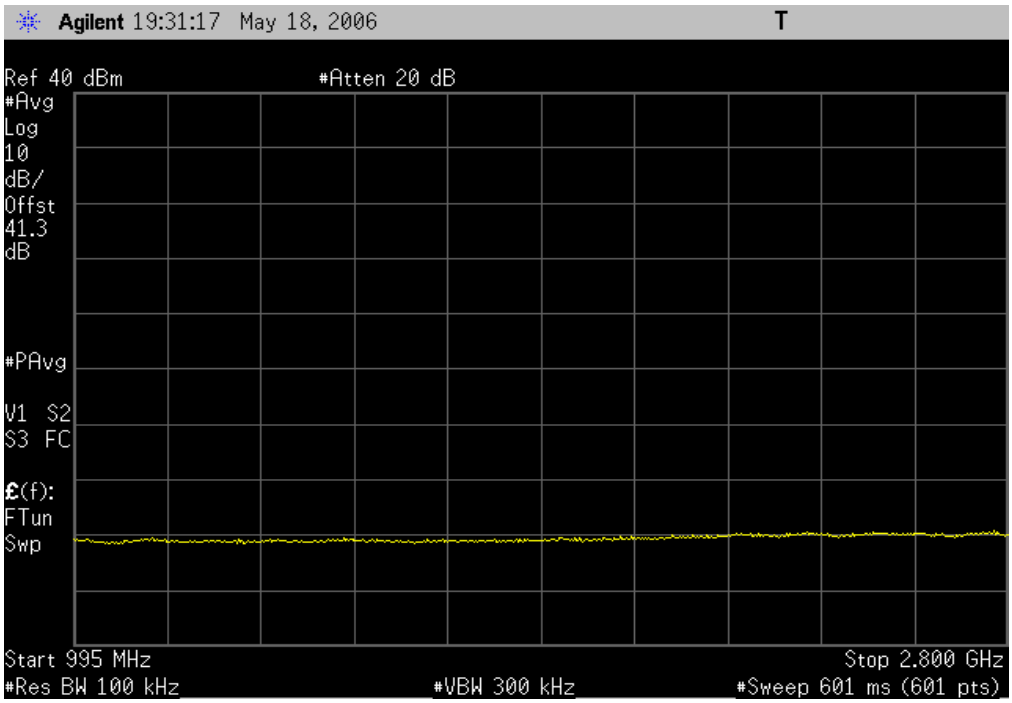
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



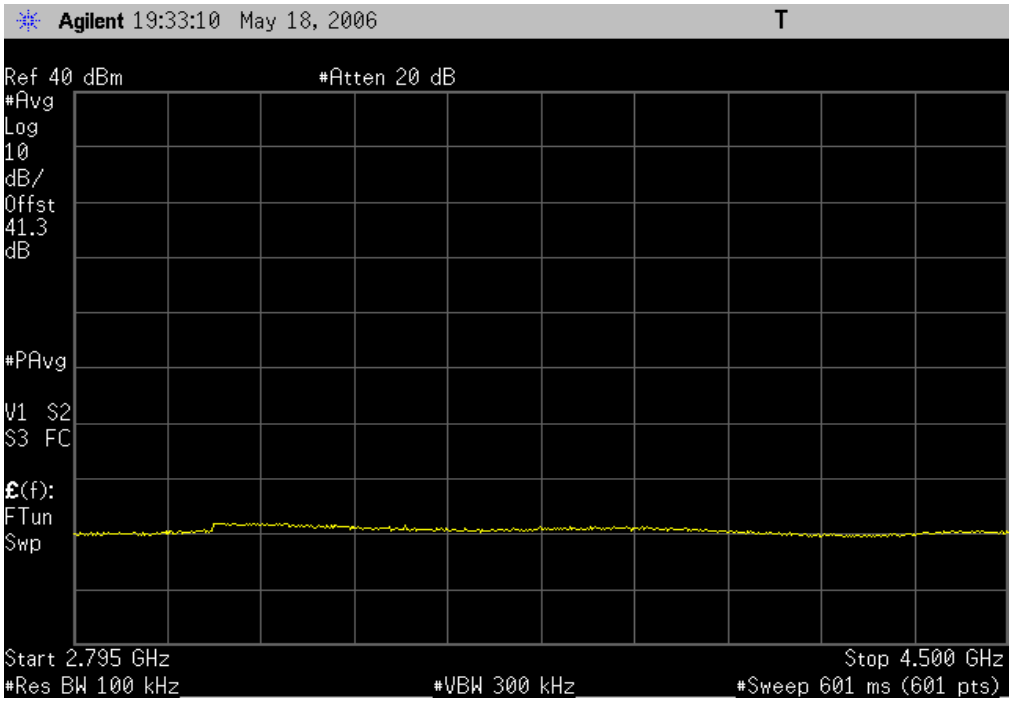
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



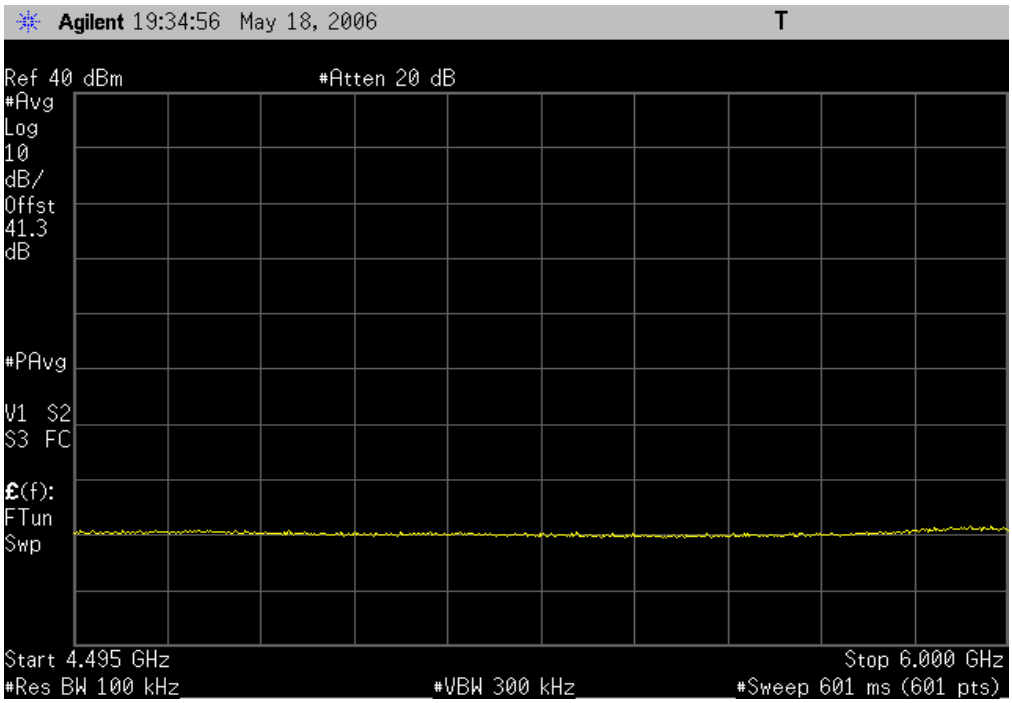
High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



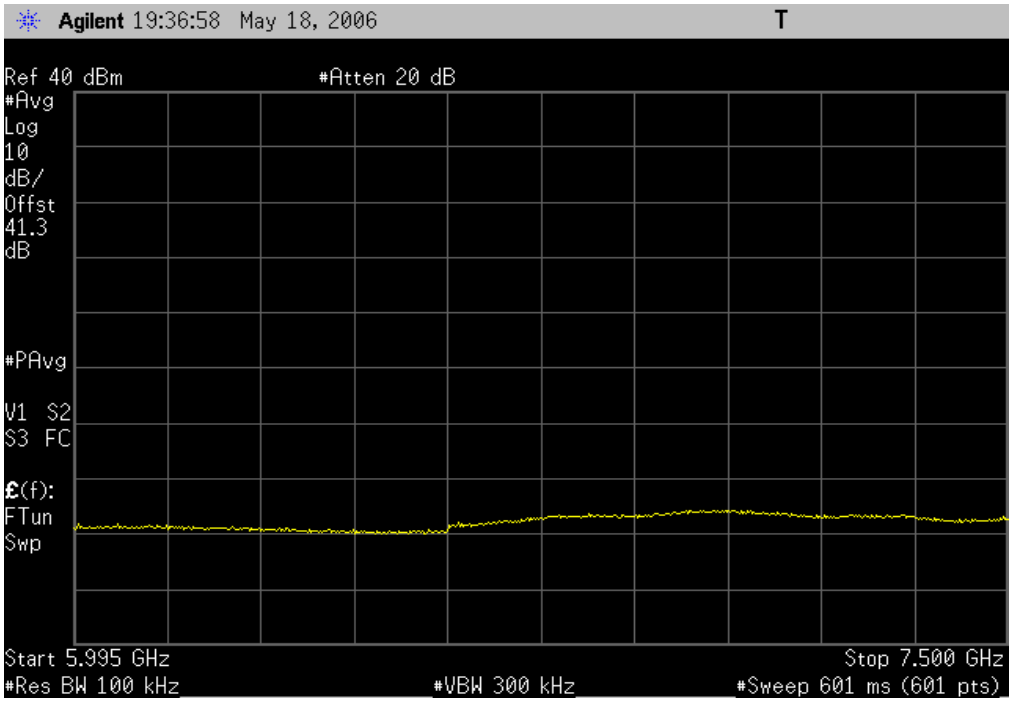
High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



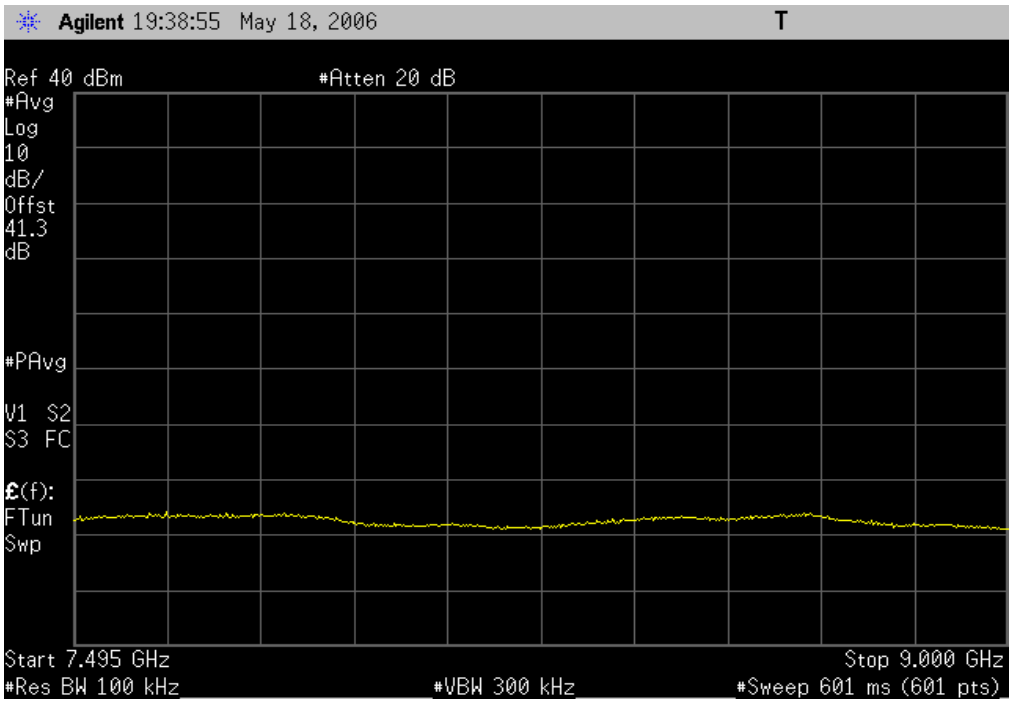
High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 7.495MHz-9.0GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 9 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/18/06
Customer:	Radioframe Networks, Inc.			Temperature:	24°C
Attendees:	Dean Busch			Humidity:	35%
Project:	None			Barometric Pres.:	29.99
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

800MHz Band, Mid Power Level

DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
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Mid Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
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High Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
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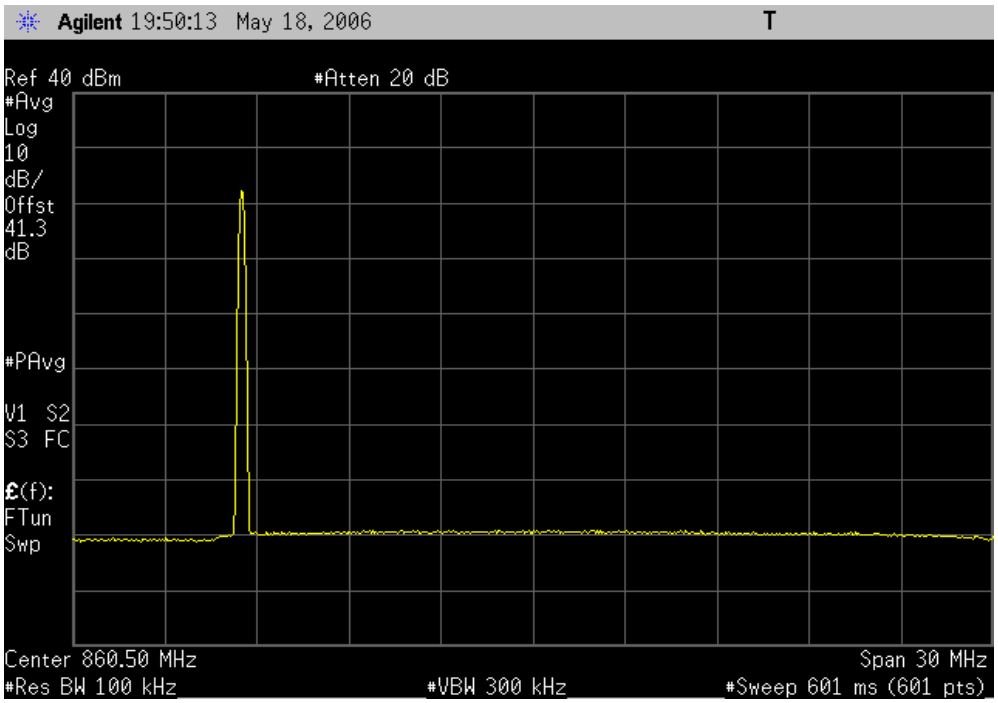
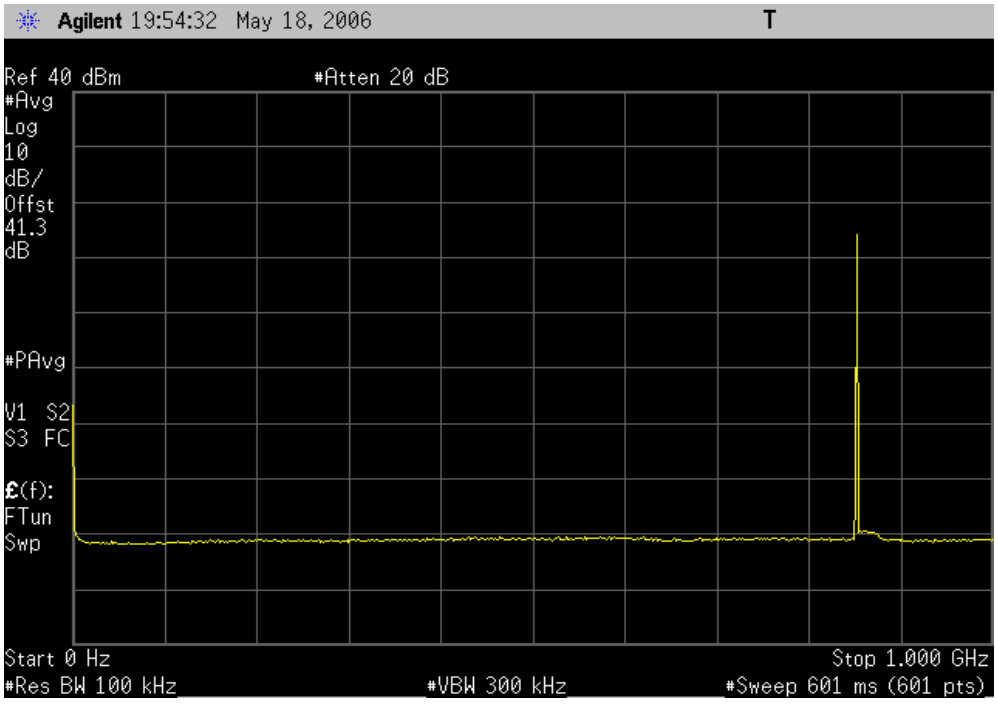
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495GHz-9GHz	< -30 dBm	≤ -13 dBm	Pass

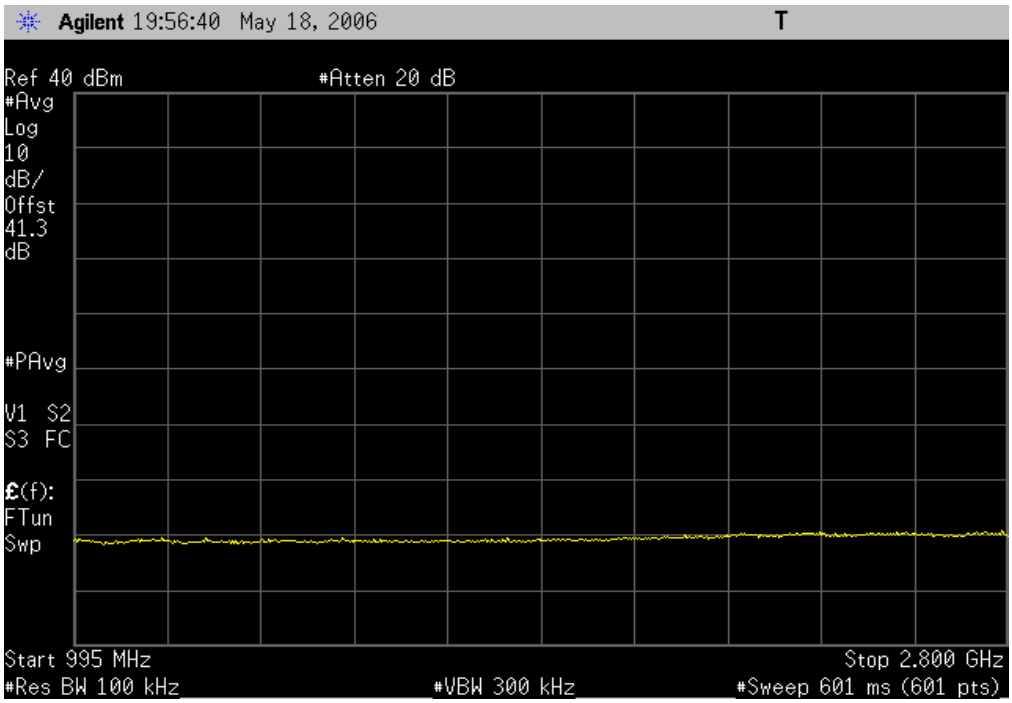
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



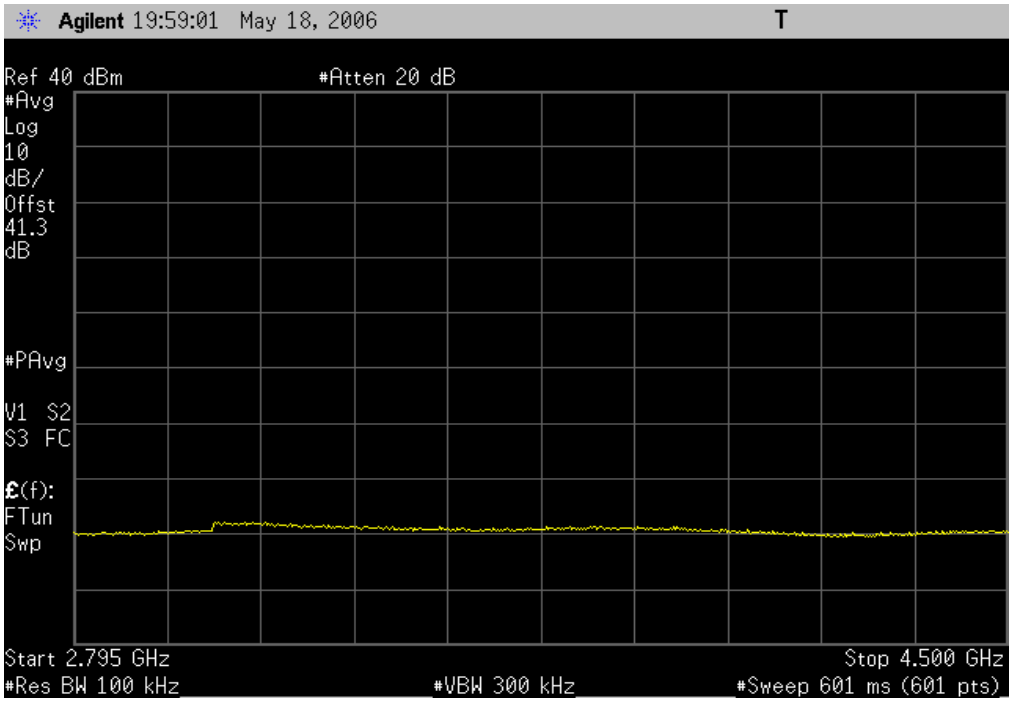
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



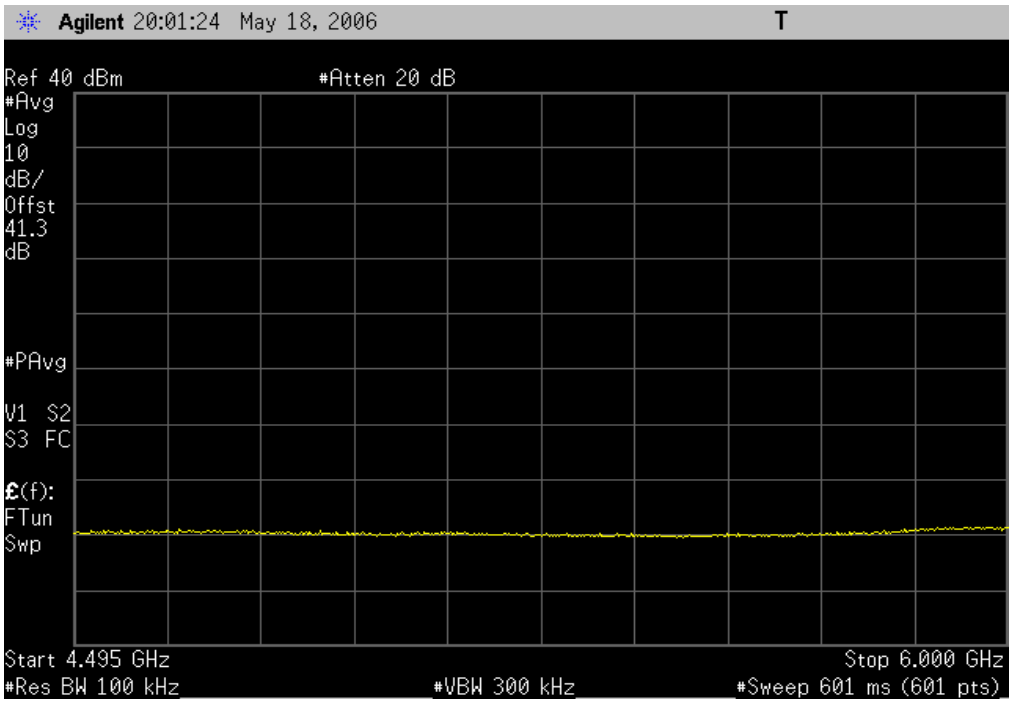
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



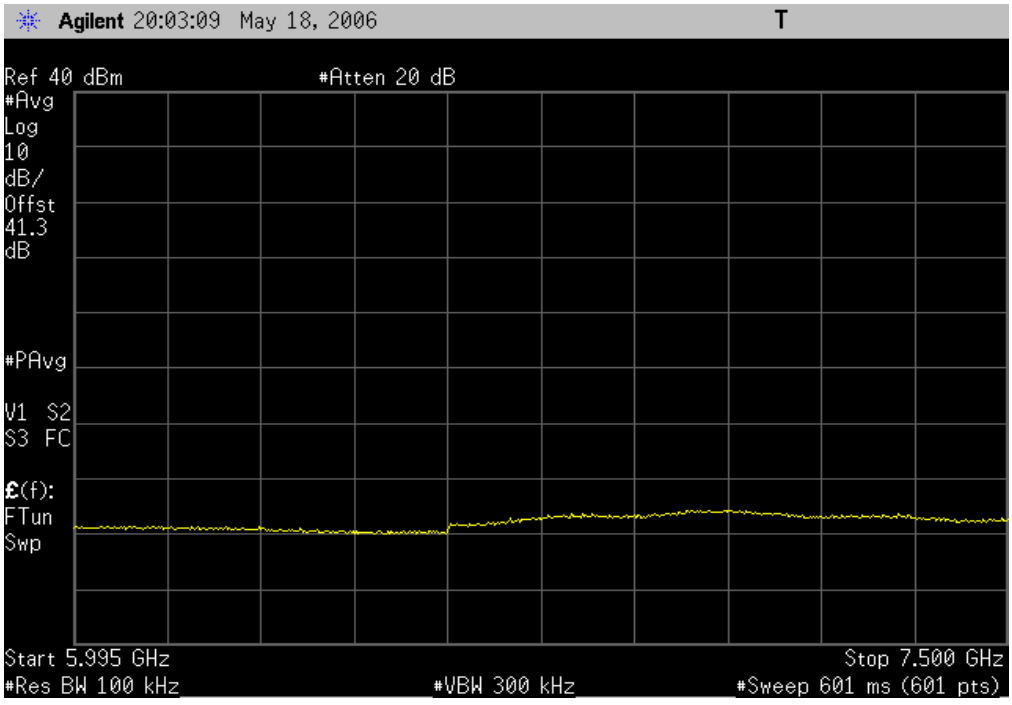
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



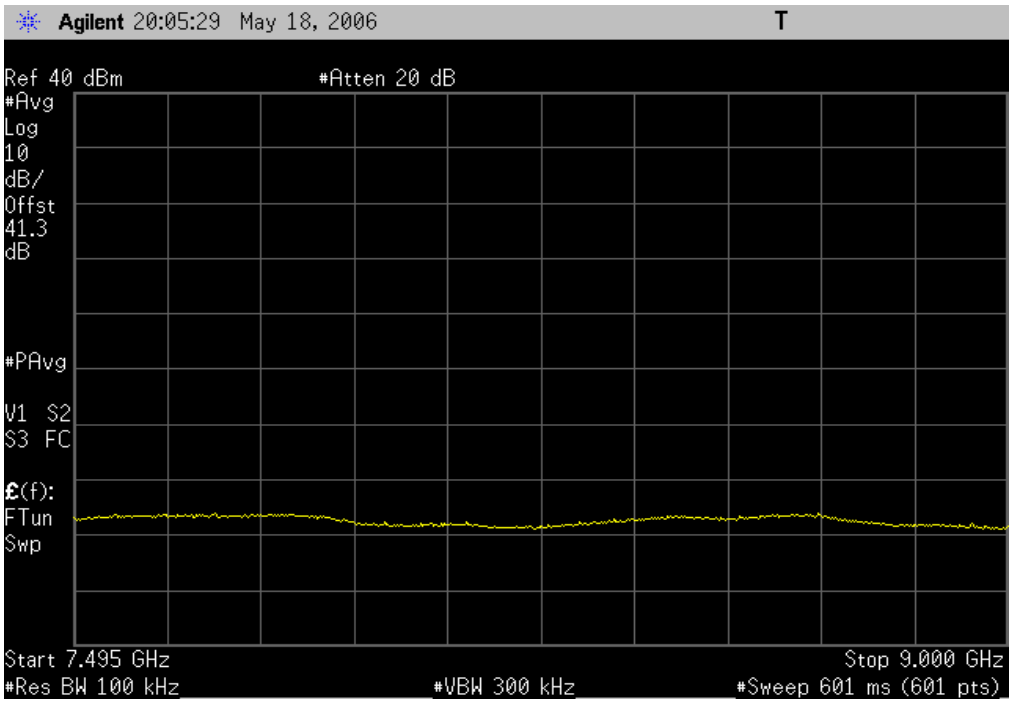
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



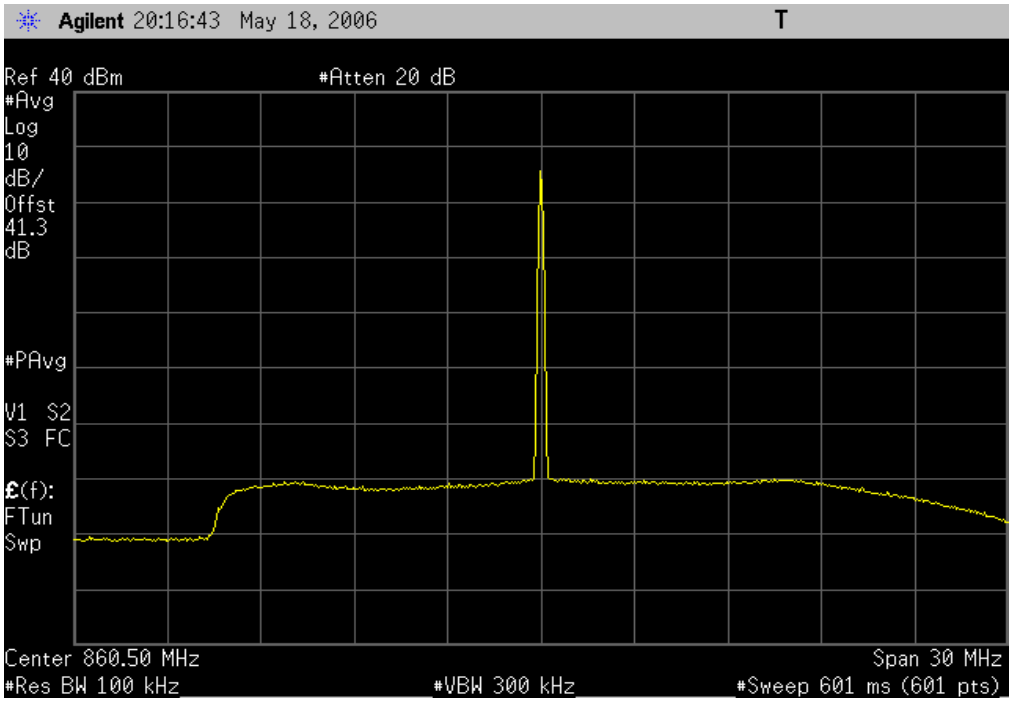
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Low Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

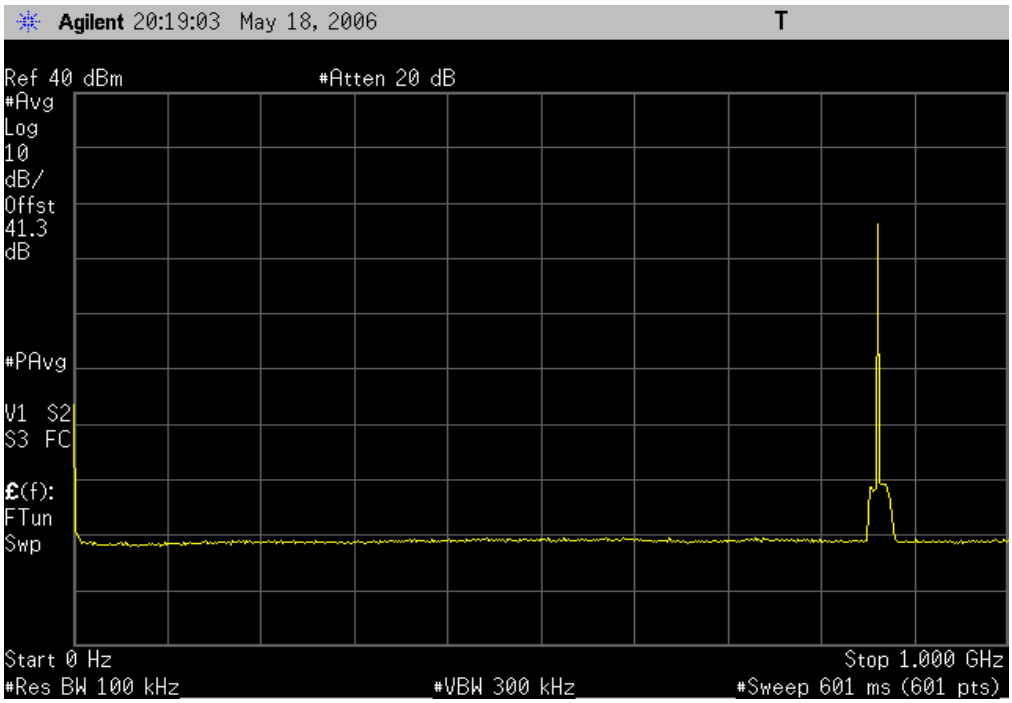


Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

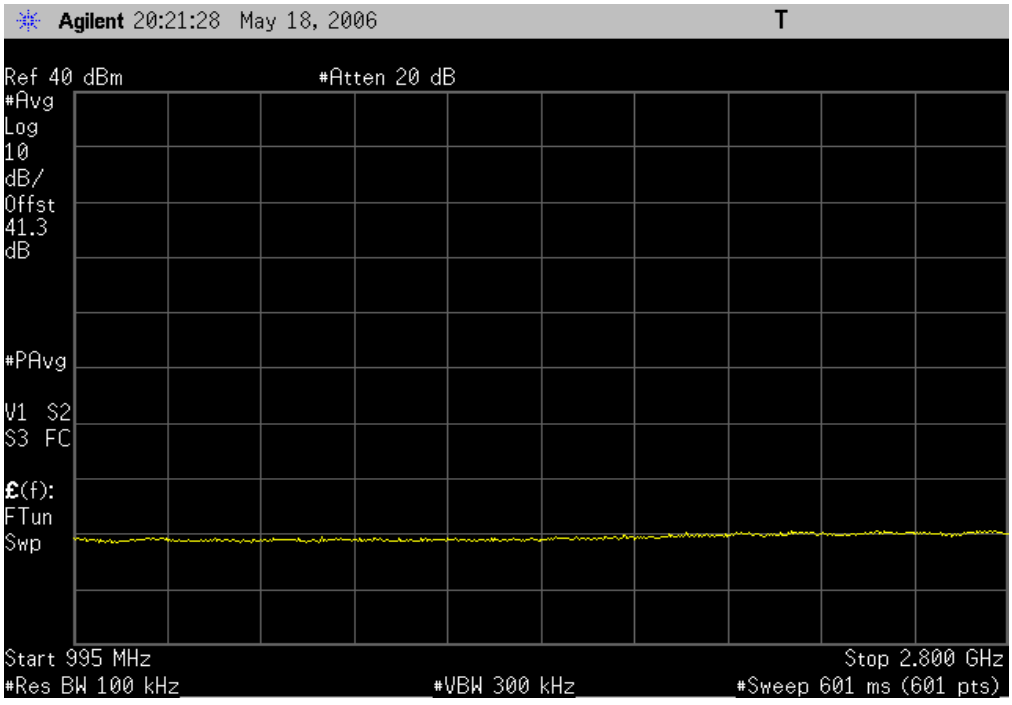


SPURIOUS EMISSIONS AT ANTENNA TERMINALS

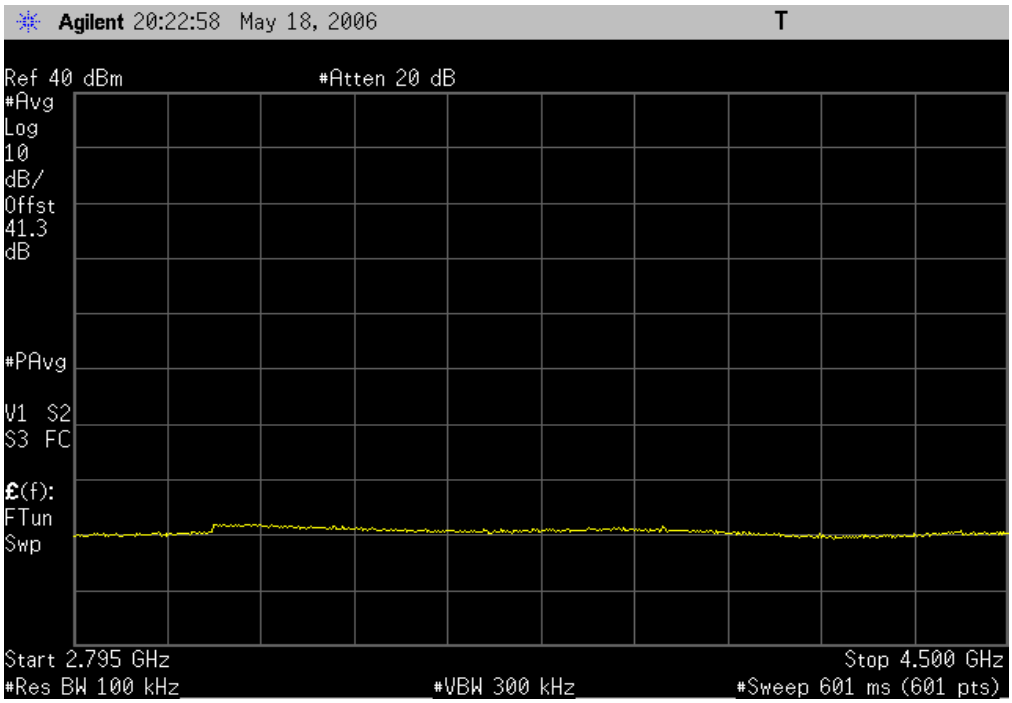
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



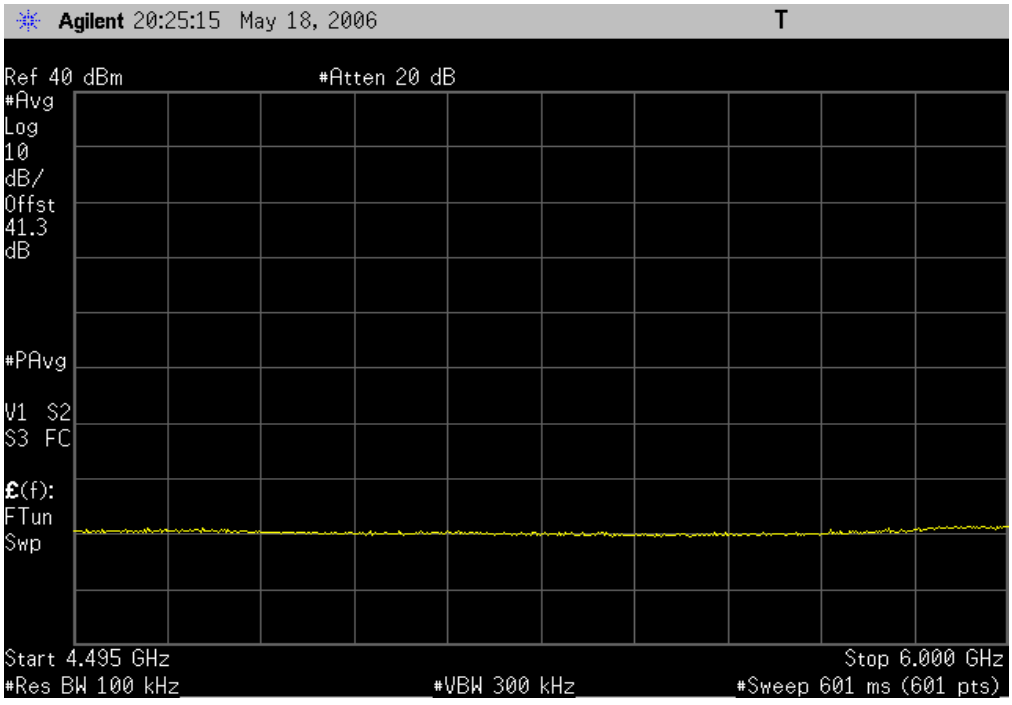
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



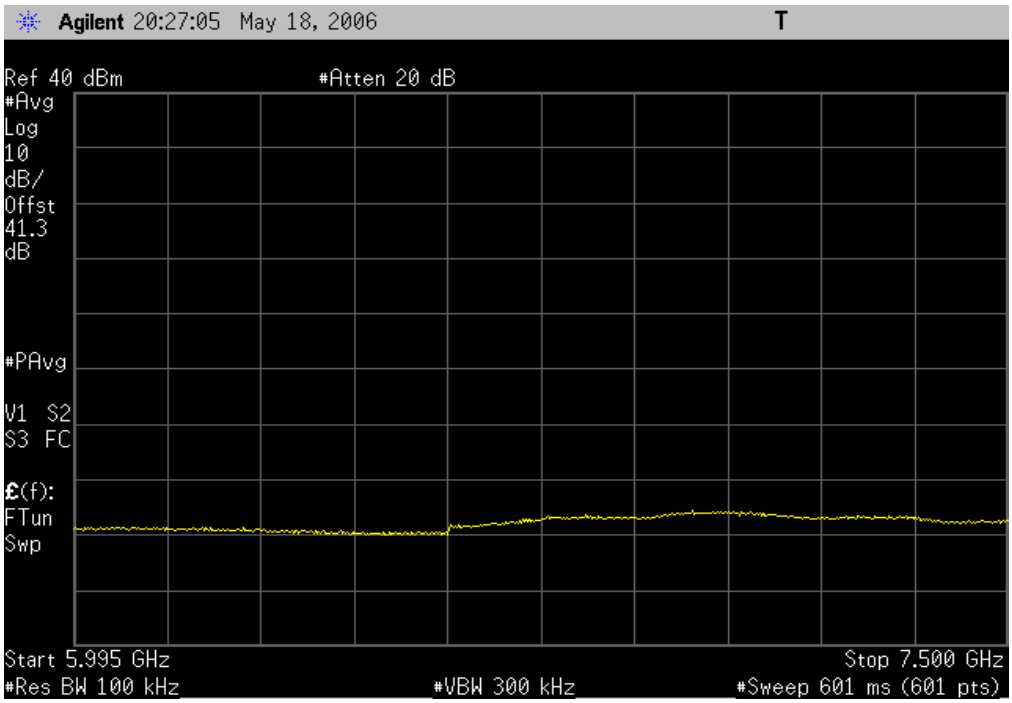
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



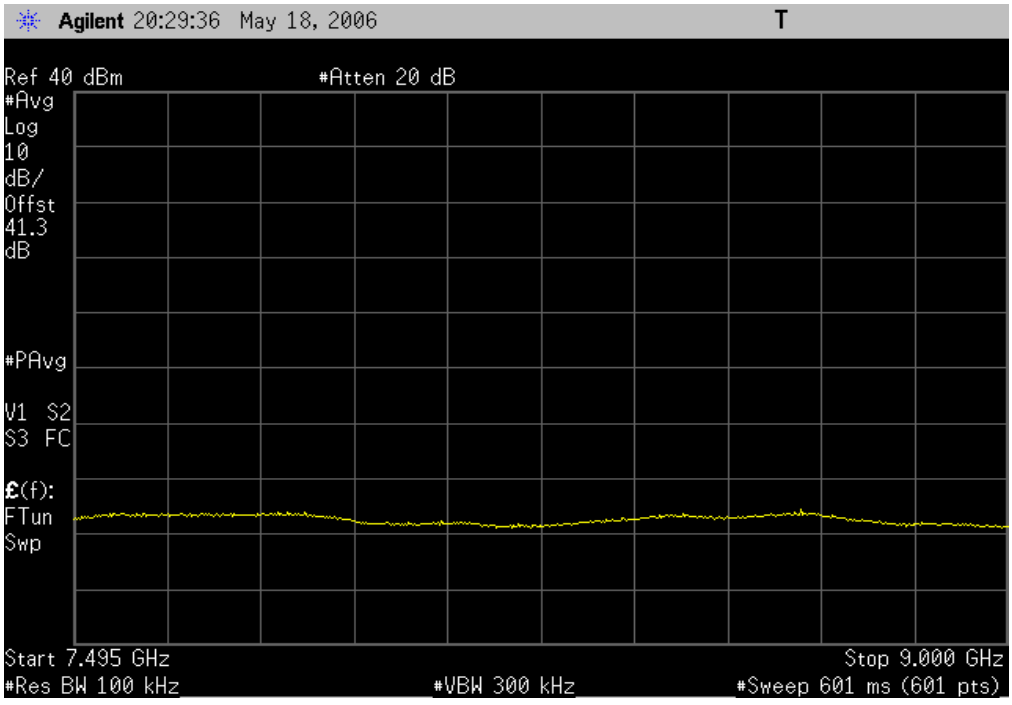
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



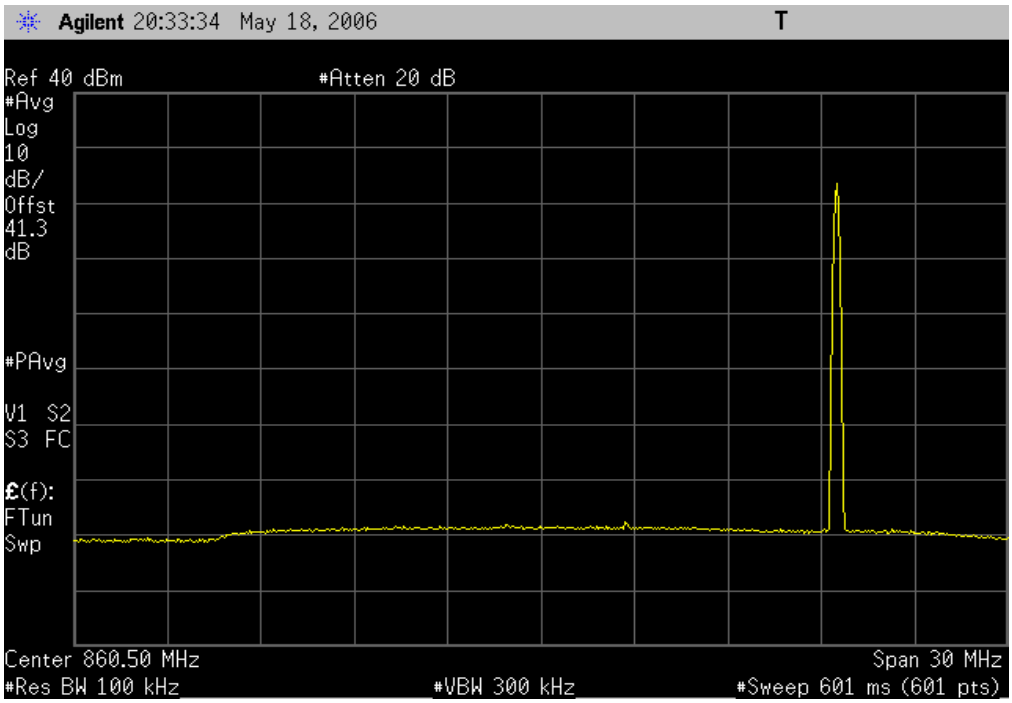
Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



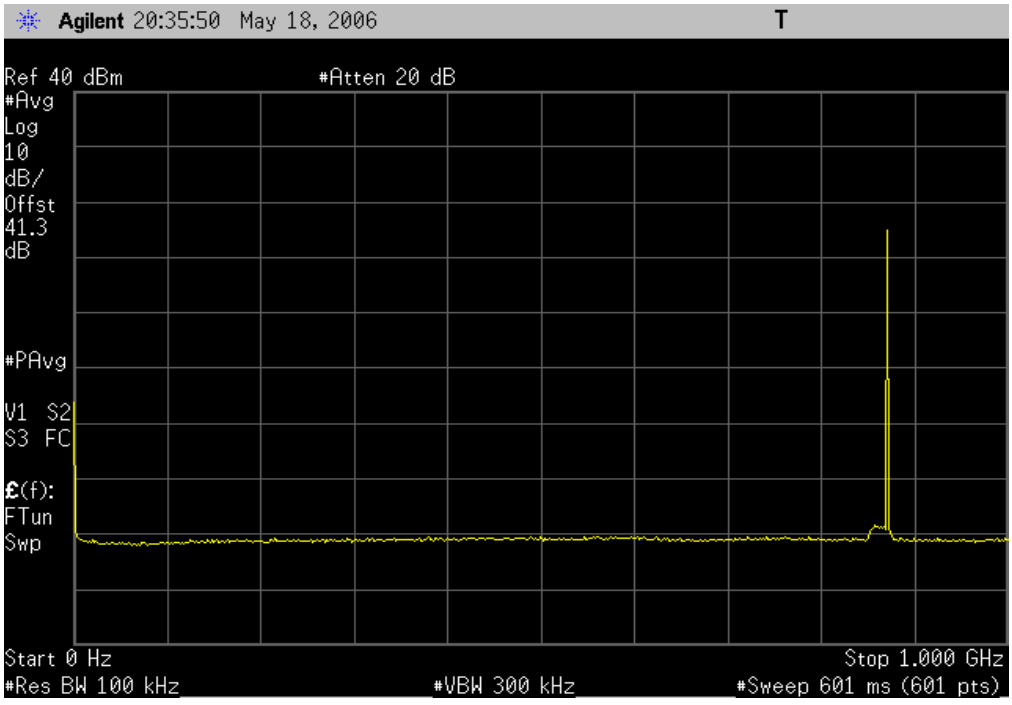
Mid Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



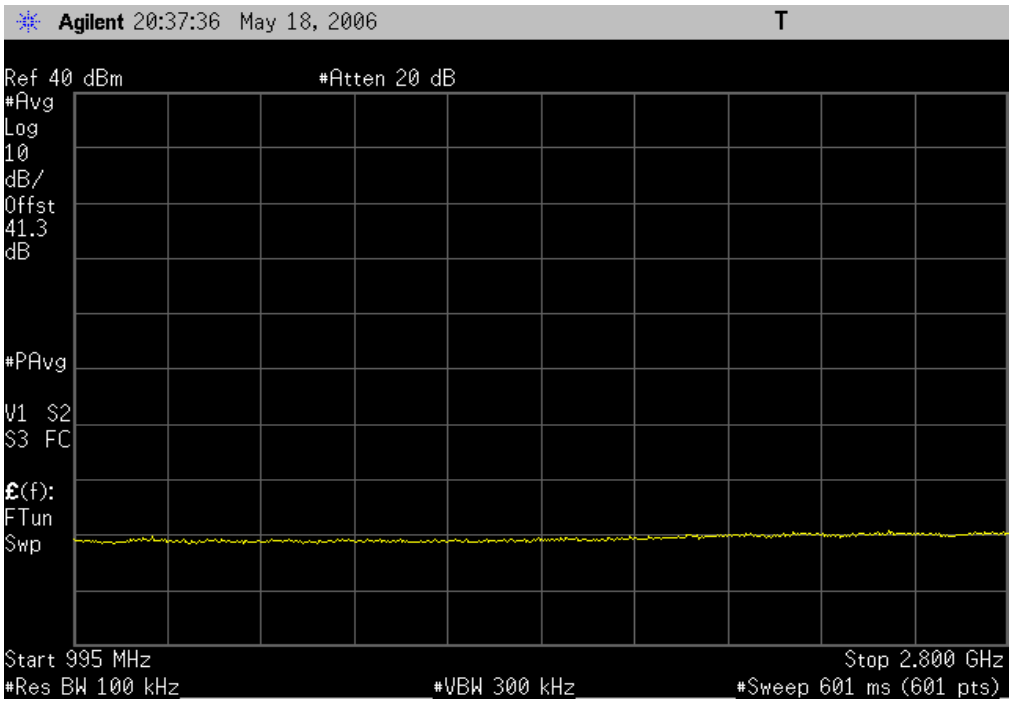
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



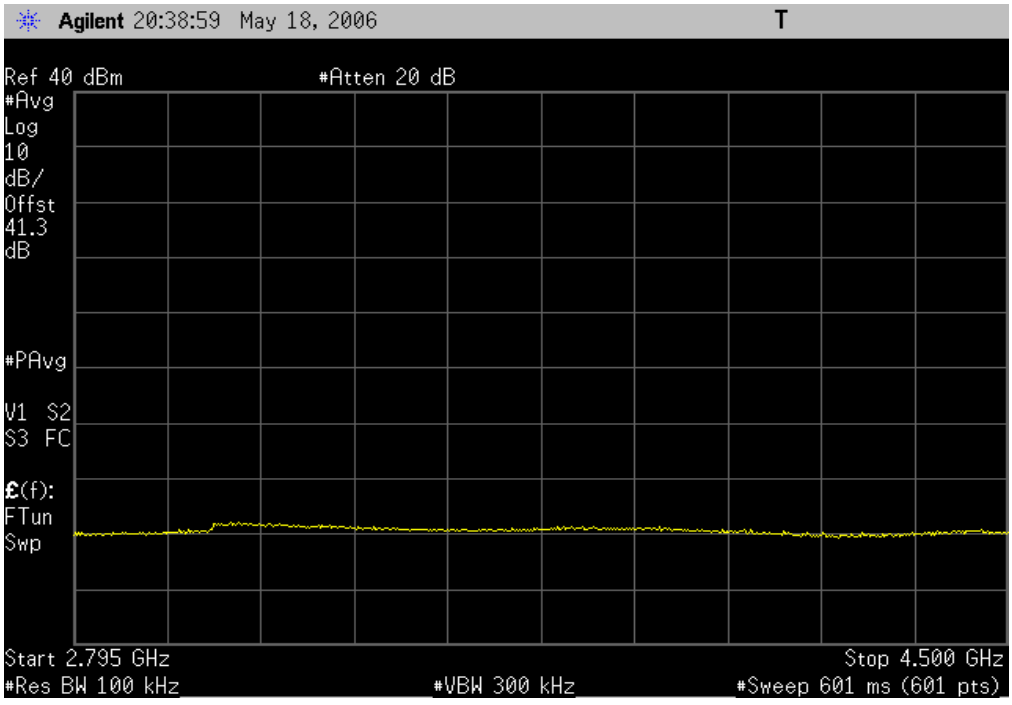
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



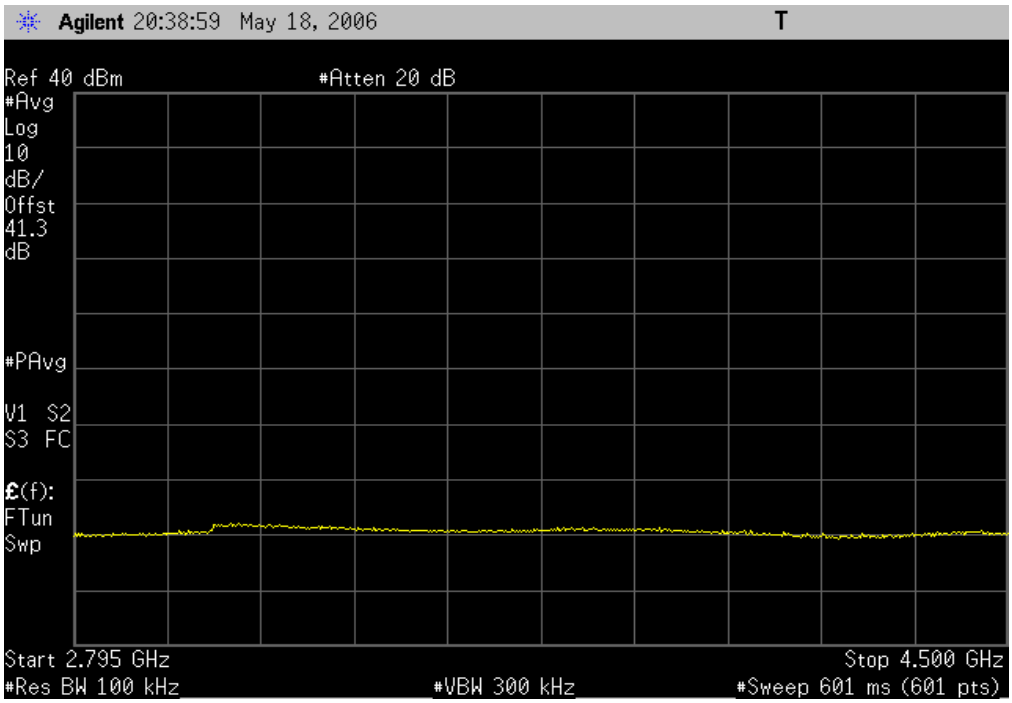
High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



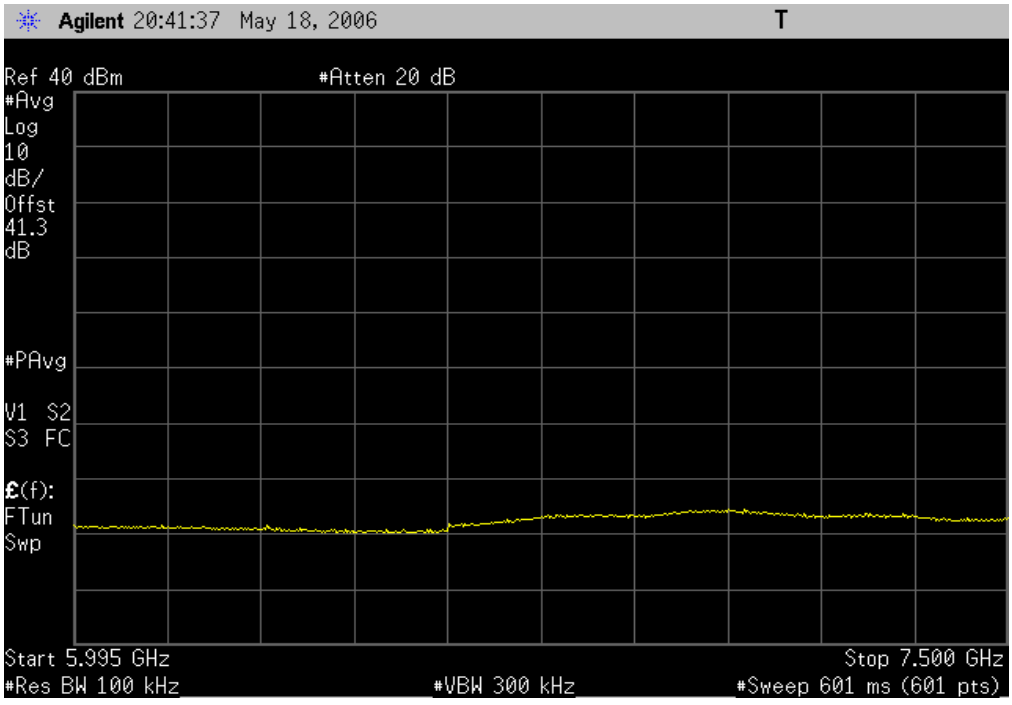
High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



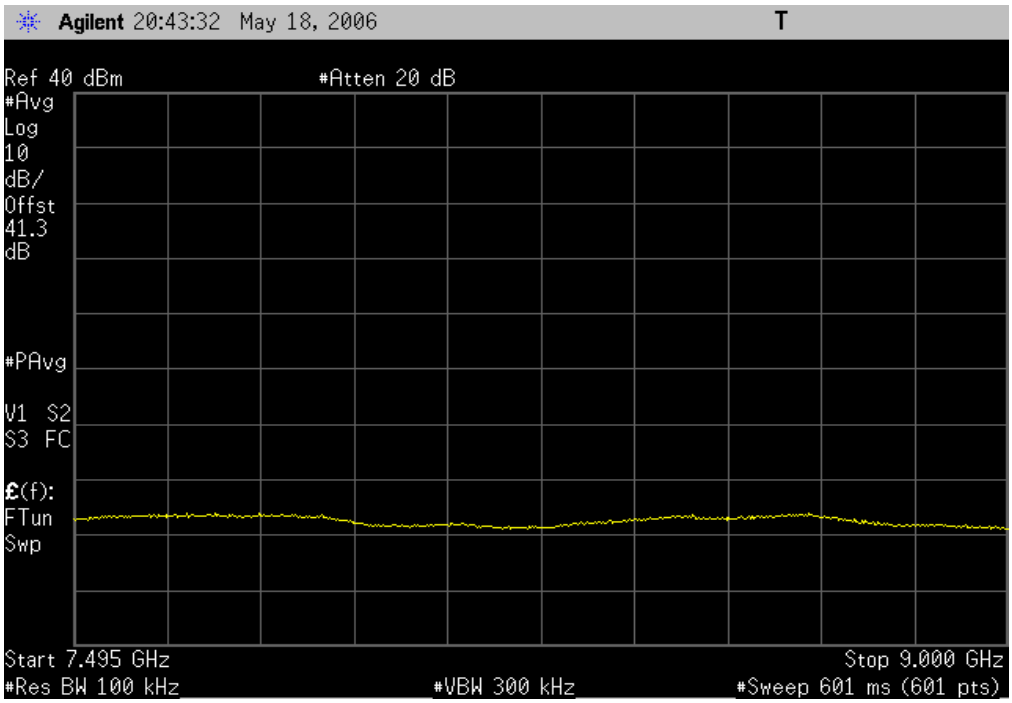
High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 7.495GHz-9GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24
Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The antenna power conducted emissions were measured with the EUT set in receive mode. The measurements were made using a direct connection between each of the RF outputs of the EUT and the spectrum analyzer. The spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/23/06
Customer:	Radioframe Networks, Inc.			Temperature:	24°C
Attendees:	Dean Busch			Humidity:	41%
Project:	None			Barometric Pres.:	29.93
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.111:2006	ANSI C63.4 2003

COMMENTS

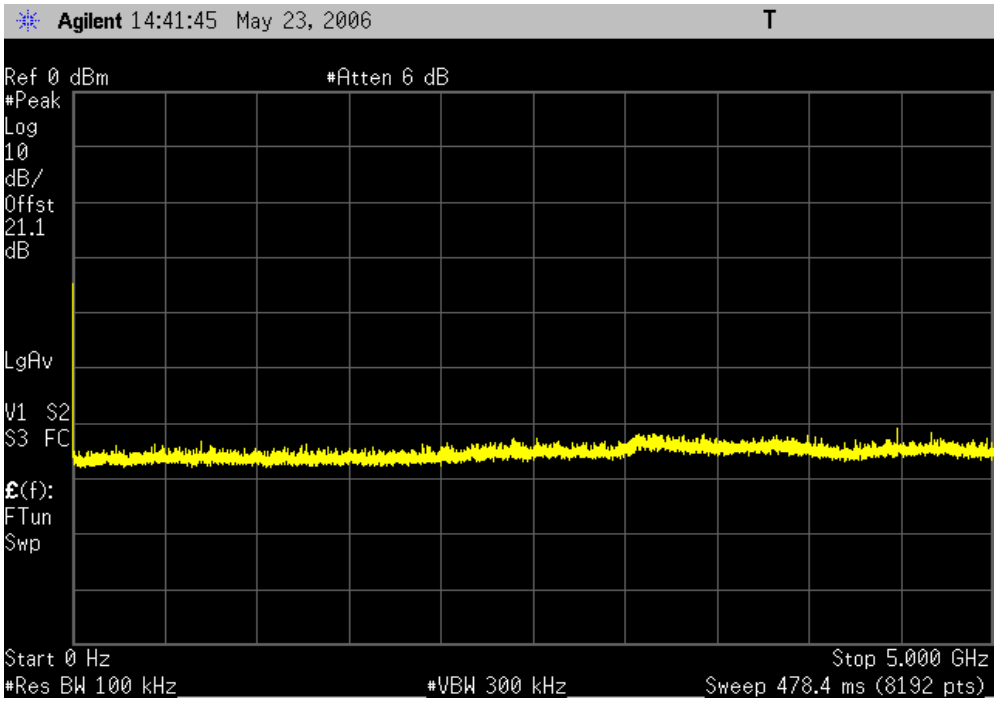
900MHz Band

DEVIATIONS FROM TEST STANDARD

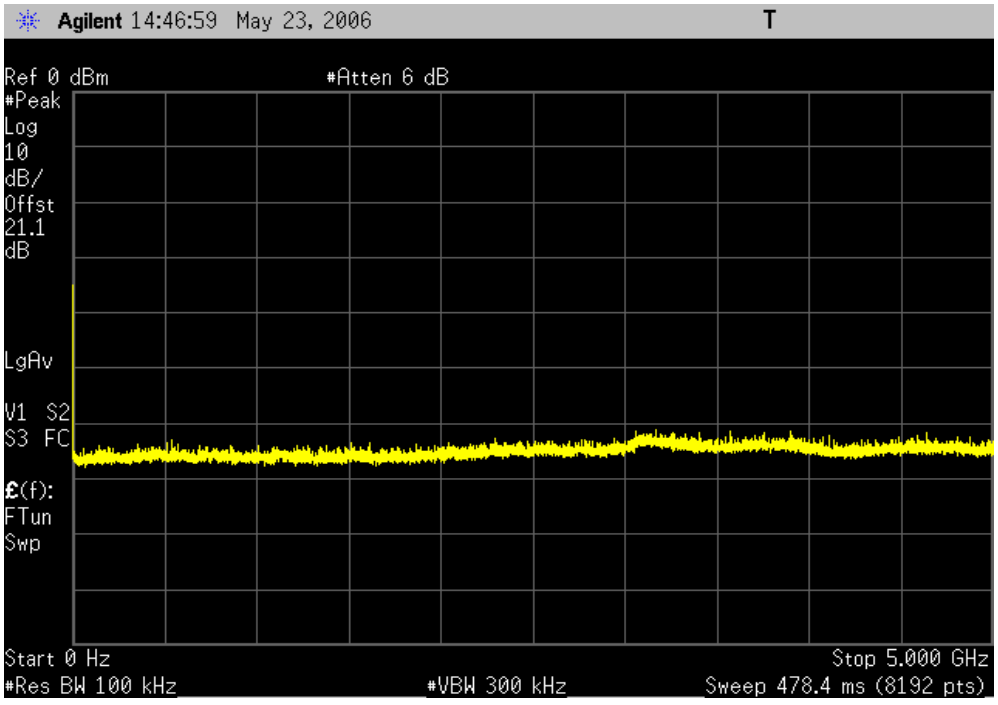
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
RX1 port	< -60 dBm	≤ -57 dBm	Pass
RX2 port	< -60 dBm	≤ -57 dBm	Pass
RX3 port	< -60 dBm	≤ -57 dBm	Pass

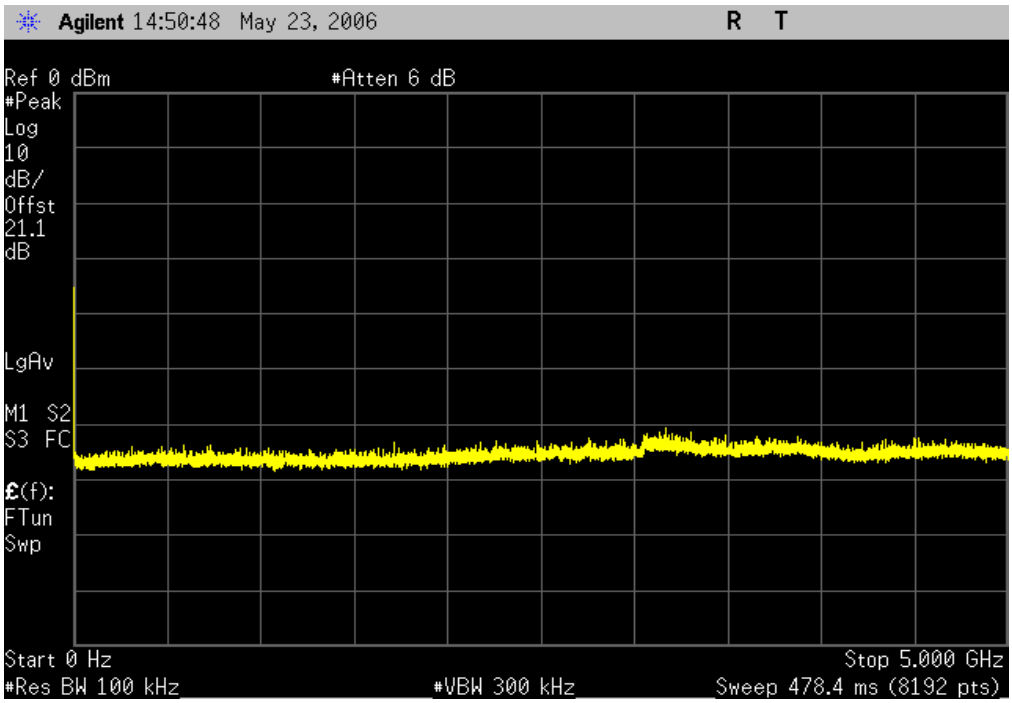
RX1 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



RX2 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



RX3 port					
Result:	Pass	**Value:**	< -60 dBm	**Limit:**	≤ -57 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
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Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24

MEASUREMENT UNCERTAINTY

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TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 10 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	Dean Busch			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

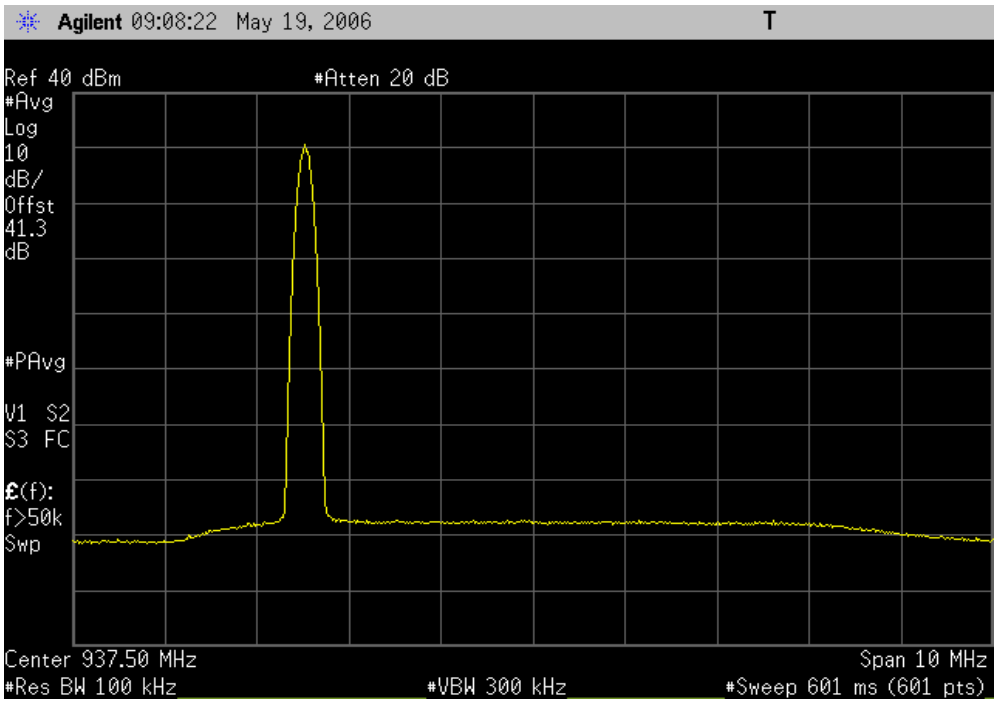
900MHz Band, High Power Level

DEVIATIONS FROM TEST STANDARD

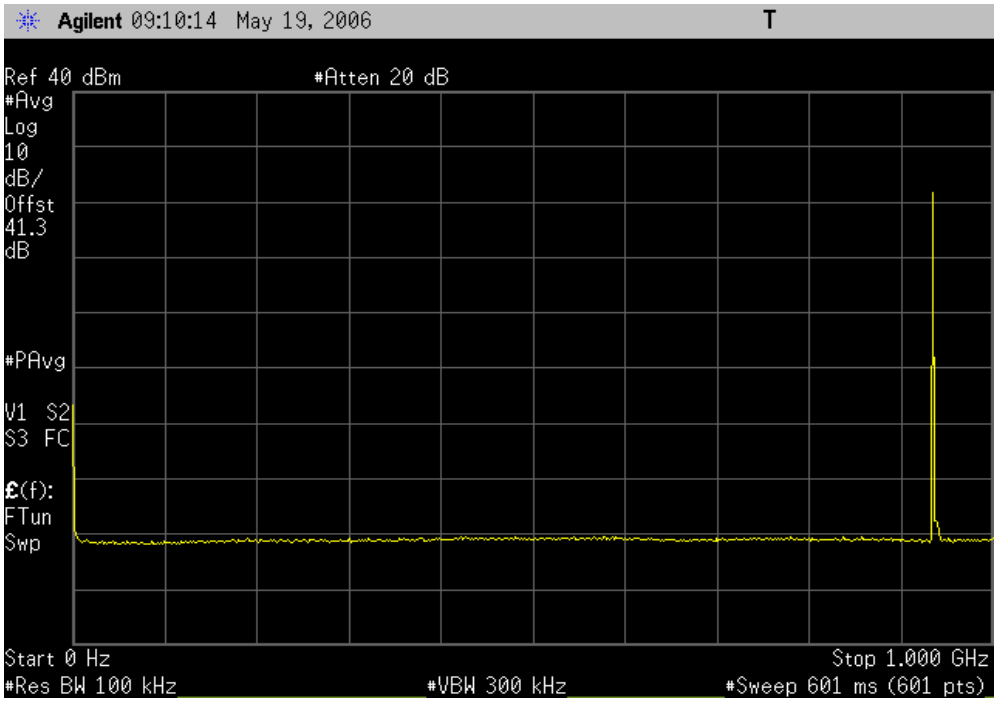
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
High Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, In Band	-22.4 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
9 Channel Intermods, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass

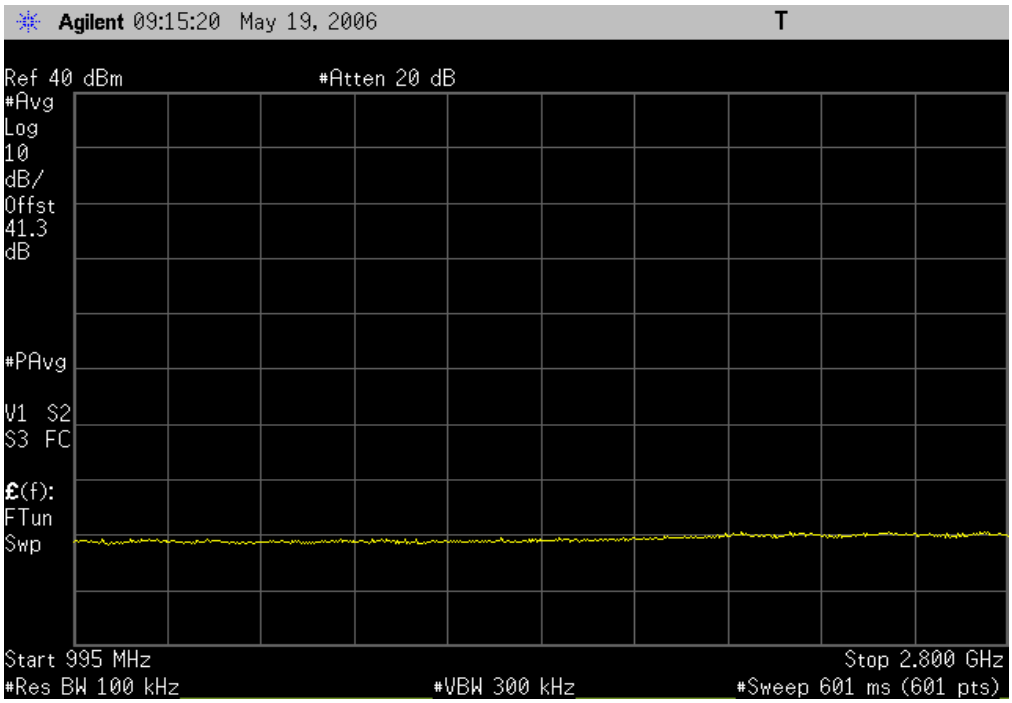
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



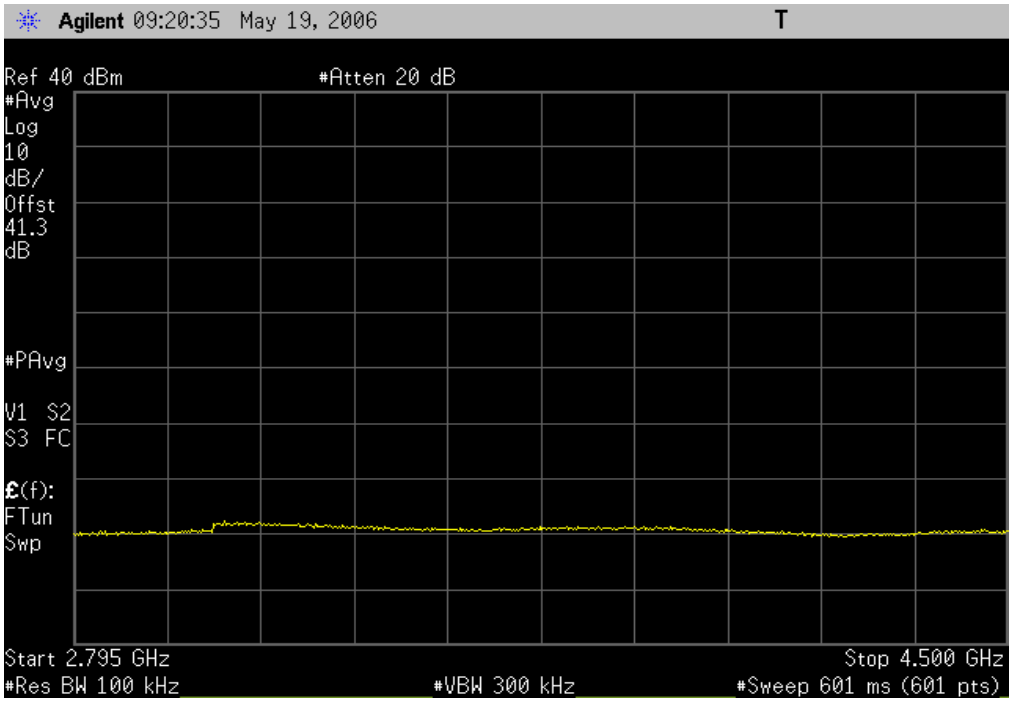
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



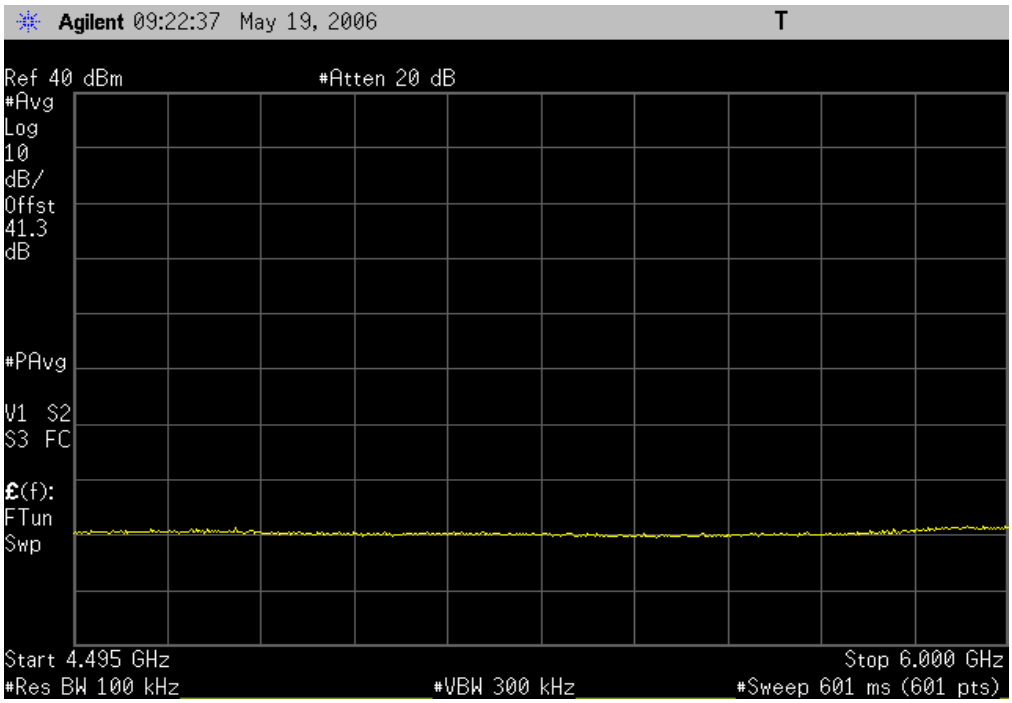
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



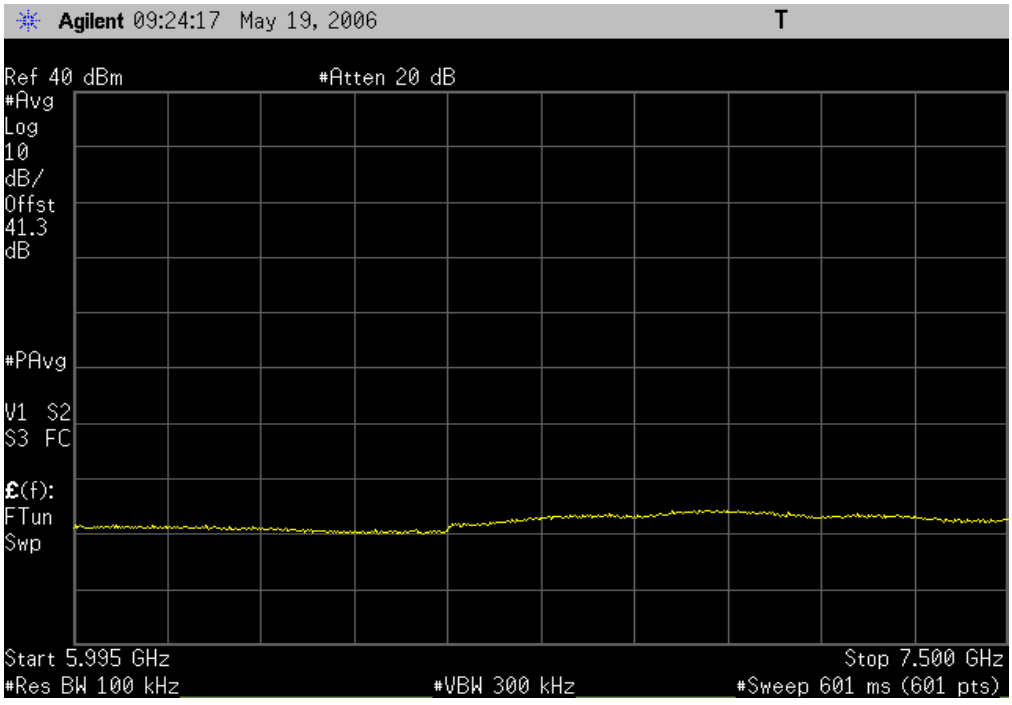
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



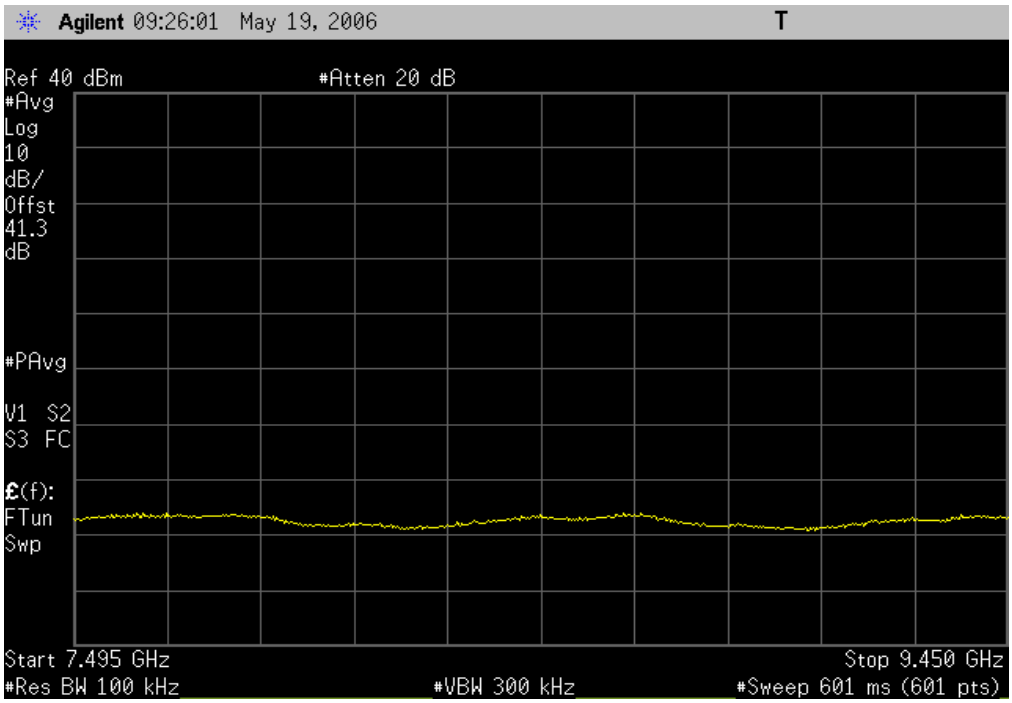
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



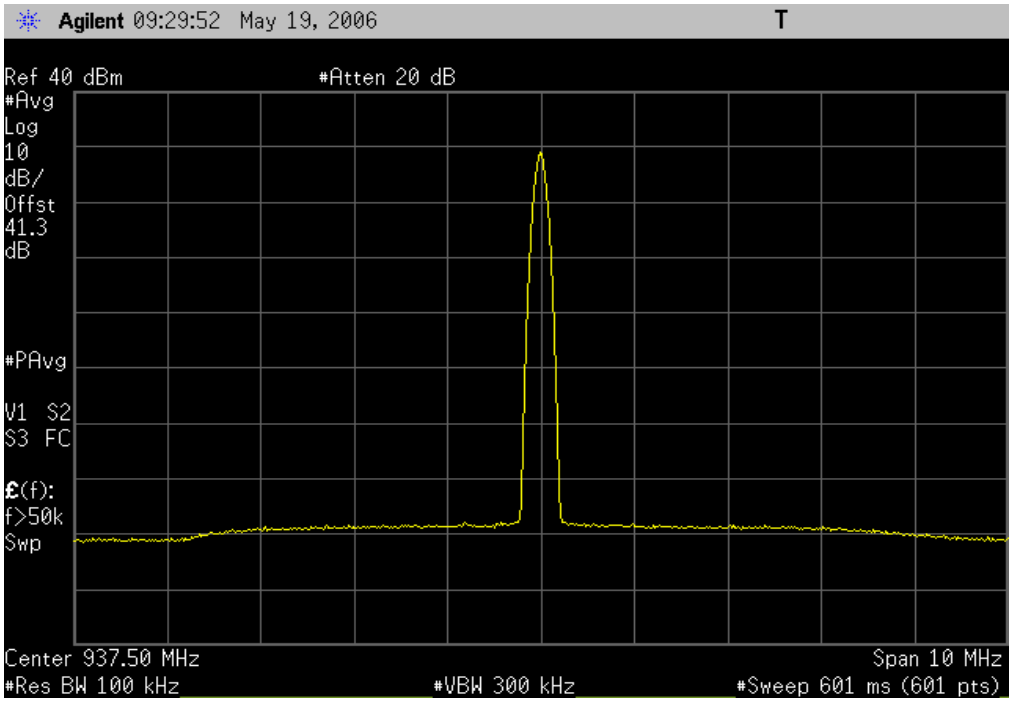
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



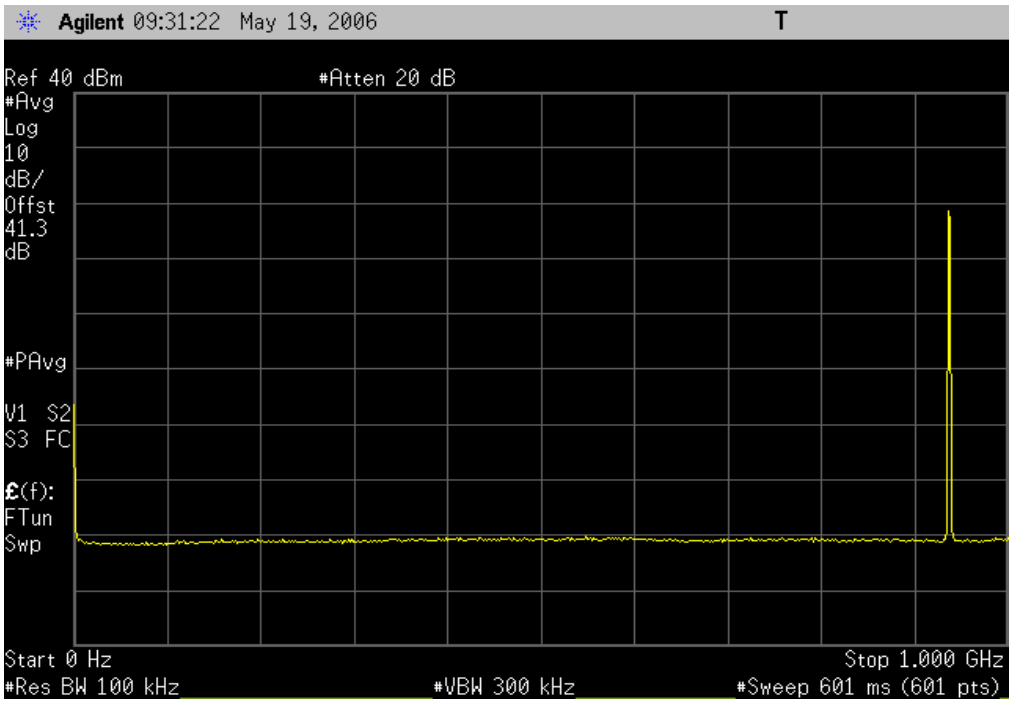
Low Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



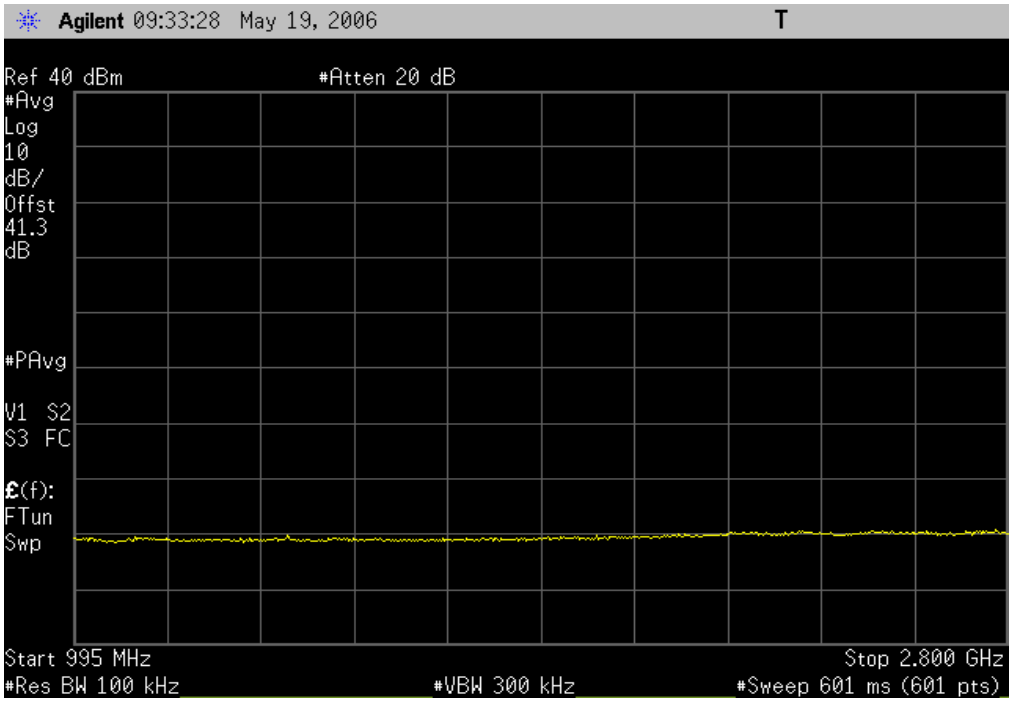
Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



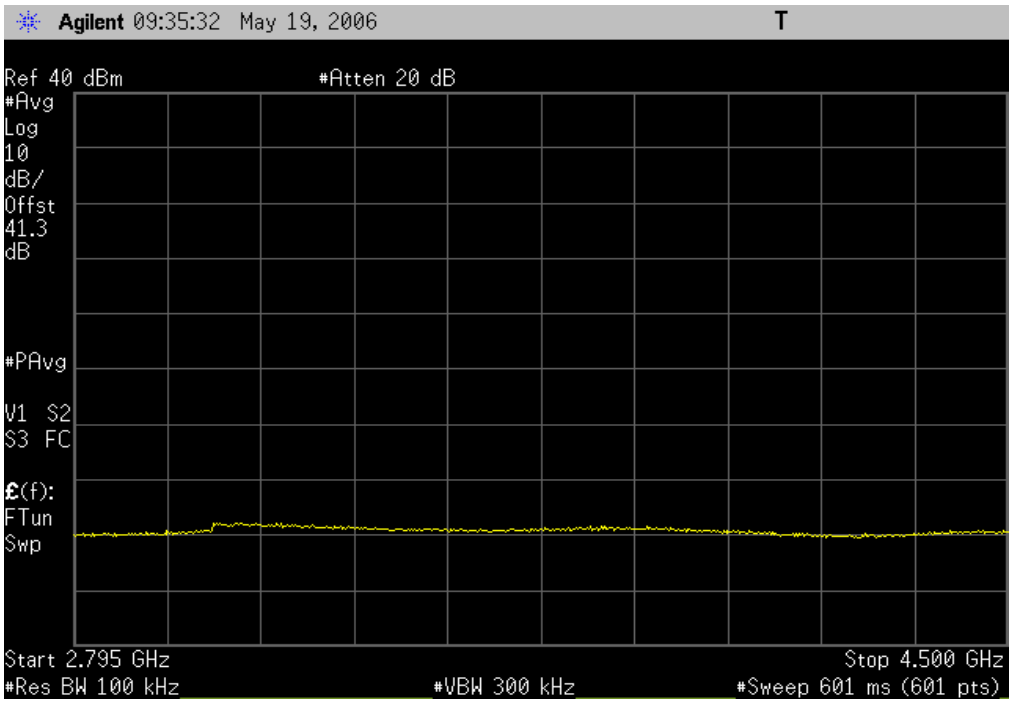
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



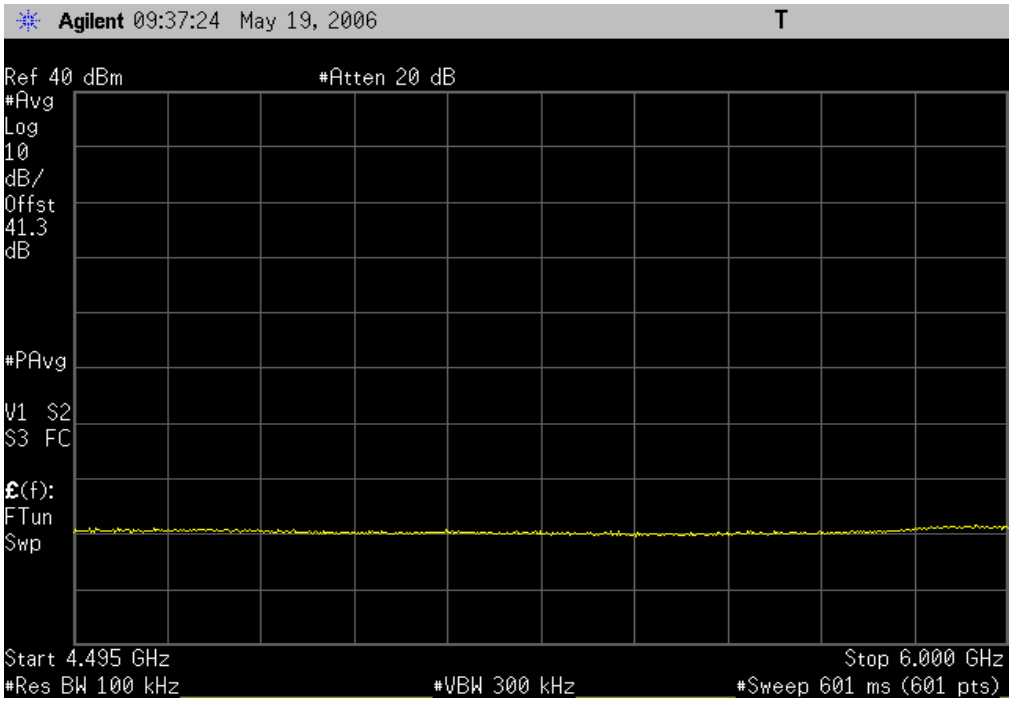
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



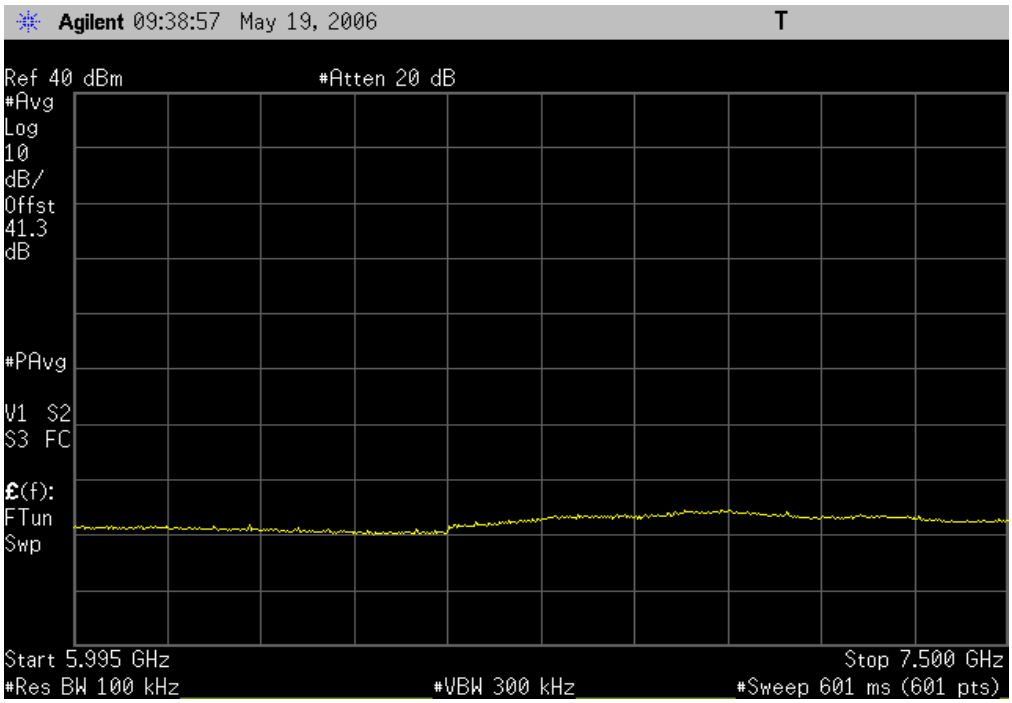
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



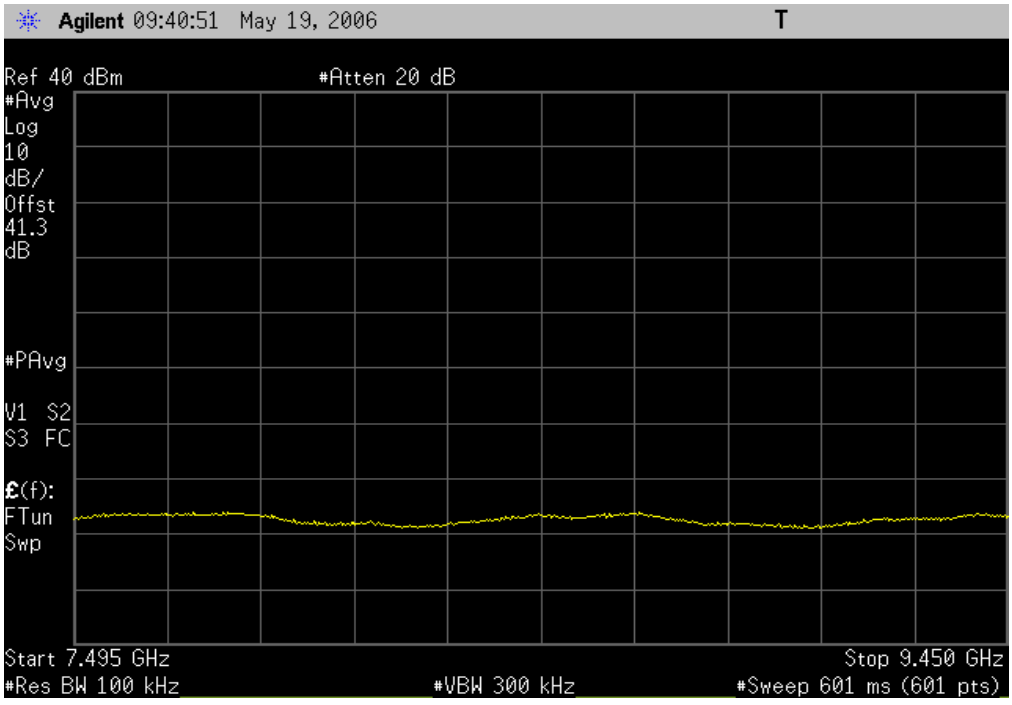
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



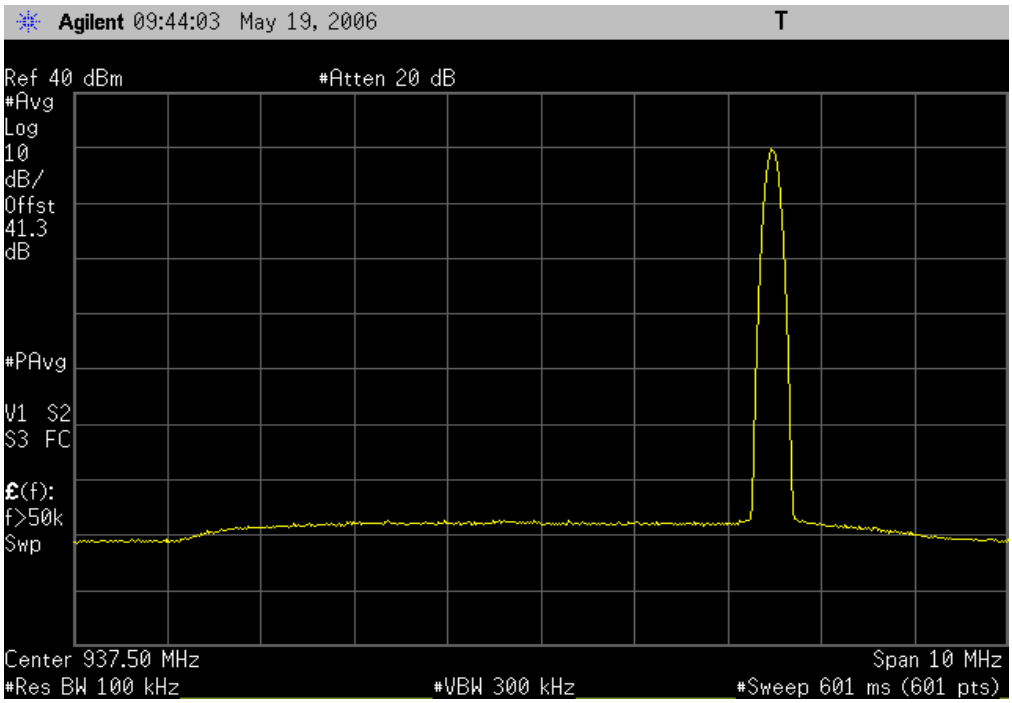
Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



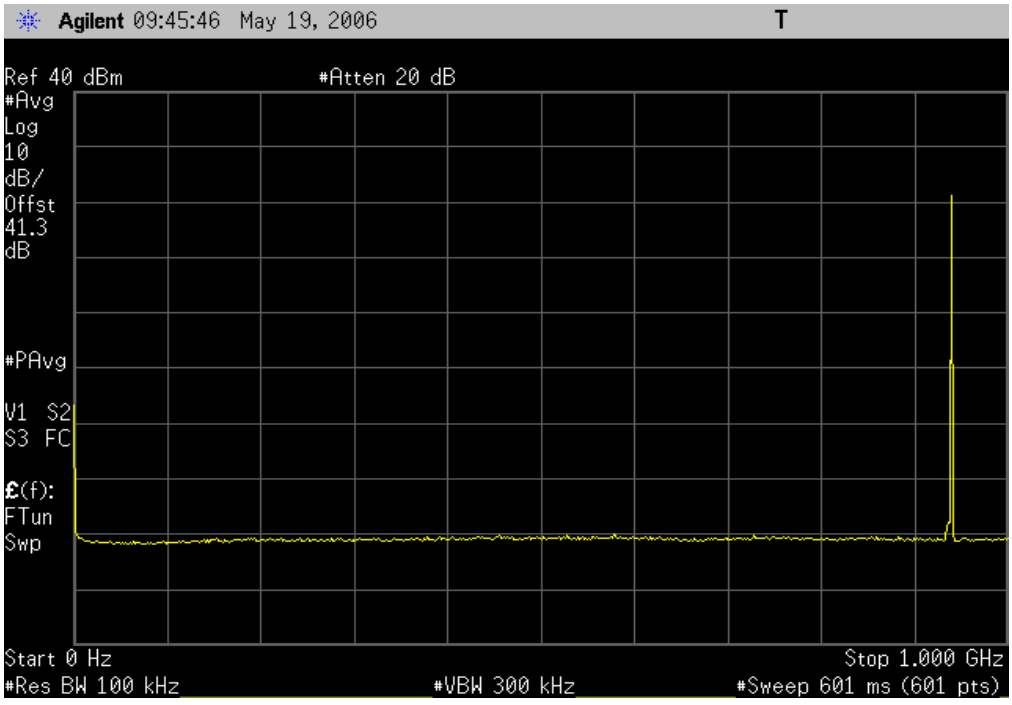
Mid Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



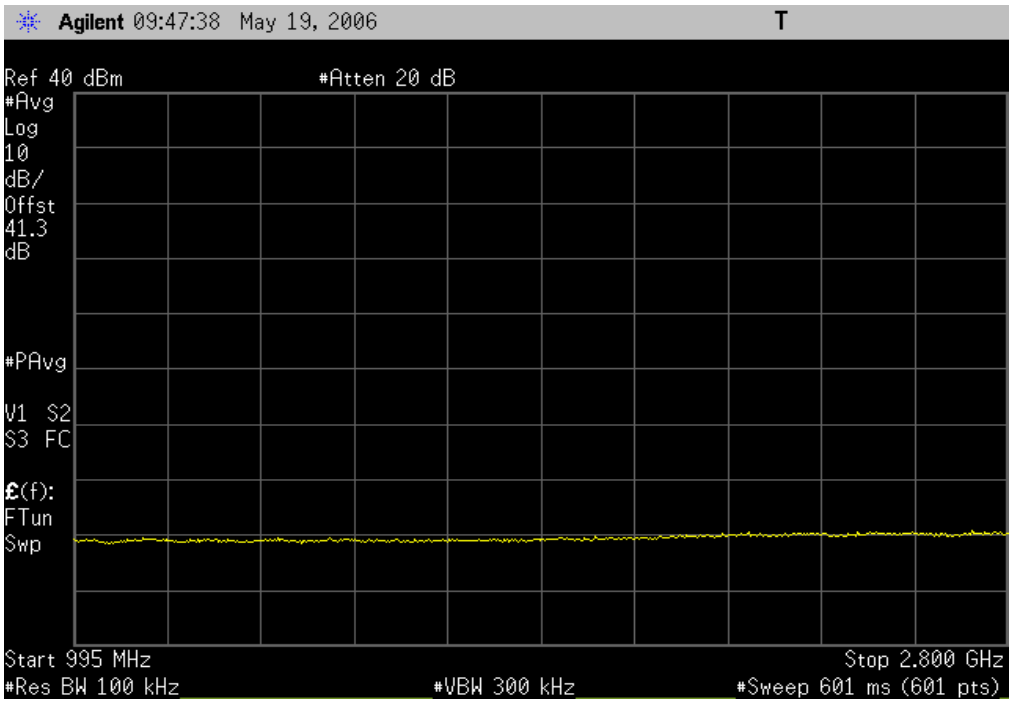
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



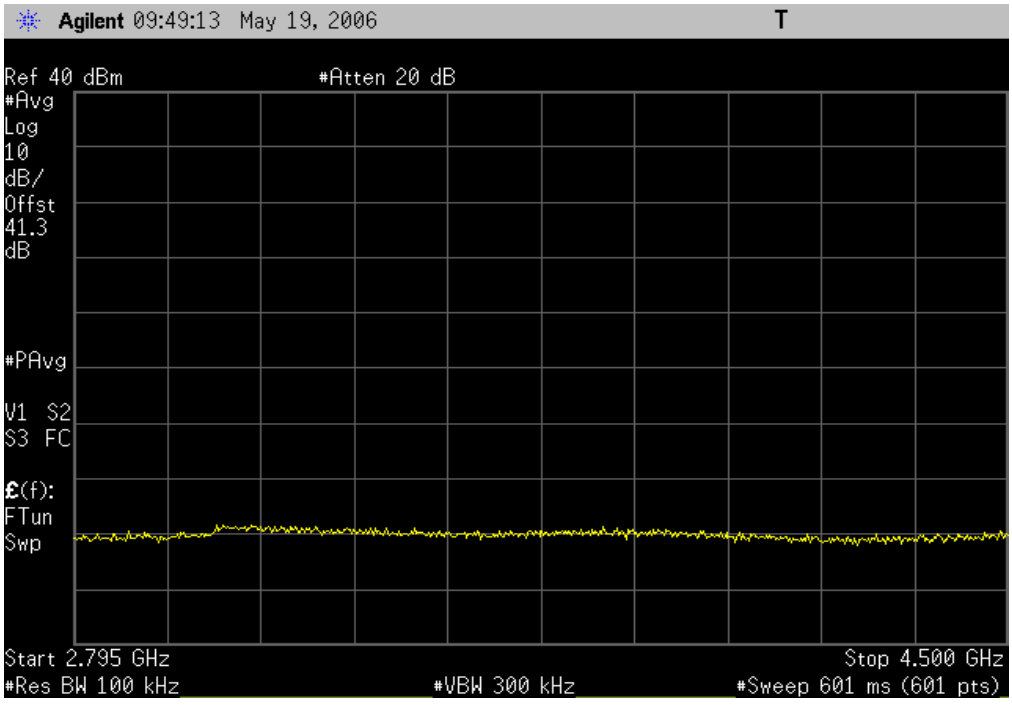
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

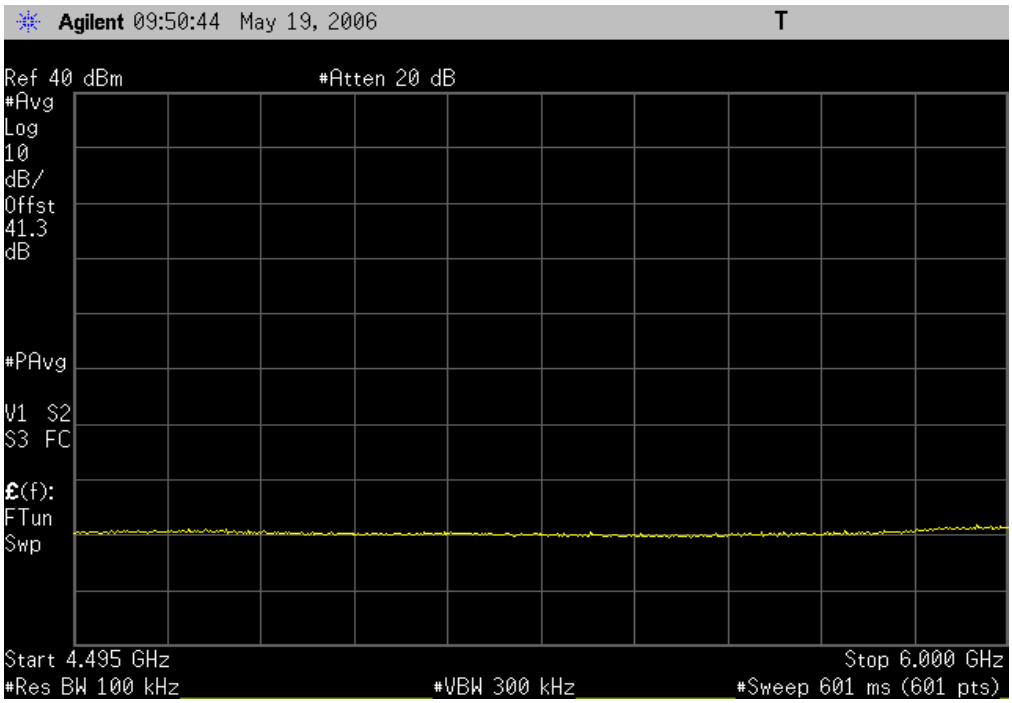


High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

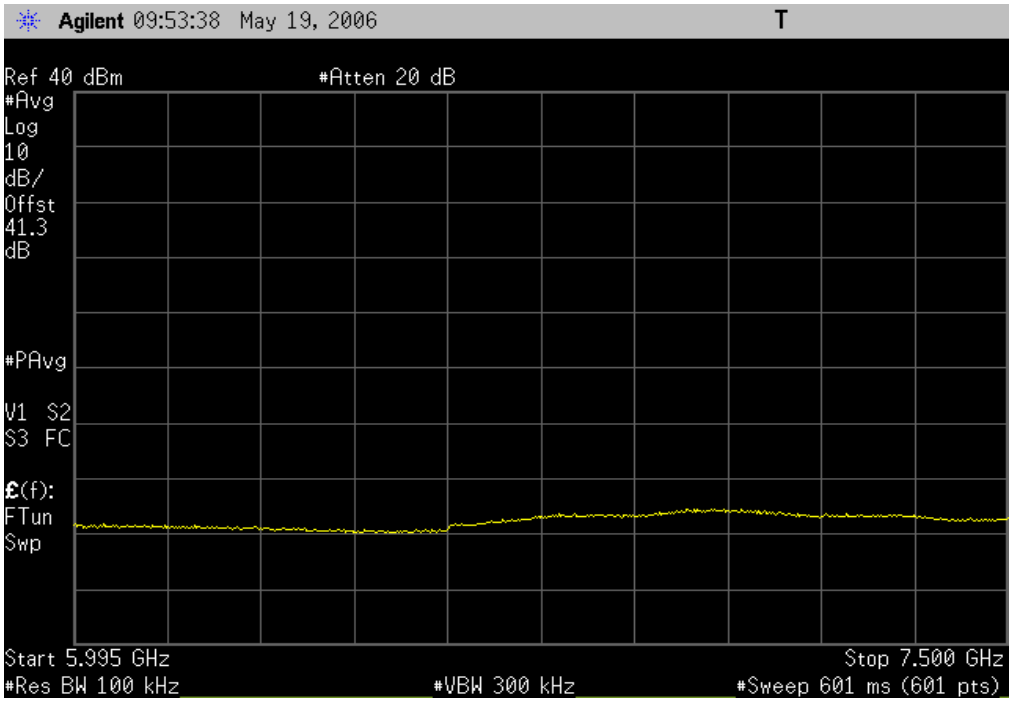


SPURIOUS EMISSIONS AT ANTENNA TERMINALS

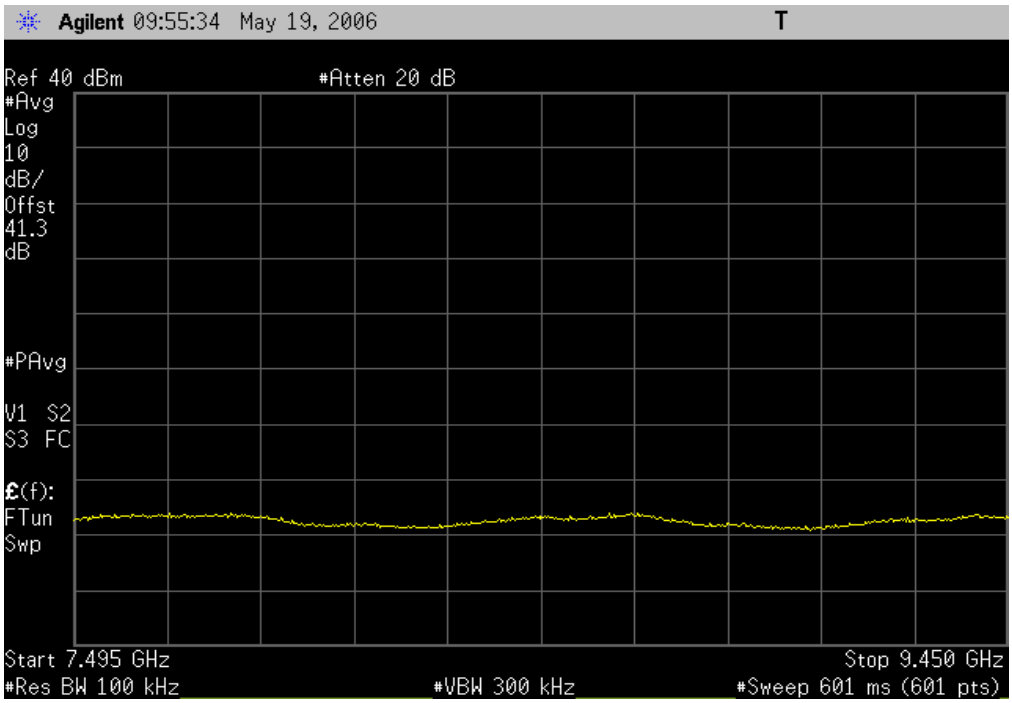
High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



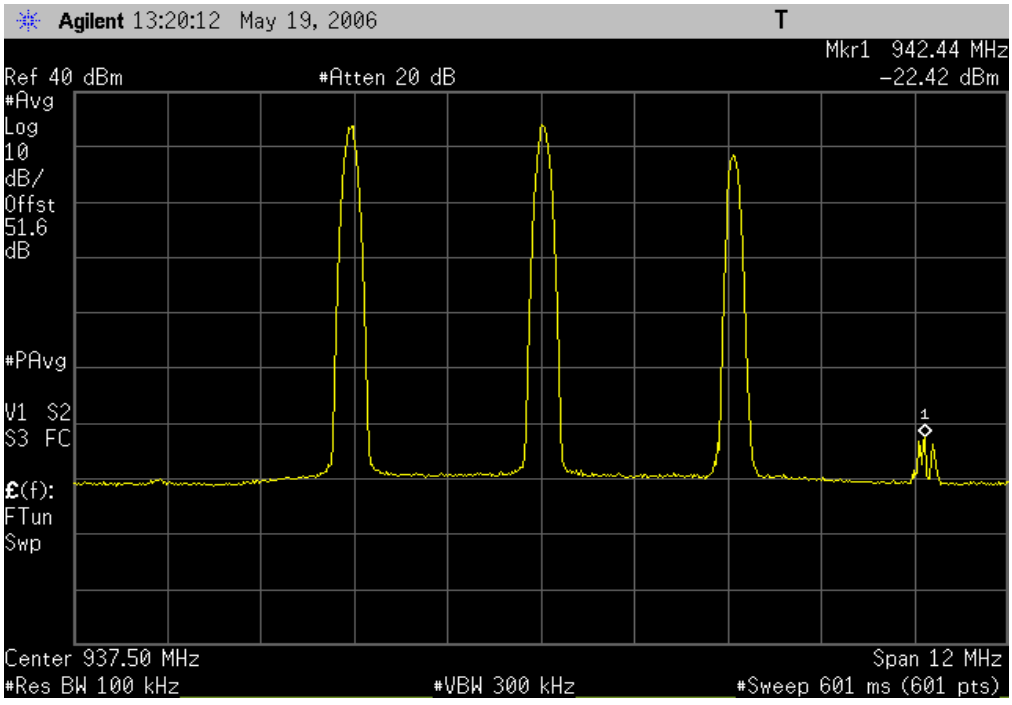
High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



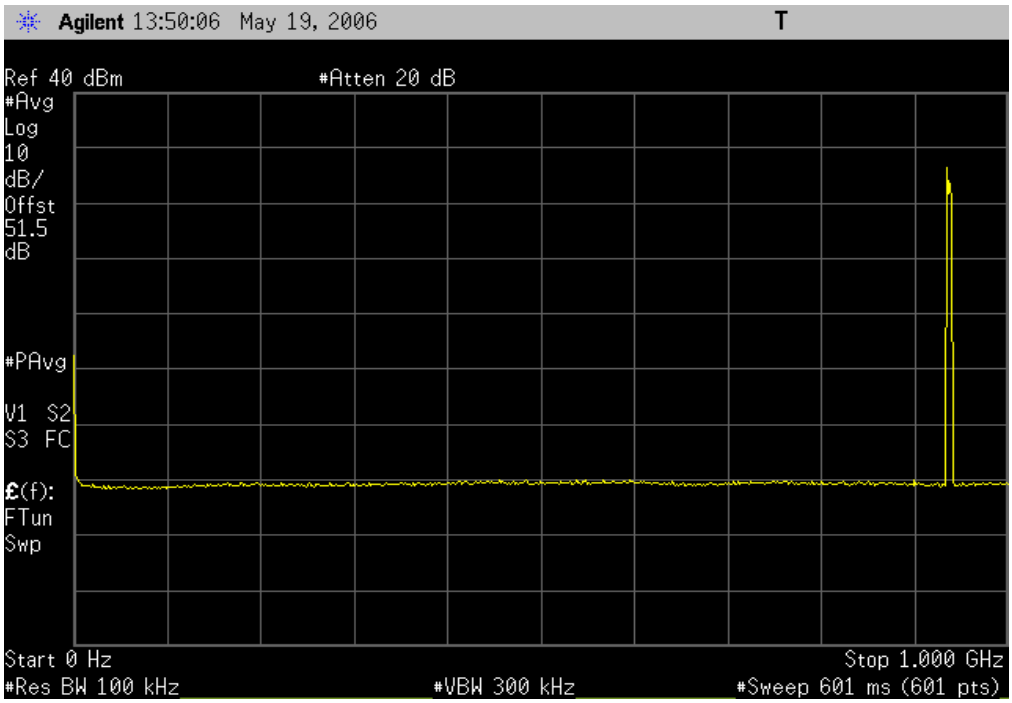
High Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



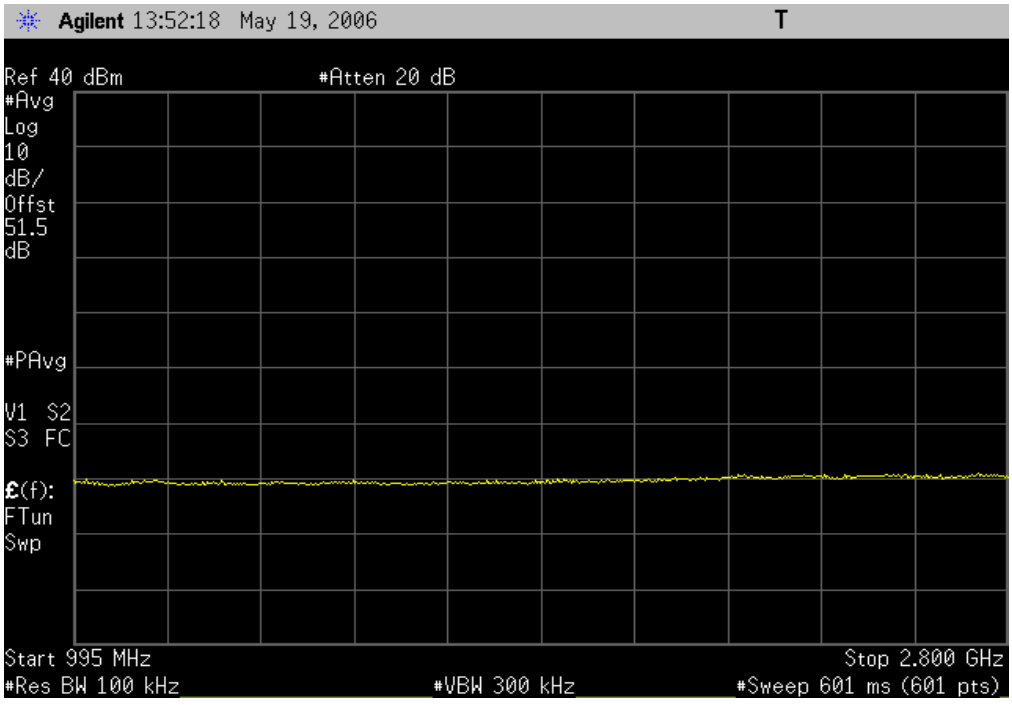
9 Channel Intermods, In Band					
Result:	Pass	**Value:**	-22.4 dBm	**Limit:**	≤ -13 dBm



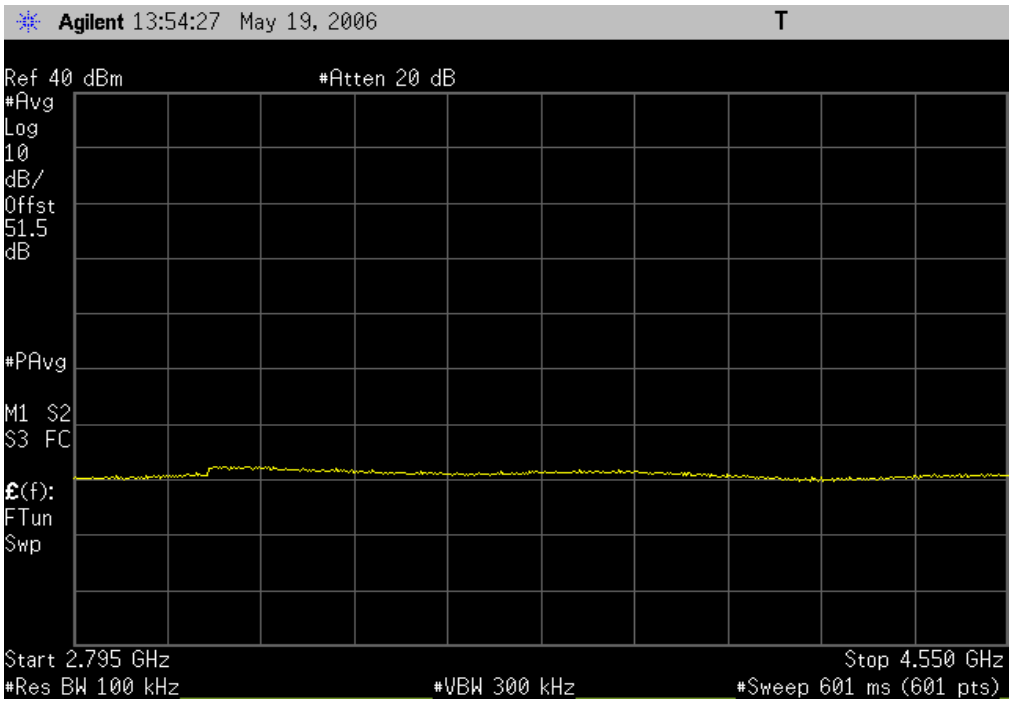
9 Channel Intermods, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



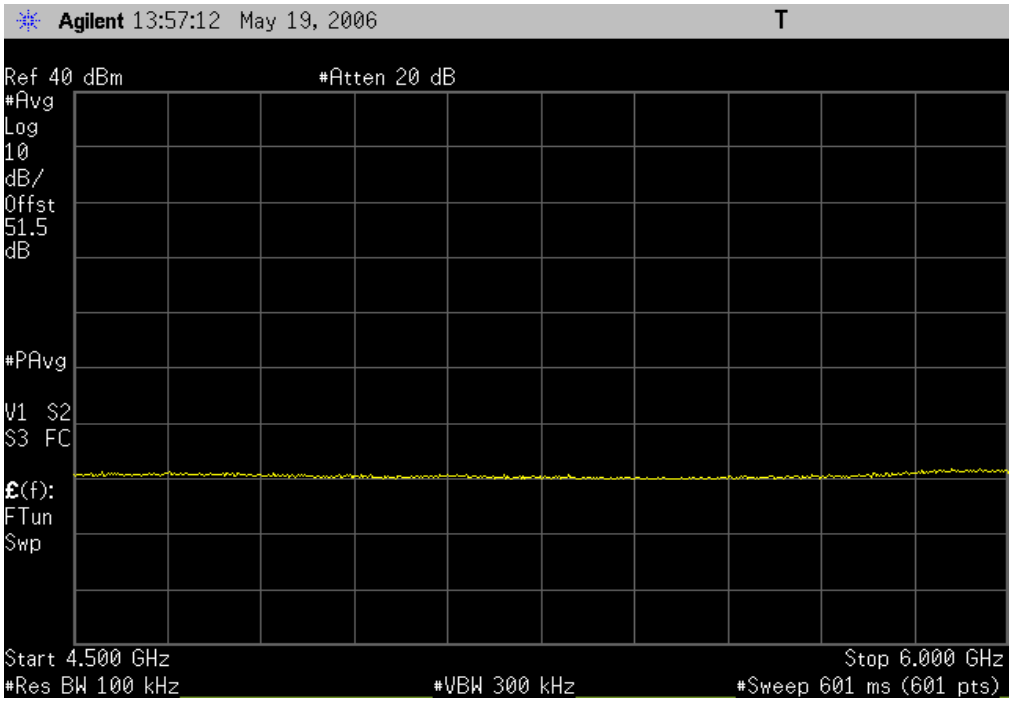
9 Channel Intermods, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



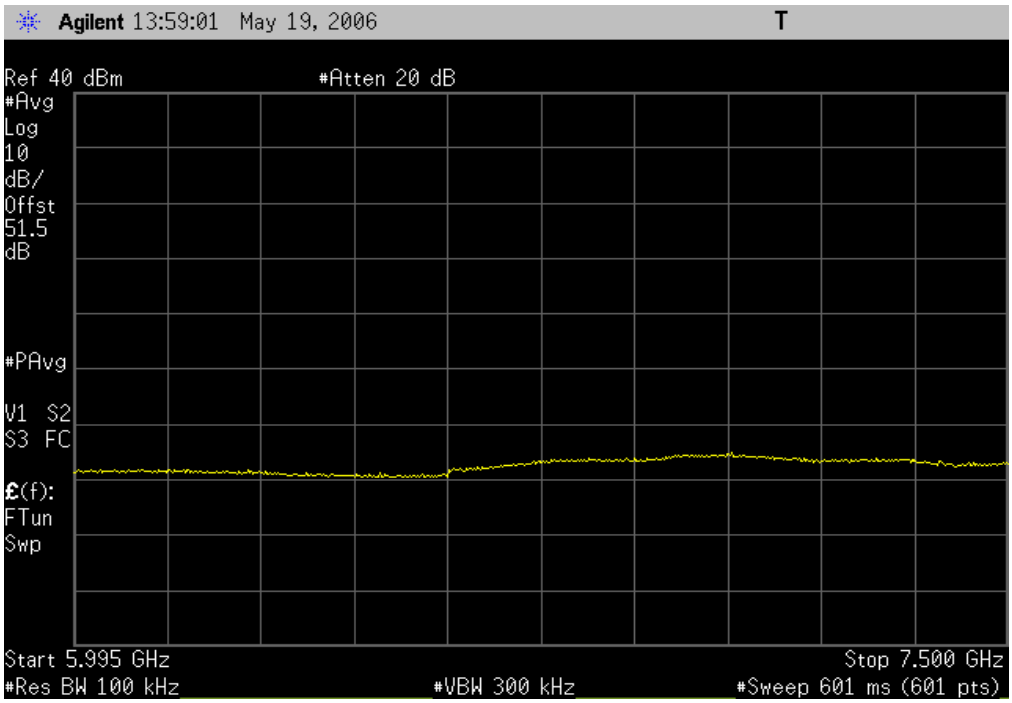
9 Channel Intermods, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



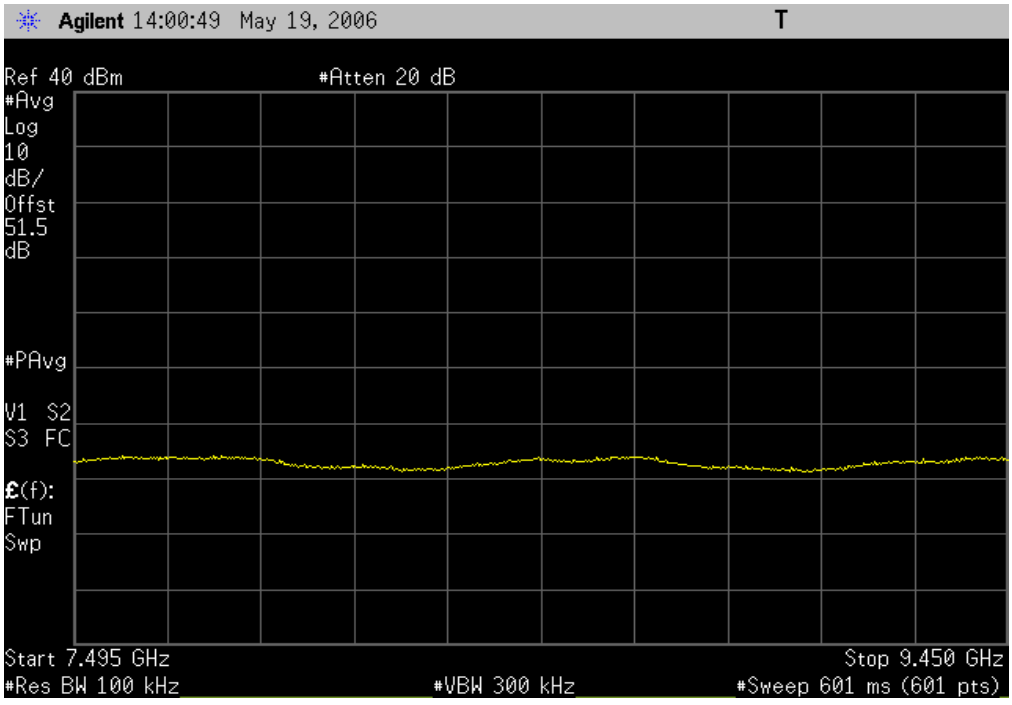
9 Channel Intermods, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



9 Channel Intermods, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



9 Channel Intermods, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24
Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 10 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	Dean Busch			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

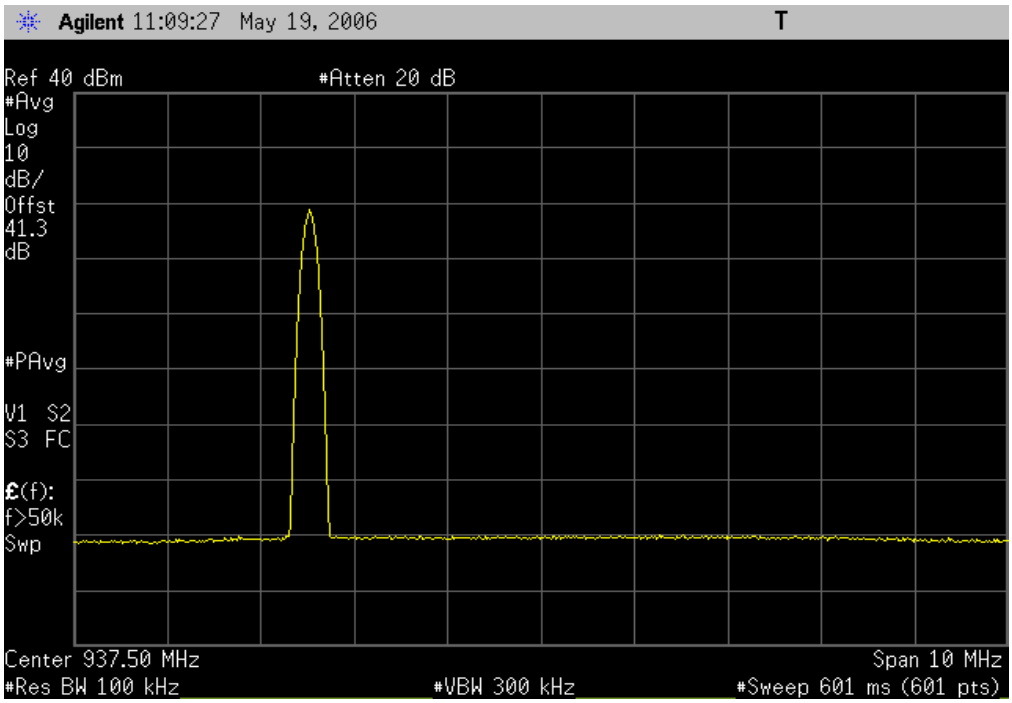
900MHz Band, High Power Level

DEVIATIONS FROM TEST STANDARD

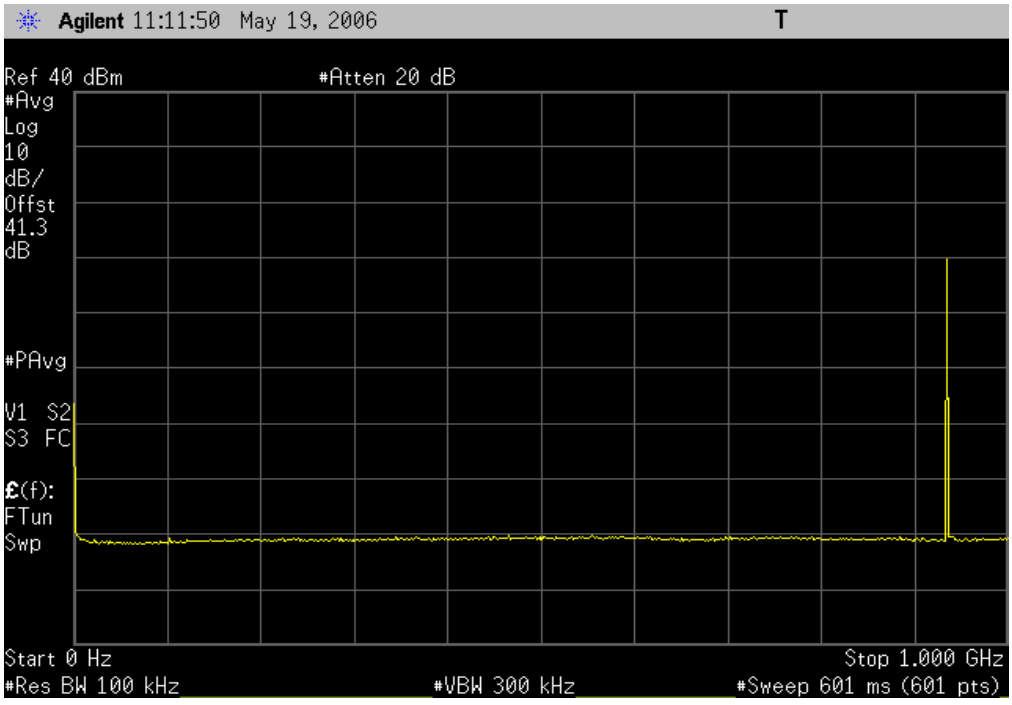
Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
High Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass

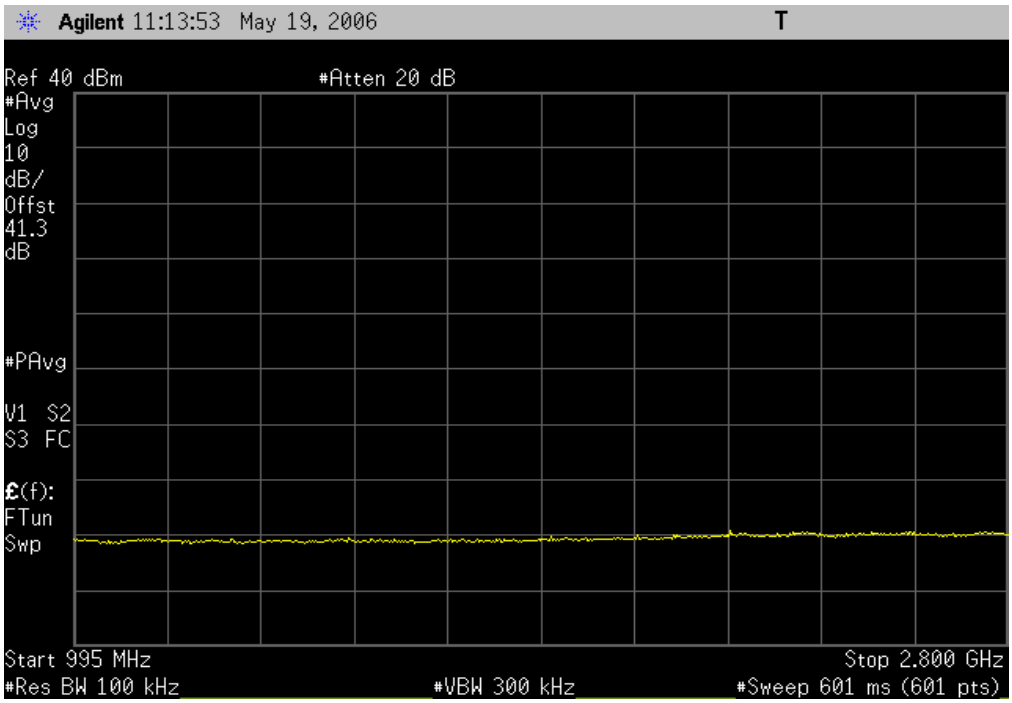
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



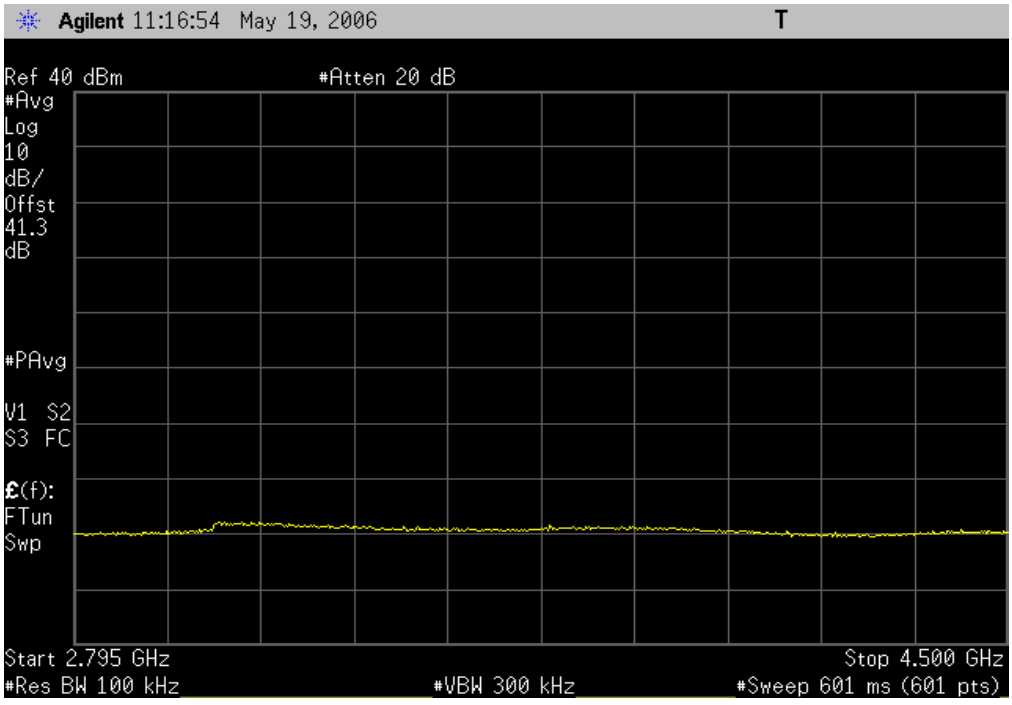
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



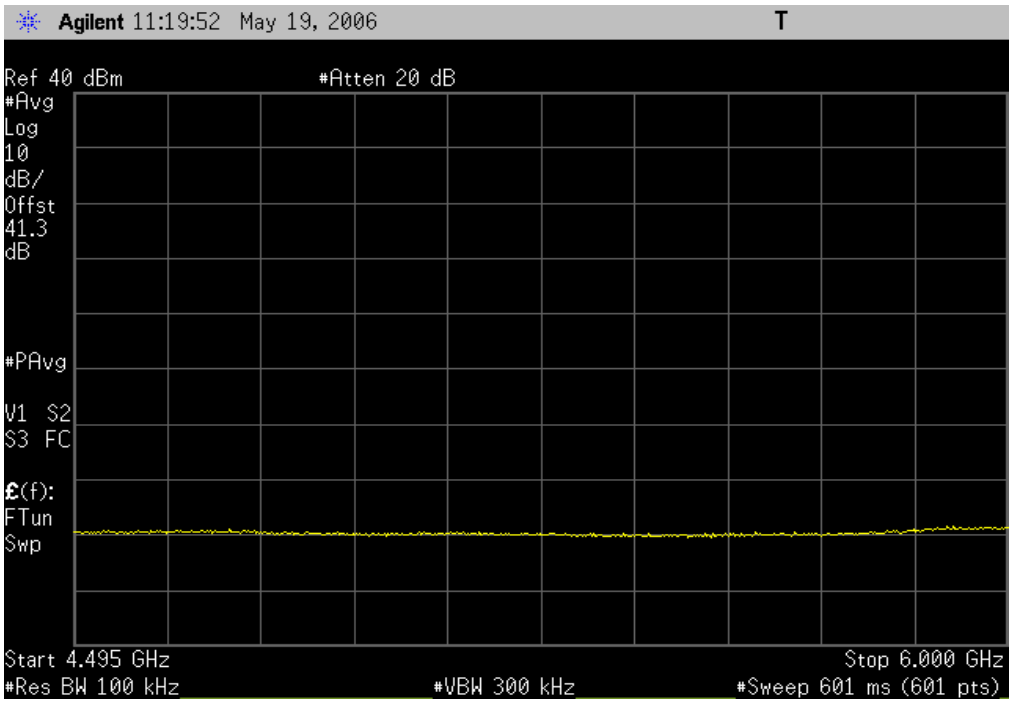
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



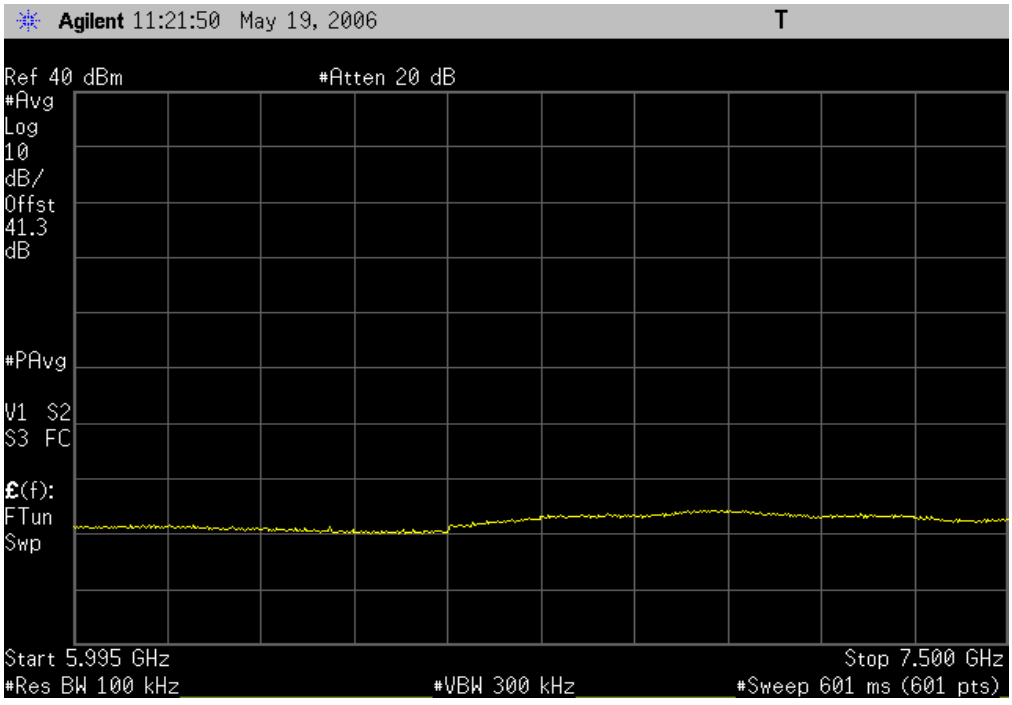
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



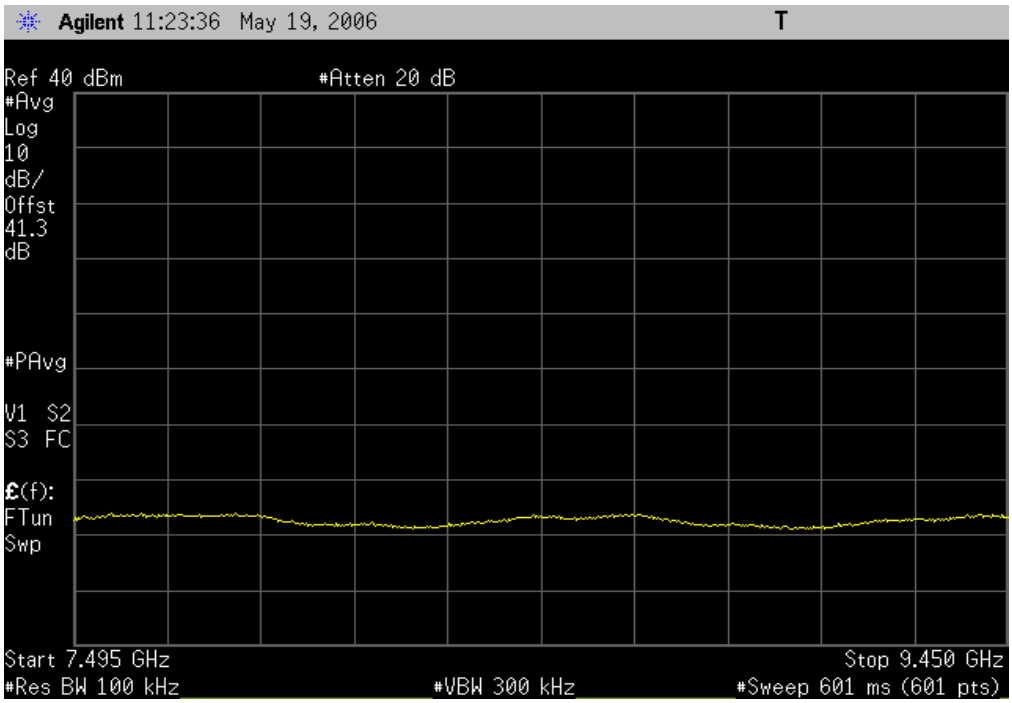
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



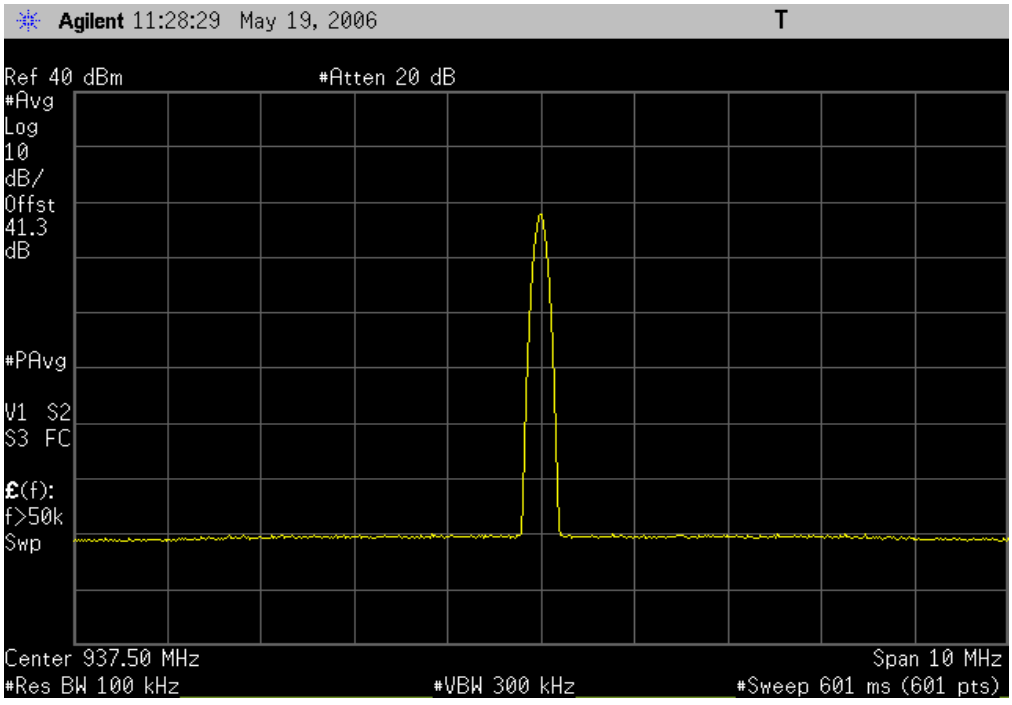
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



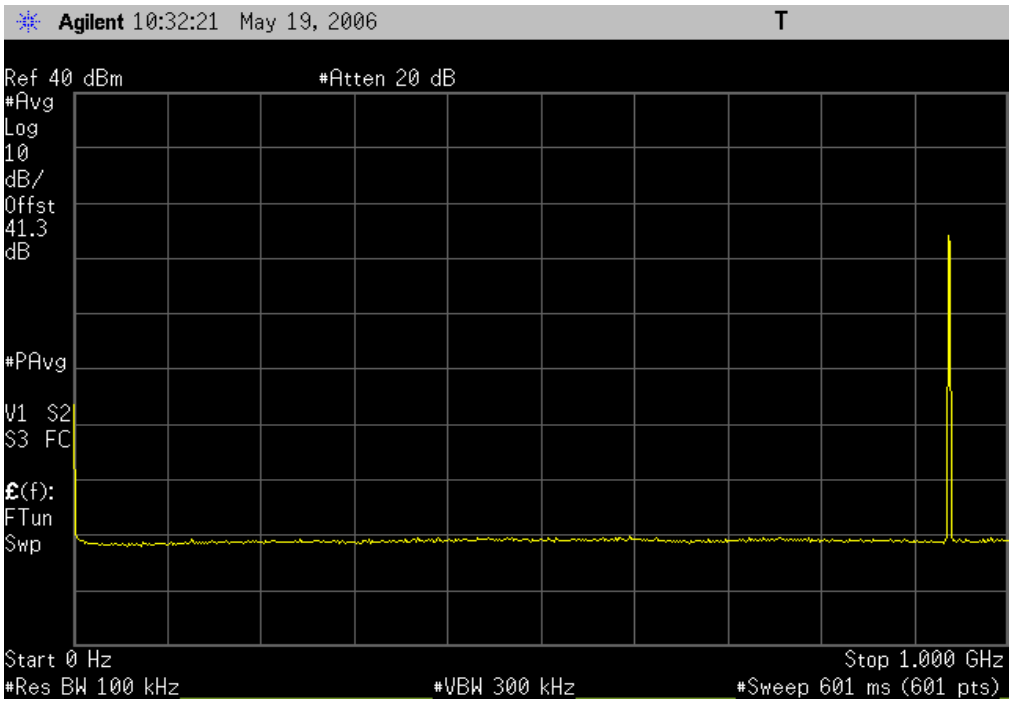
Low Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



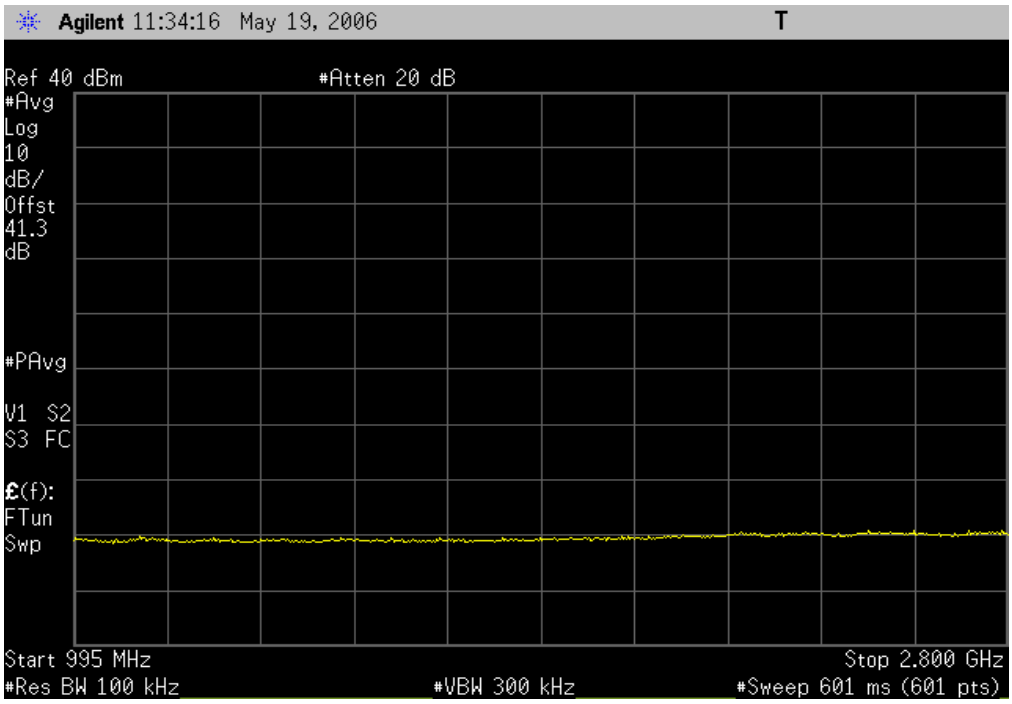
Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



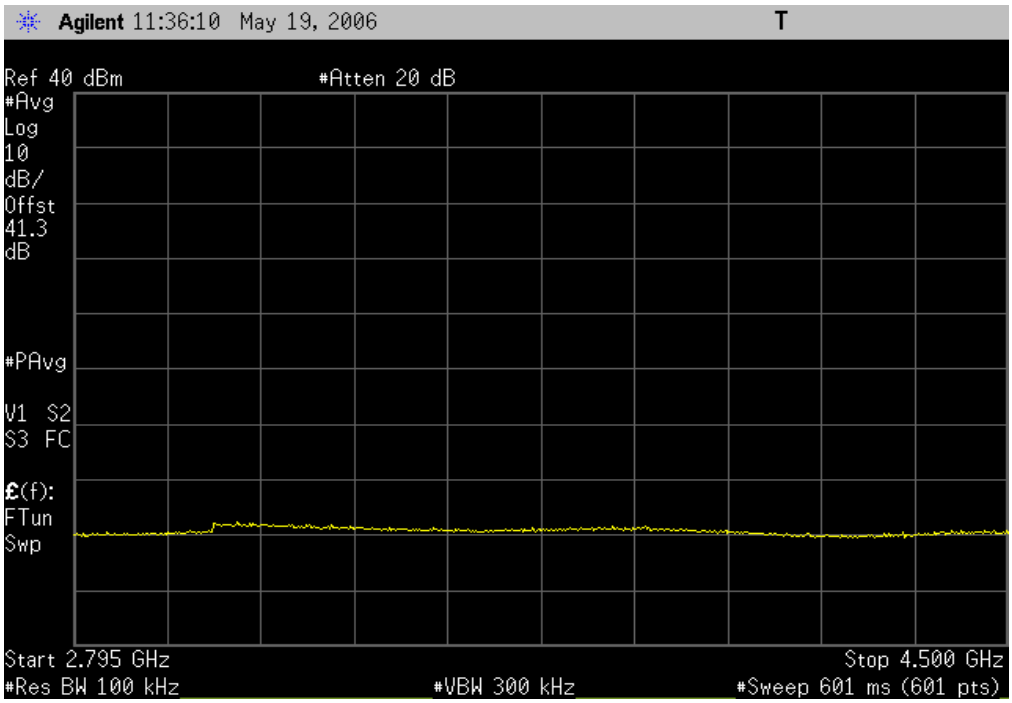
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



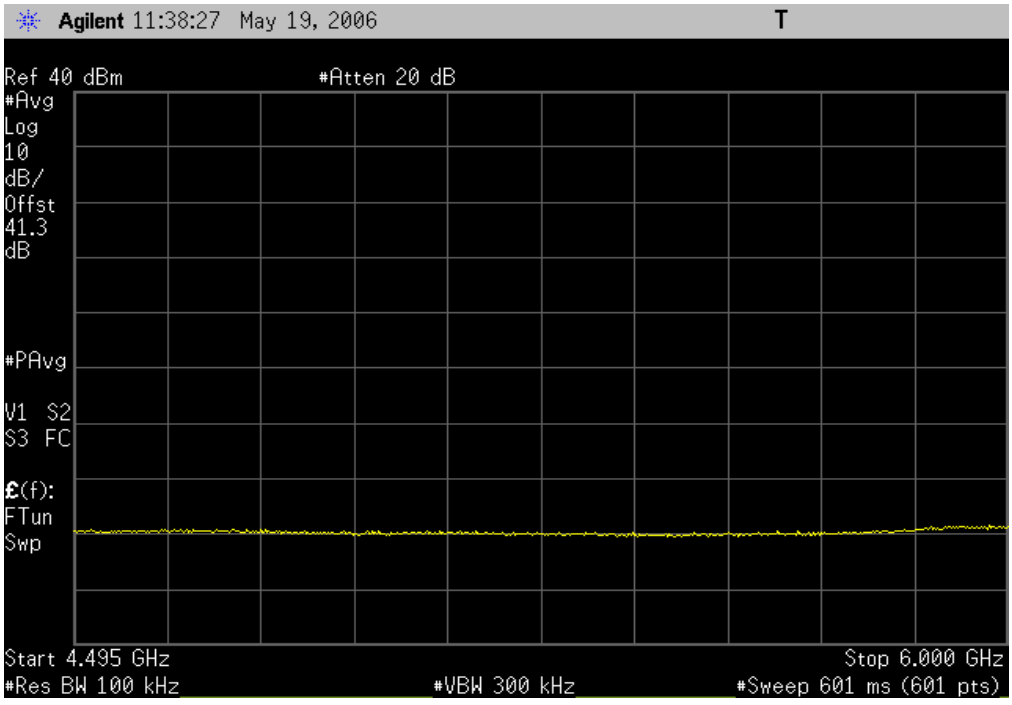
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



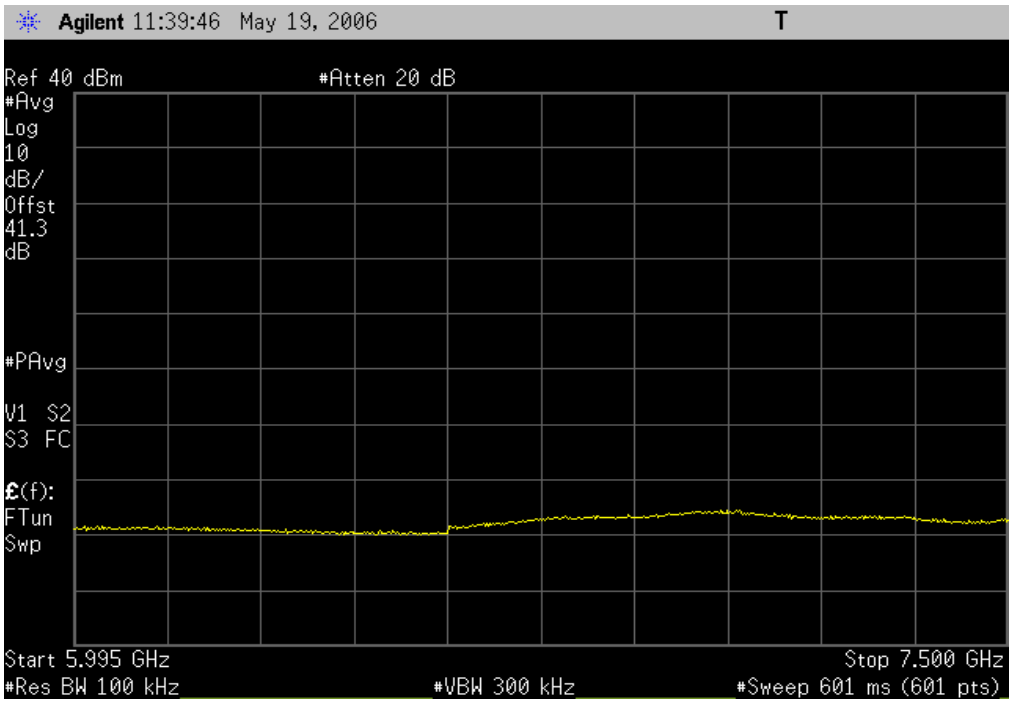
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



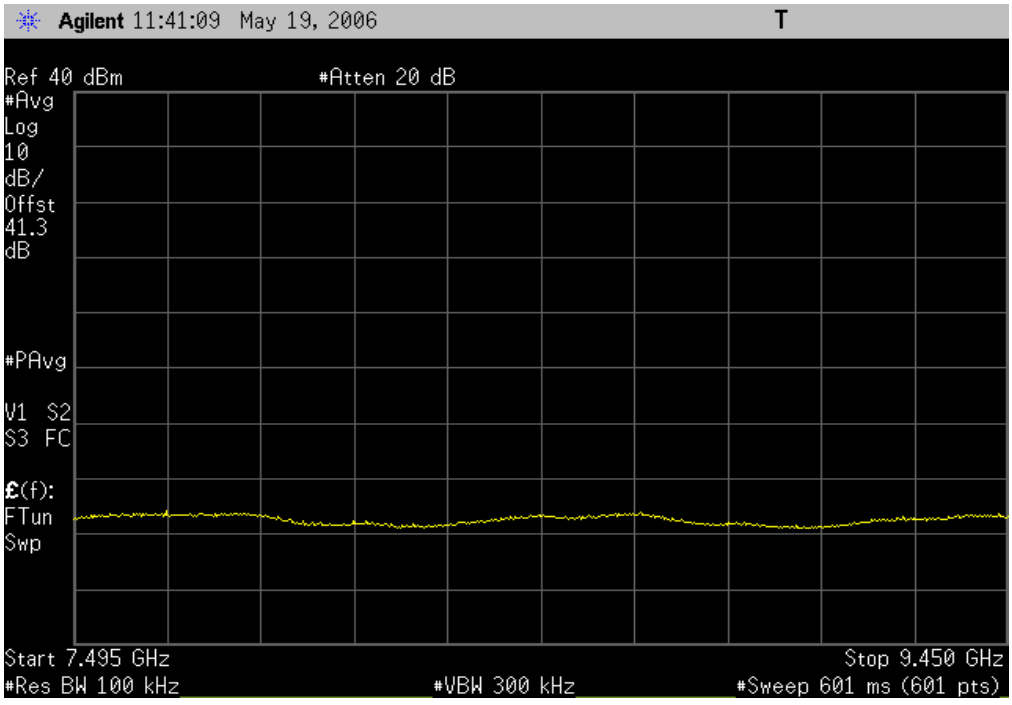
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

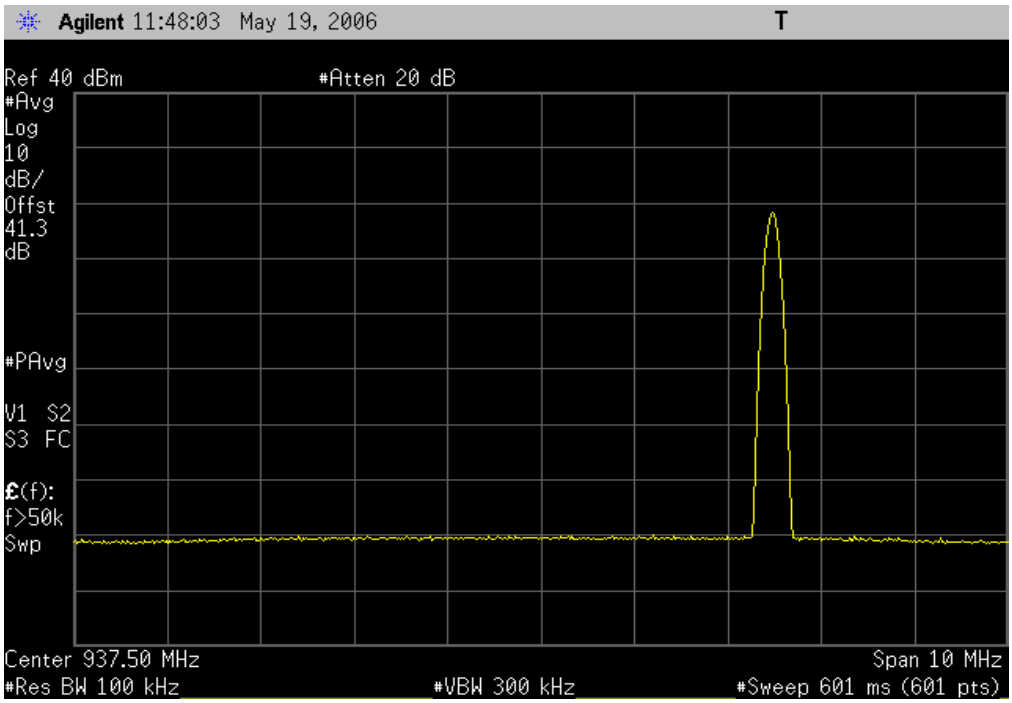


Mid Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

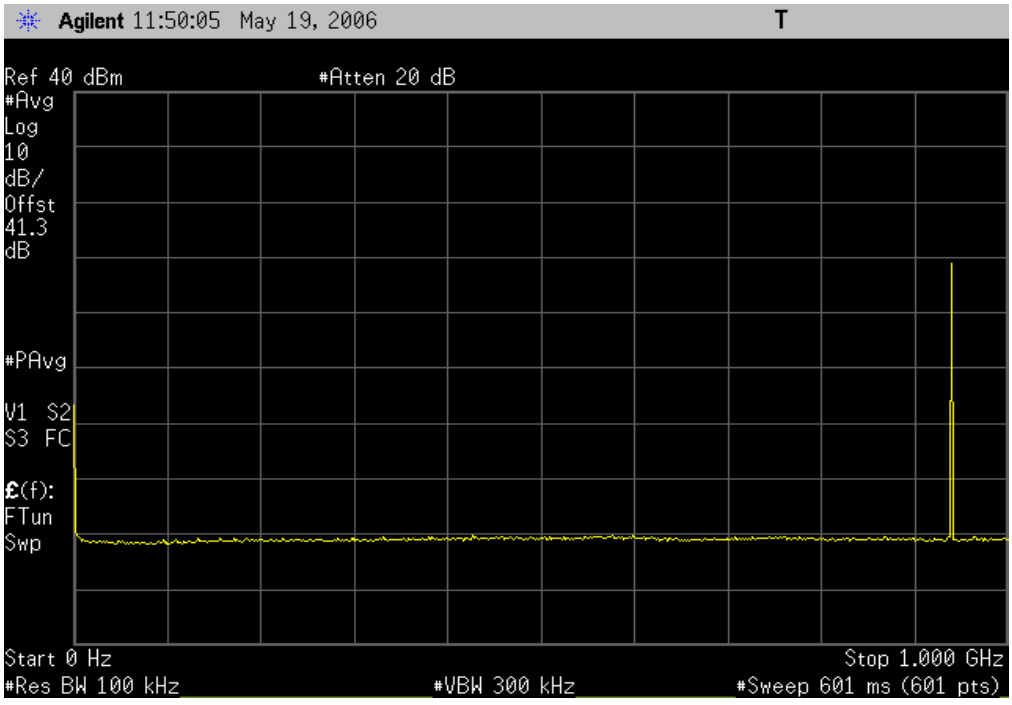


SPURIOUS EMISSIONS AT ANTENNA TERMINALS

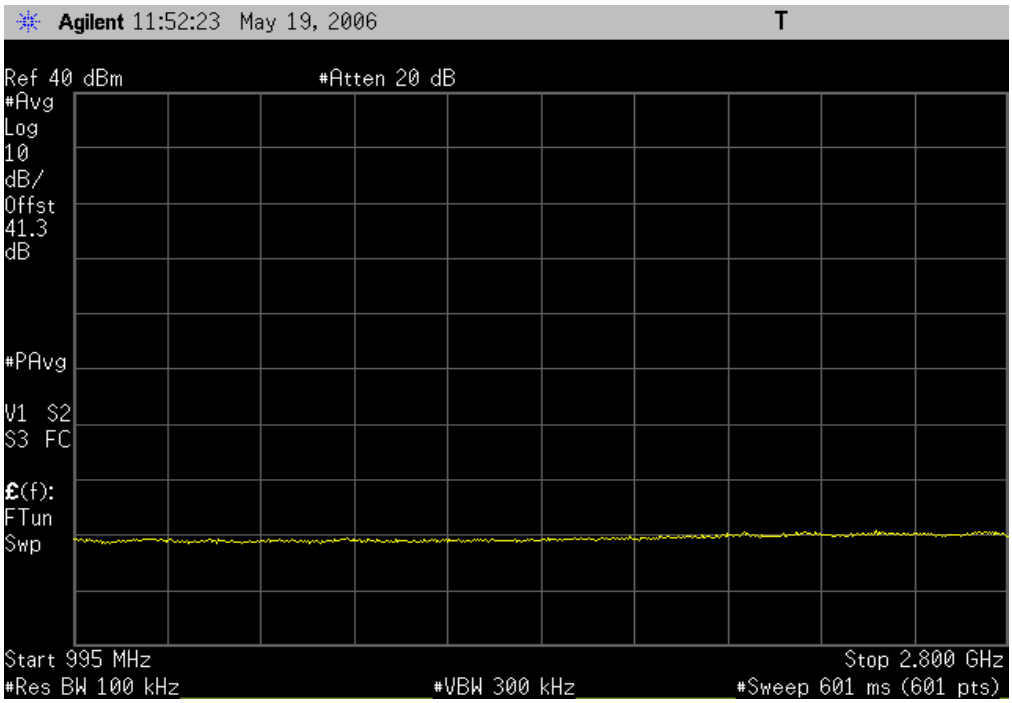
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



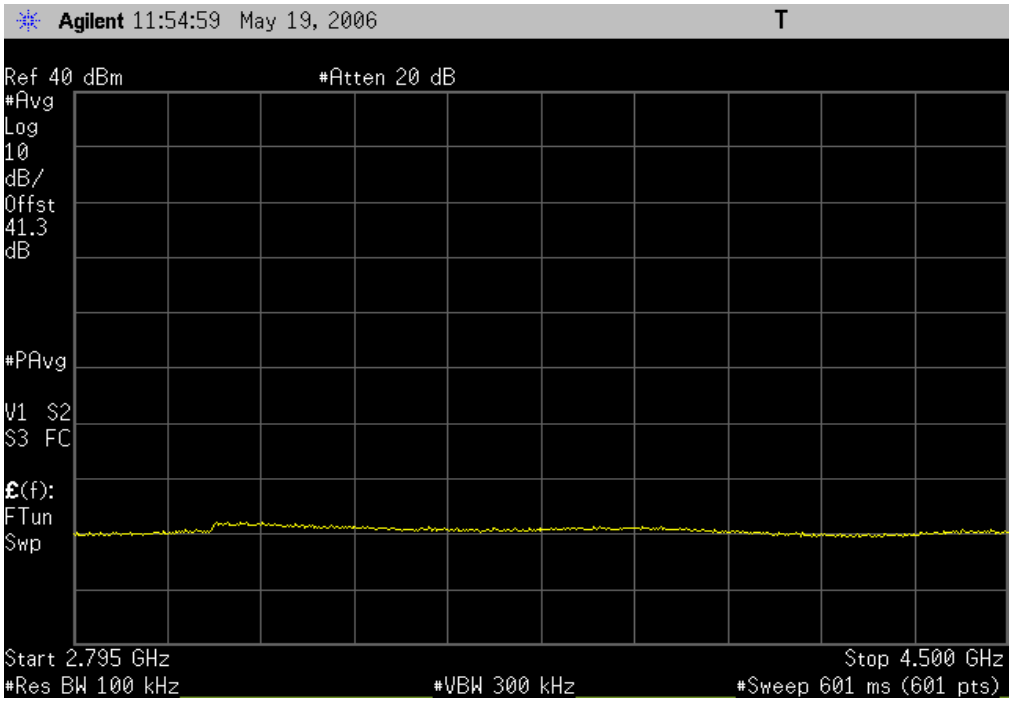
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



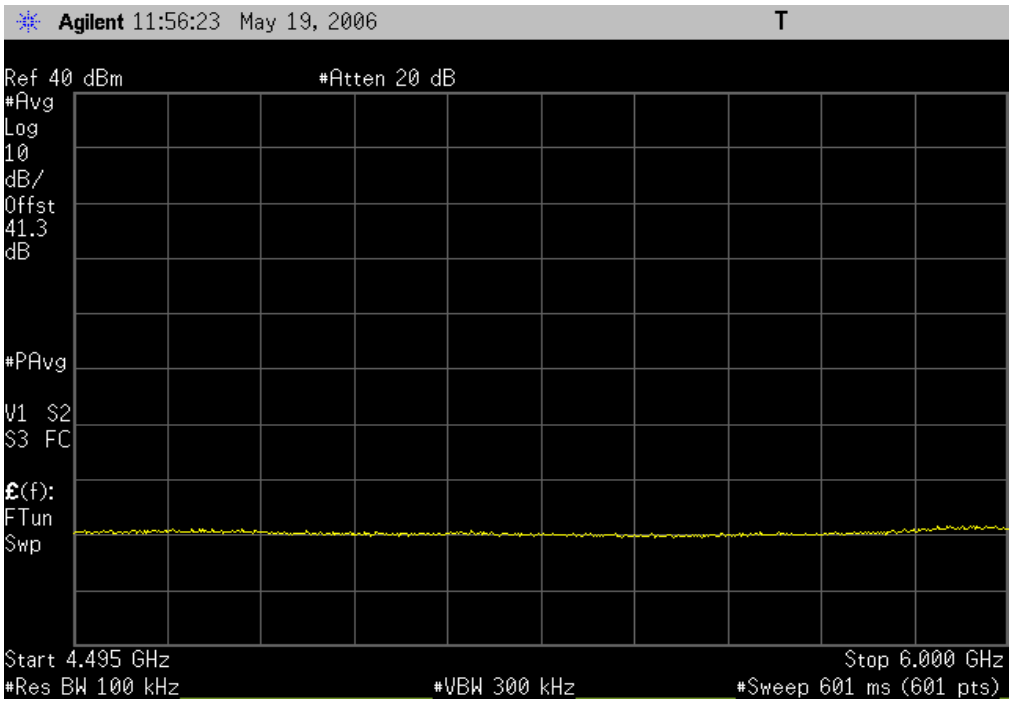
High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



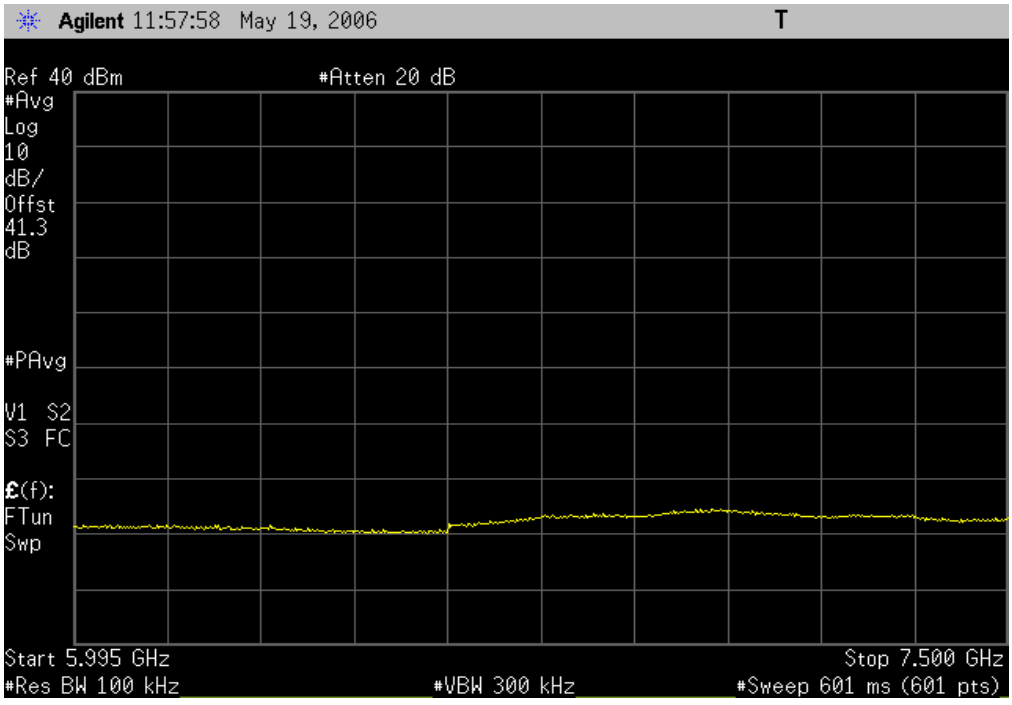
High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

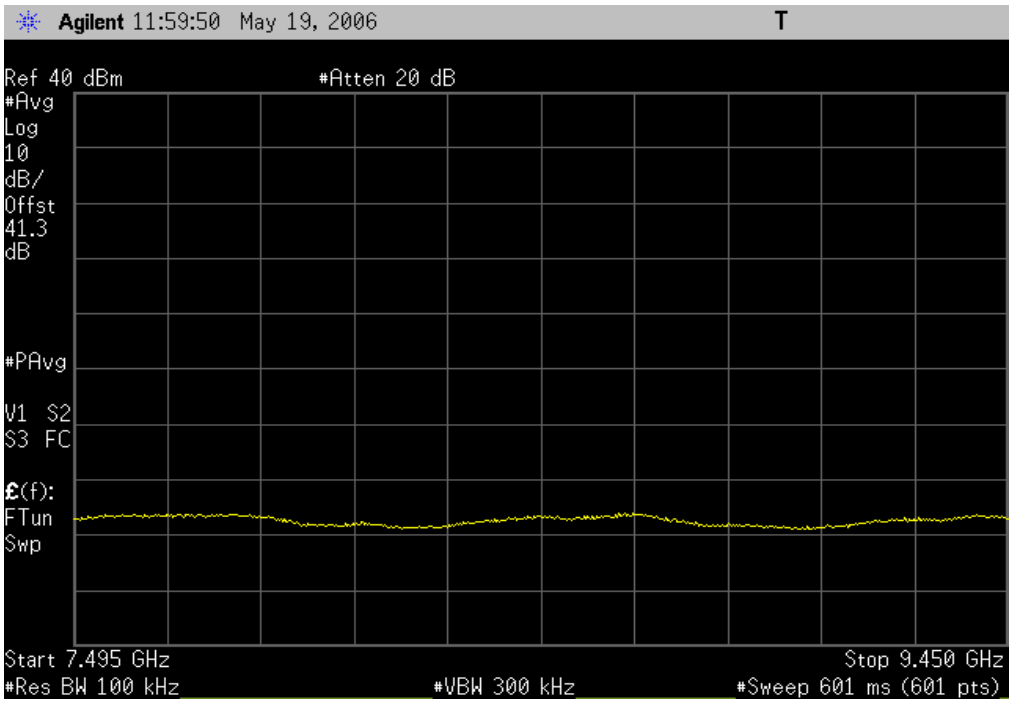


High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



SPURIOUS EMISSIONS AT ANTENNA TERMINALS

High Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



< -30 dBm ≤ -13 dBm

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24
Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

A spectrum analyzer was used to scan from 0 to 10 GHz. A 100kHz resolution bandwidth was used. No video filtering was employed. A 30dB external attenuator was used on the RF input of the spectrum analyzer.

NORTHWEST EMC

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2006.03.01

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	Dean Busch			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Rod Peloquin	Power:	-48Vdc	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

COMMENTS

900MHz Band, High Power Level

DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

Modes of Operation and Test Conditions	Value	Limit	Result
Low Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 4.495GHz-6GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
Low Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, In Band	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 0-1GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 995MHz-2.8GHz	< -30 dBm	≤ -13 dBm	Pass
Mid Channel, 2.795GHz-4.5GHz	< -30 dBm	≤ -13 dBm	Pass
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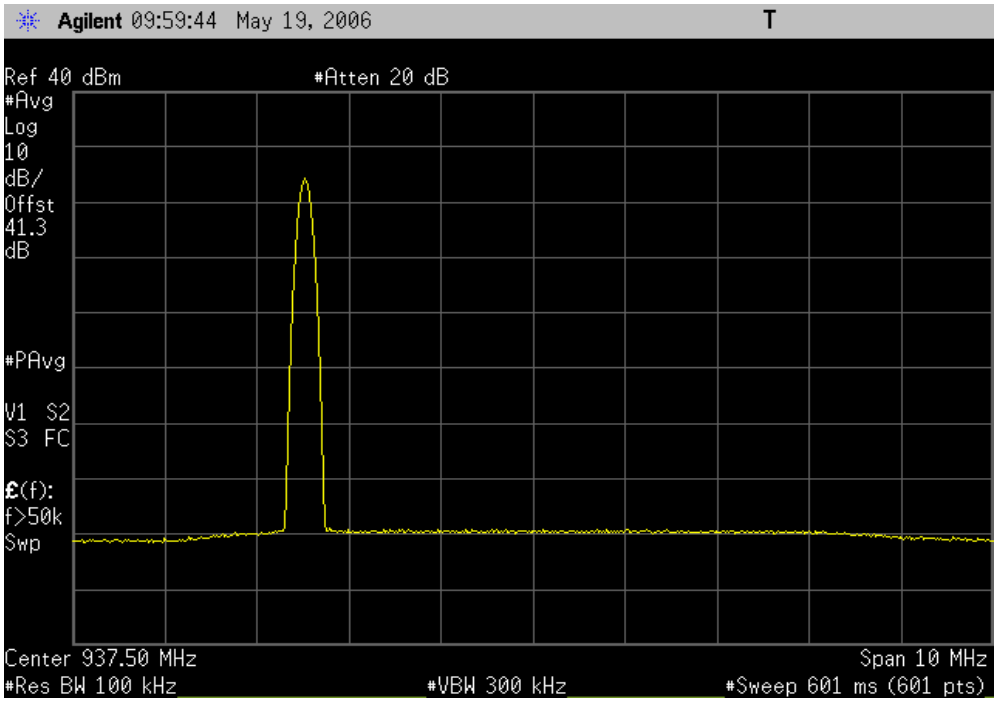
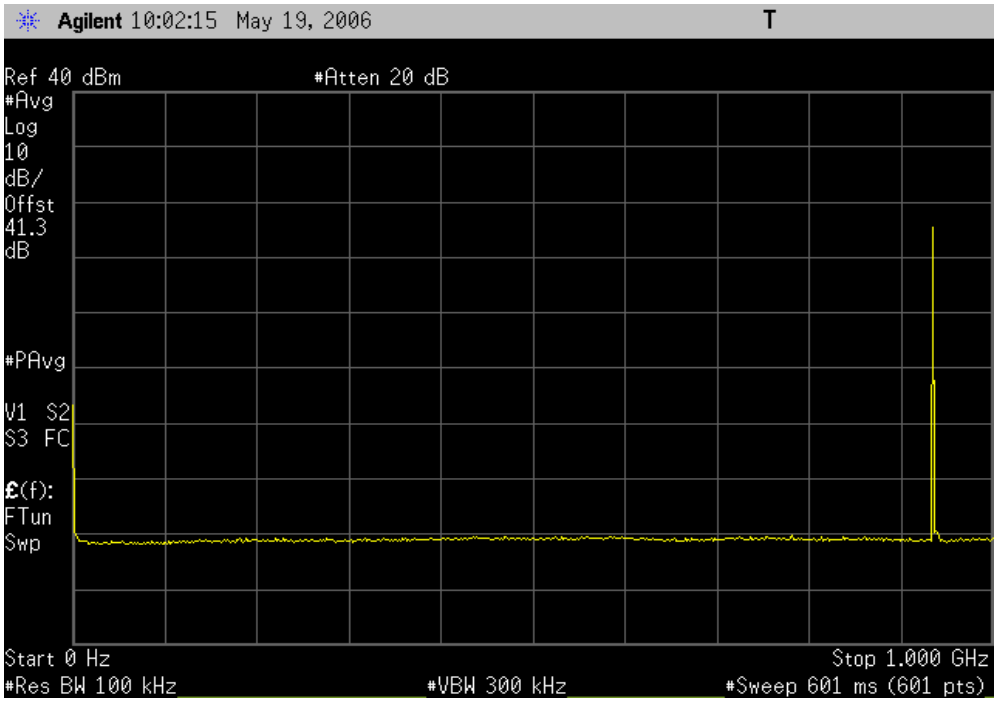
High Channel, 5.995GHz-7.5GHz	< -30 dBm	≤ -13 dBm	Pass
High Channel, 7.495GHz-9.45GHz	< -30 dBm	≤ -13 dBm	Pass

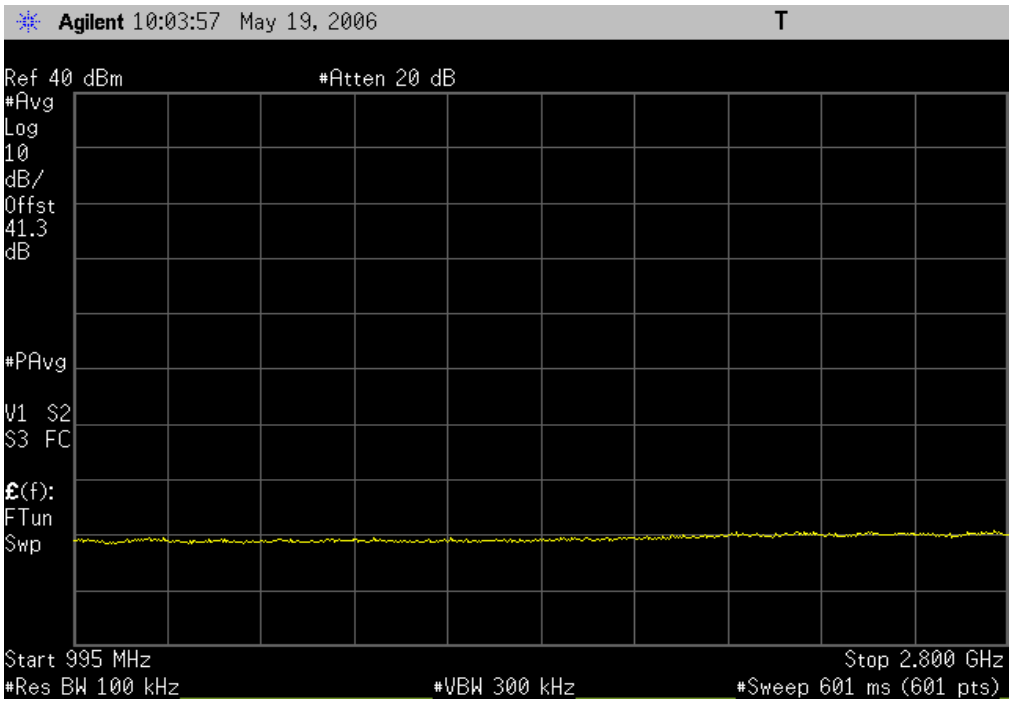
Low Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



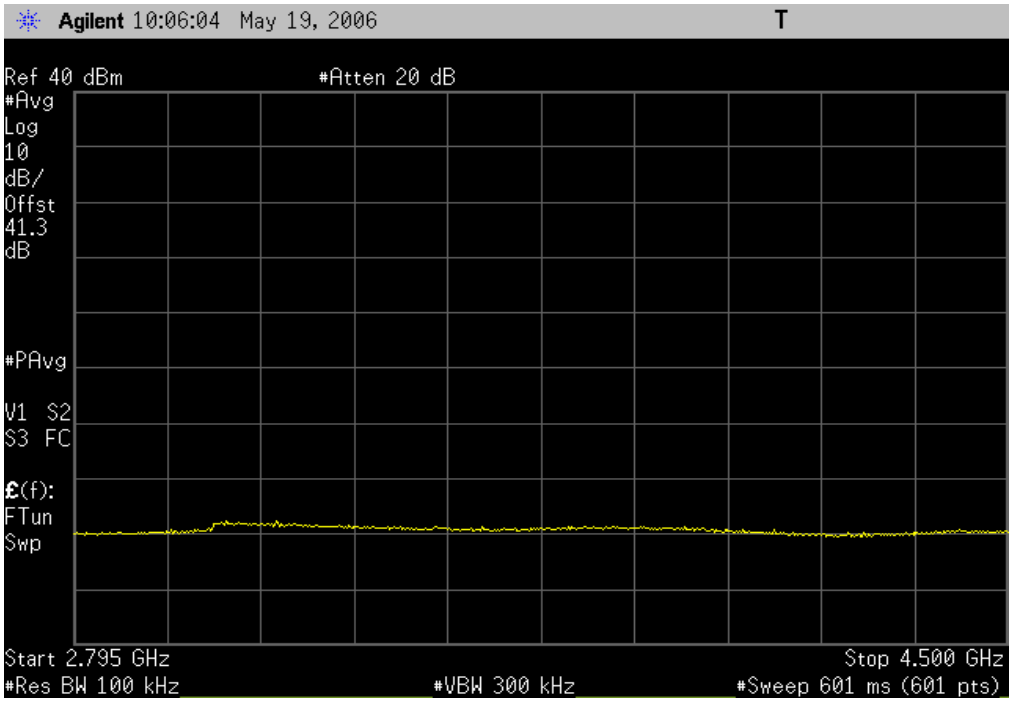
Low Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



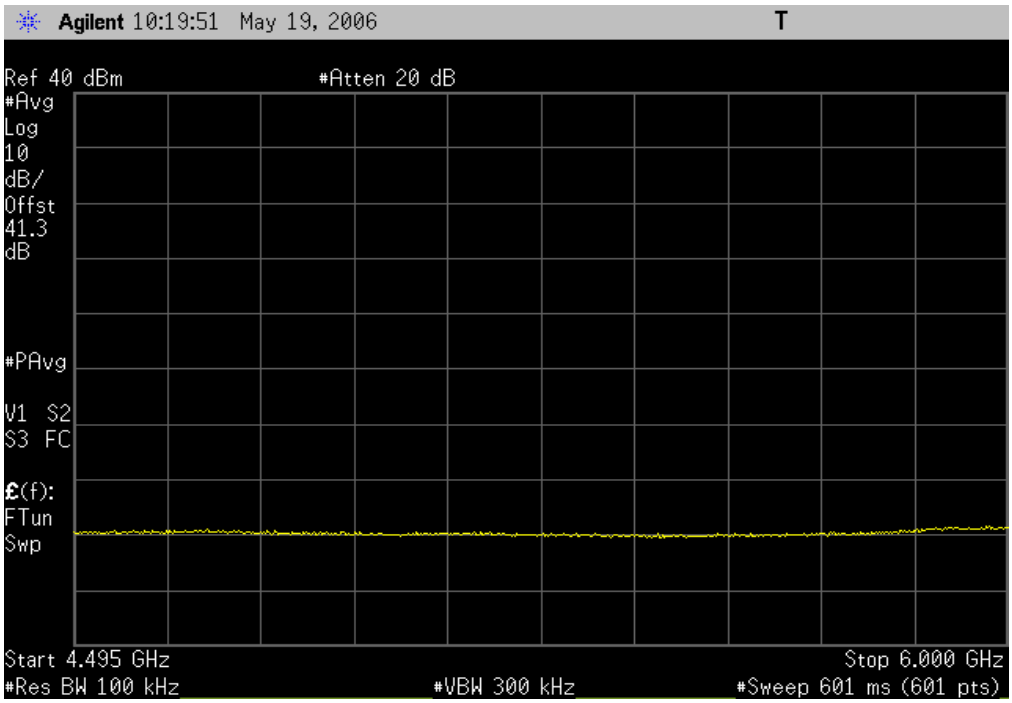
Low Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



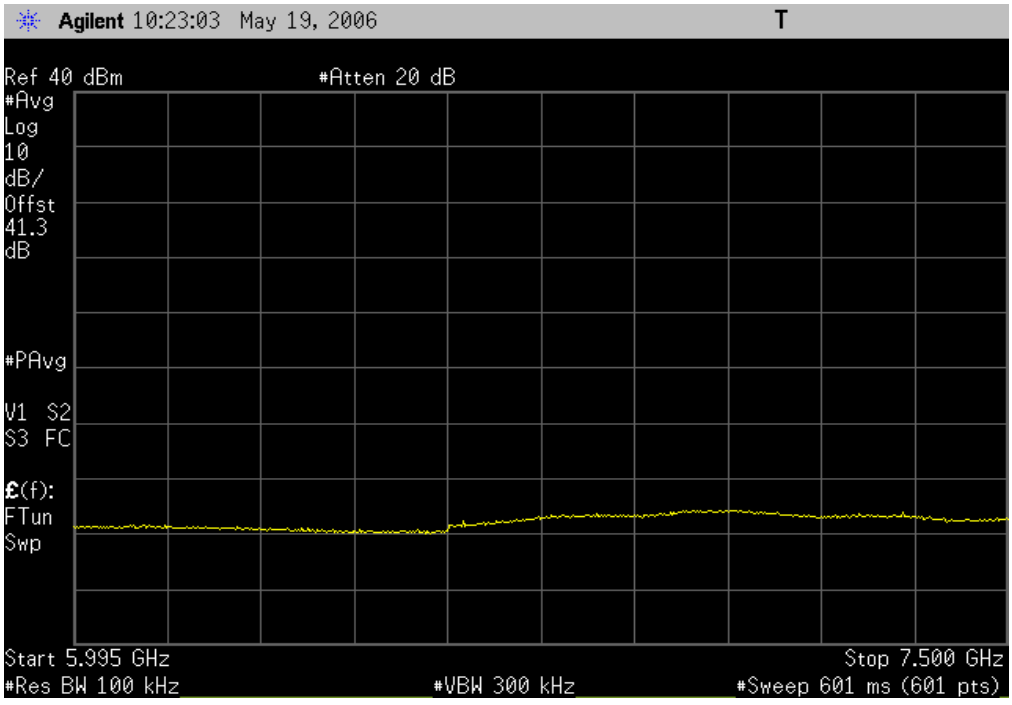
Low Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



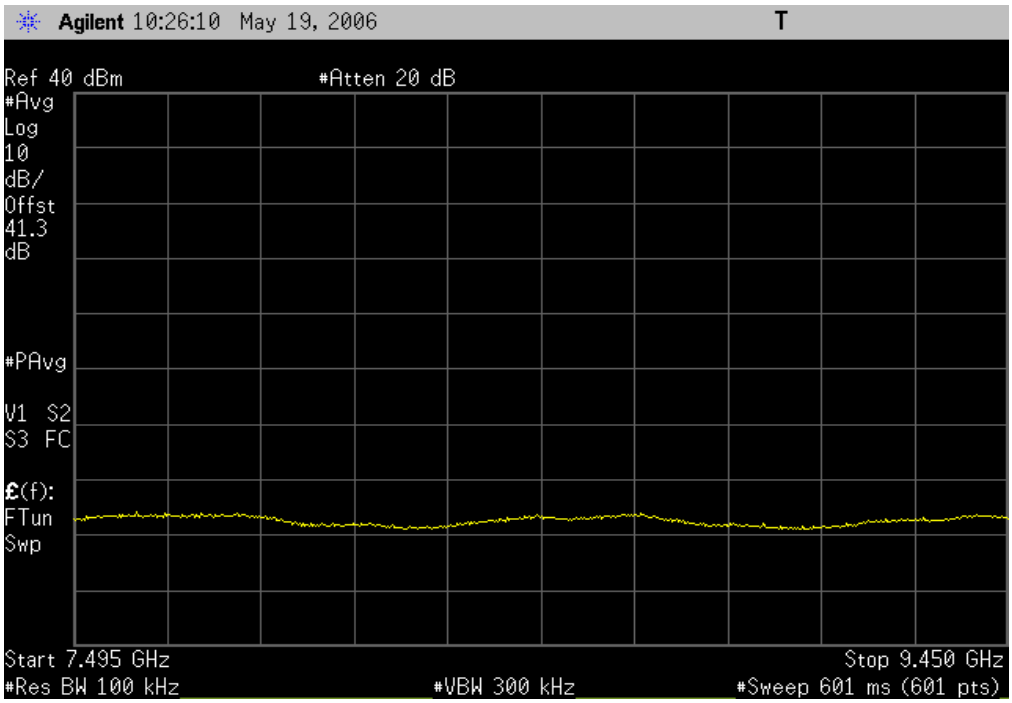
Low Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



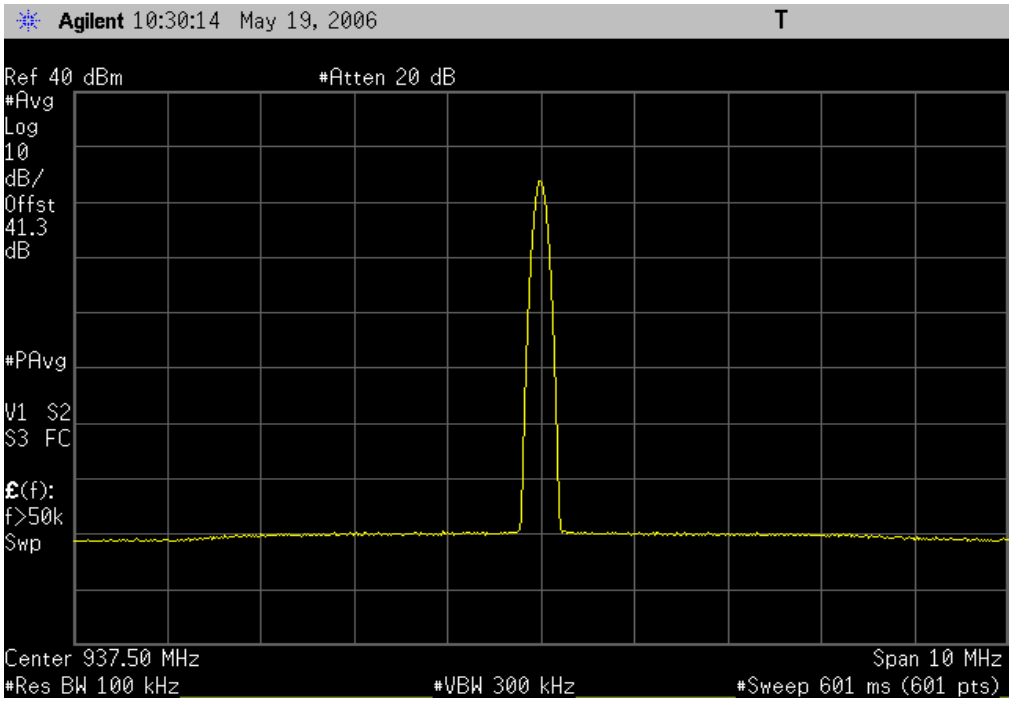
Low Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



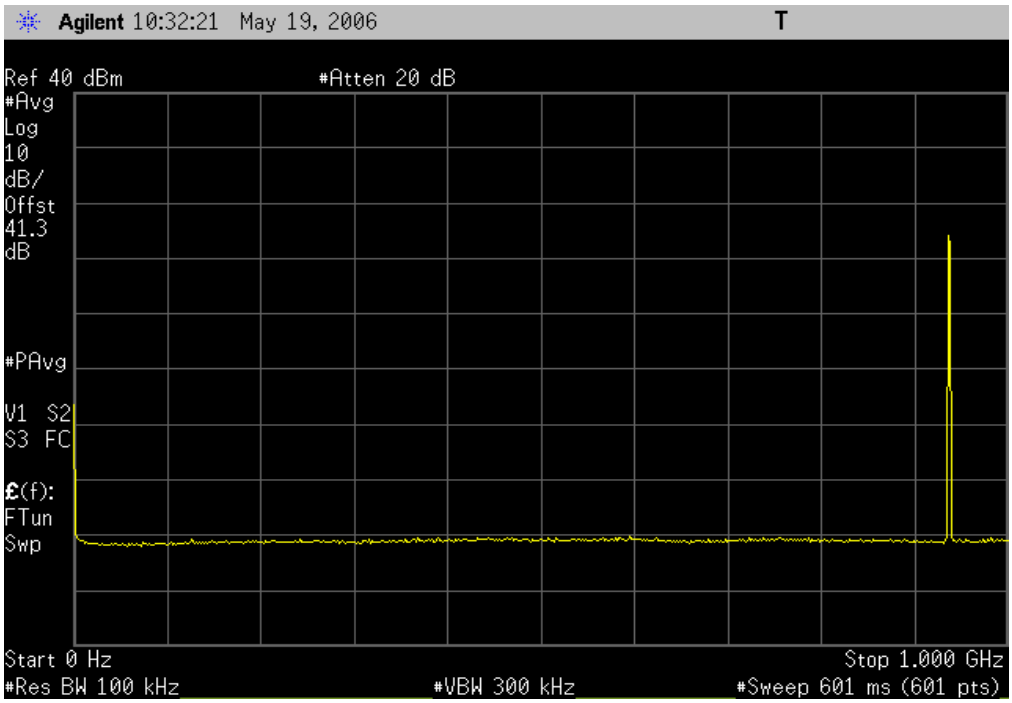
Low Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



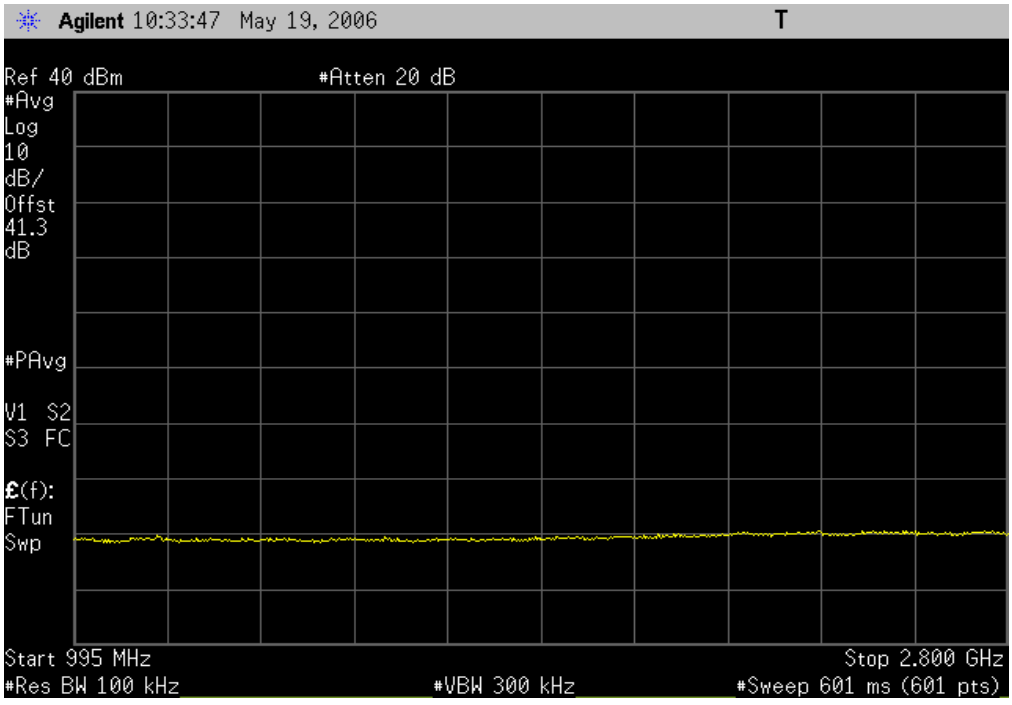
Mid Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



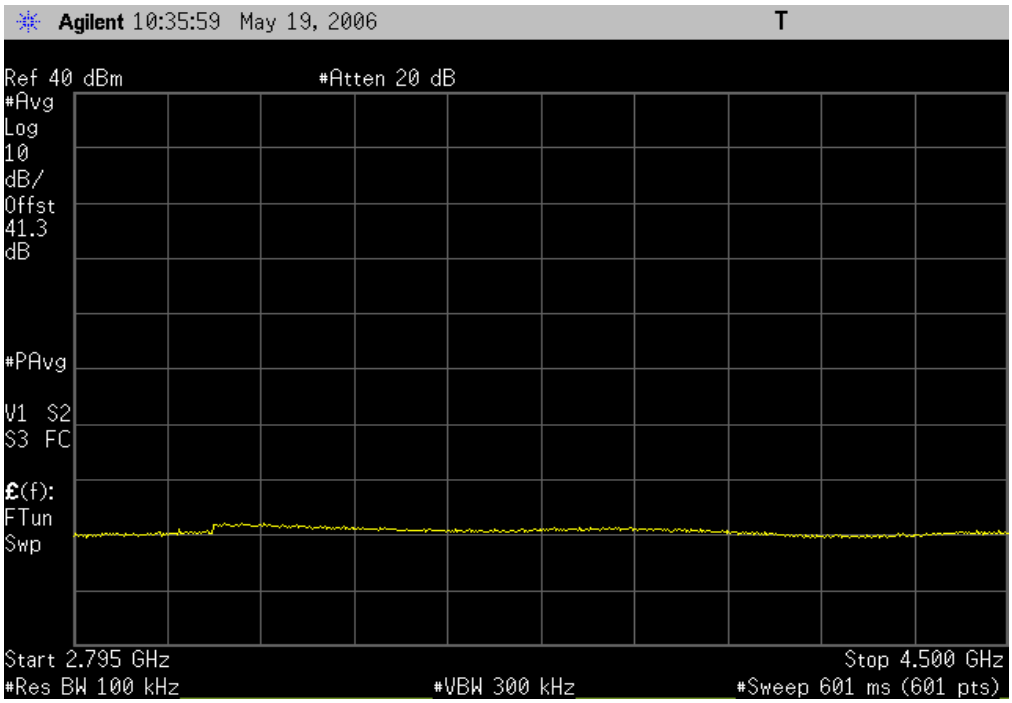
Mid Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



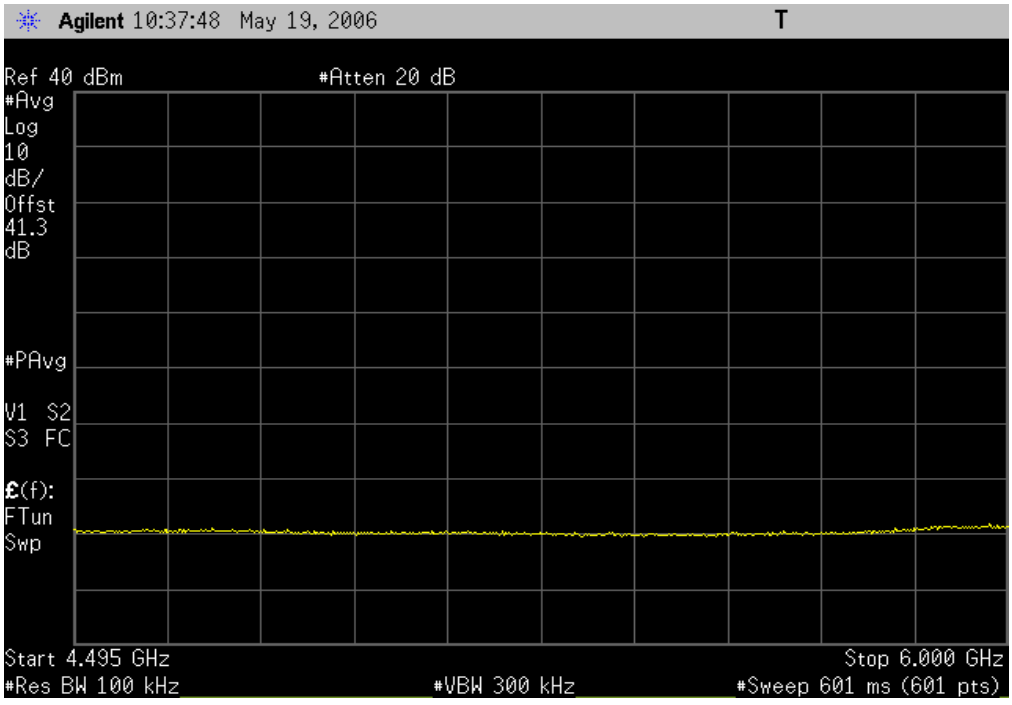
Mid Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



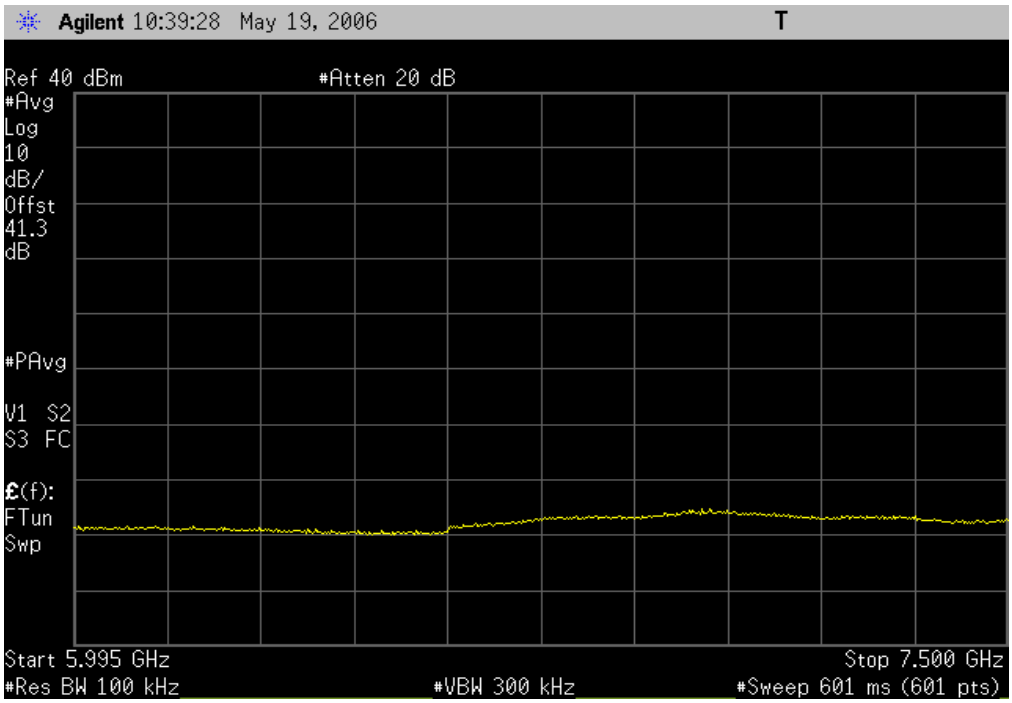
Mid Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



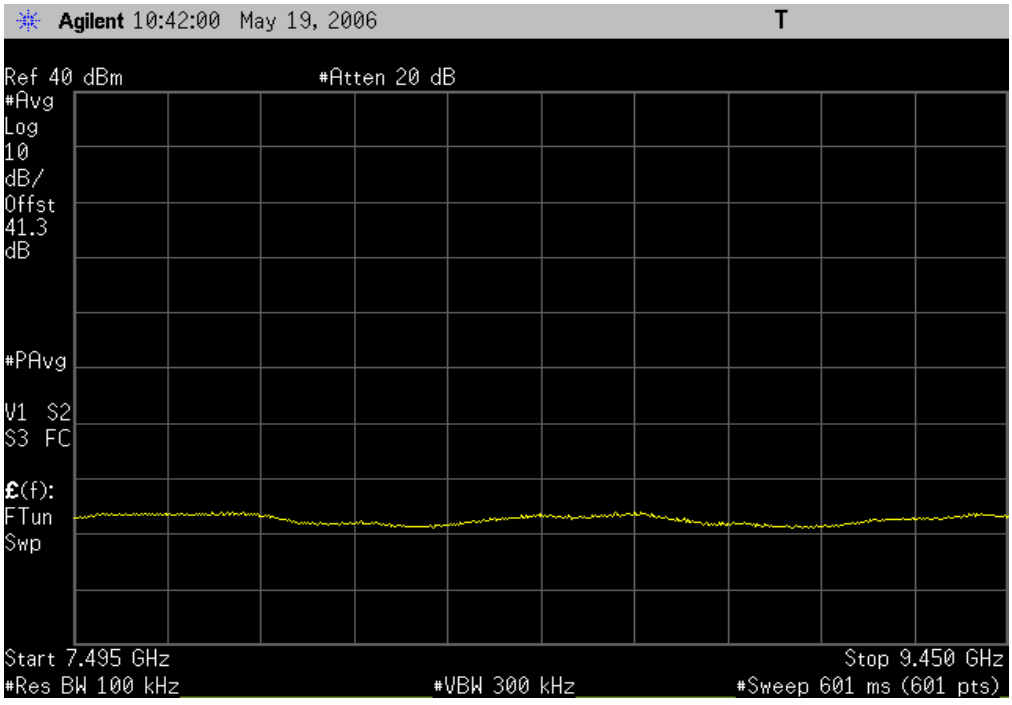
Mid Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Mid Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

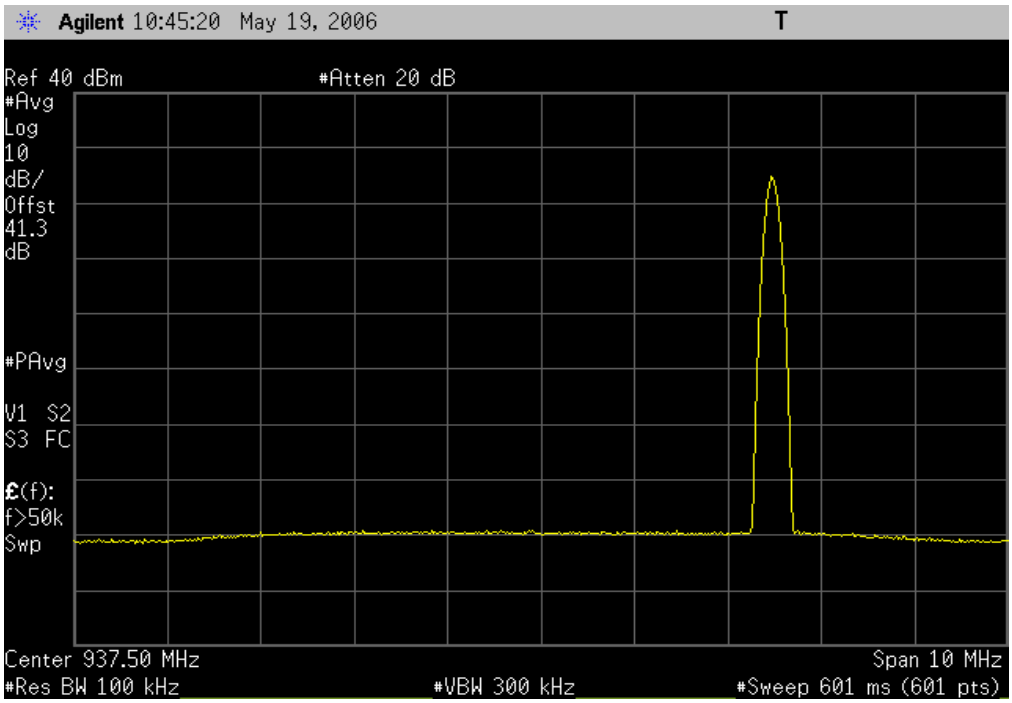


Mid Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm

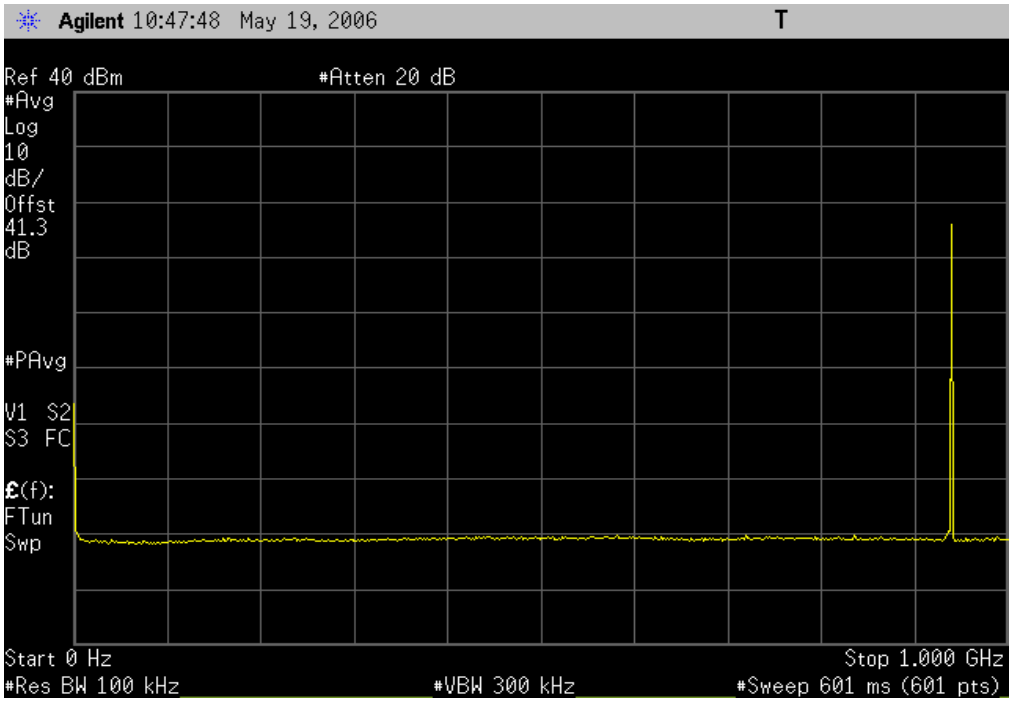


SPURIOUS EMISSIONS AT ANTENNA TERMINALS

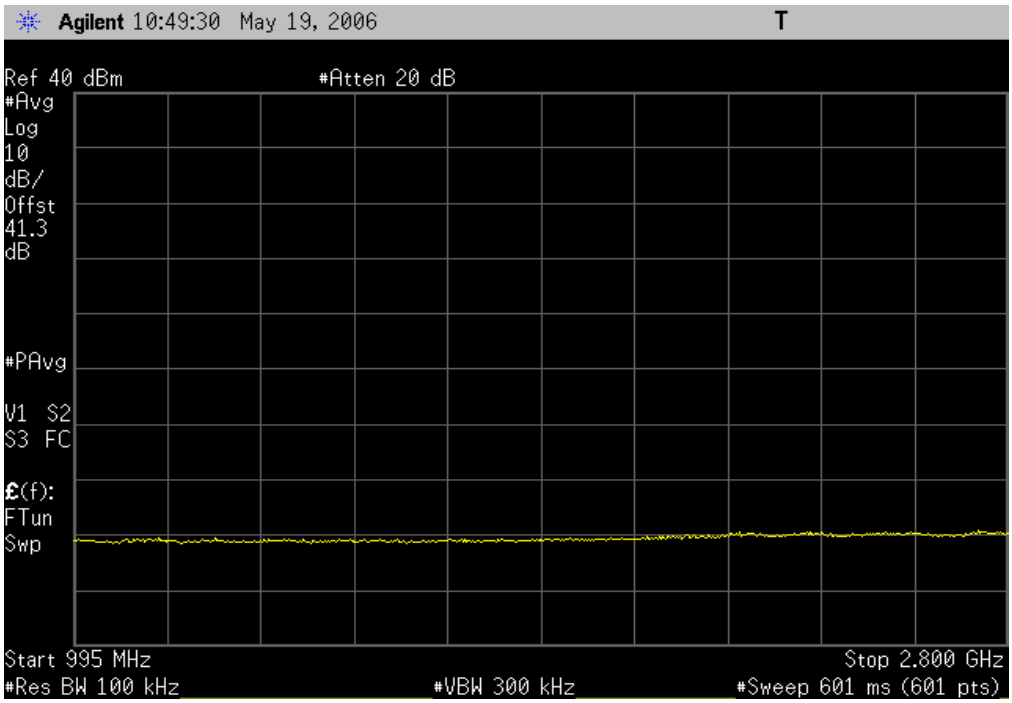
High Channel, In Band					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



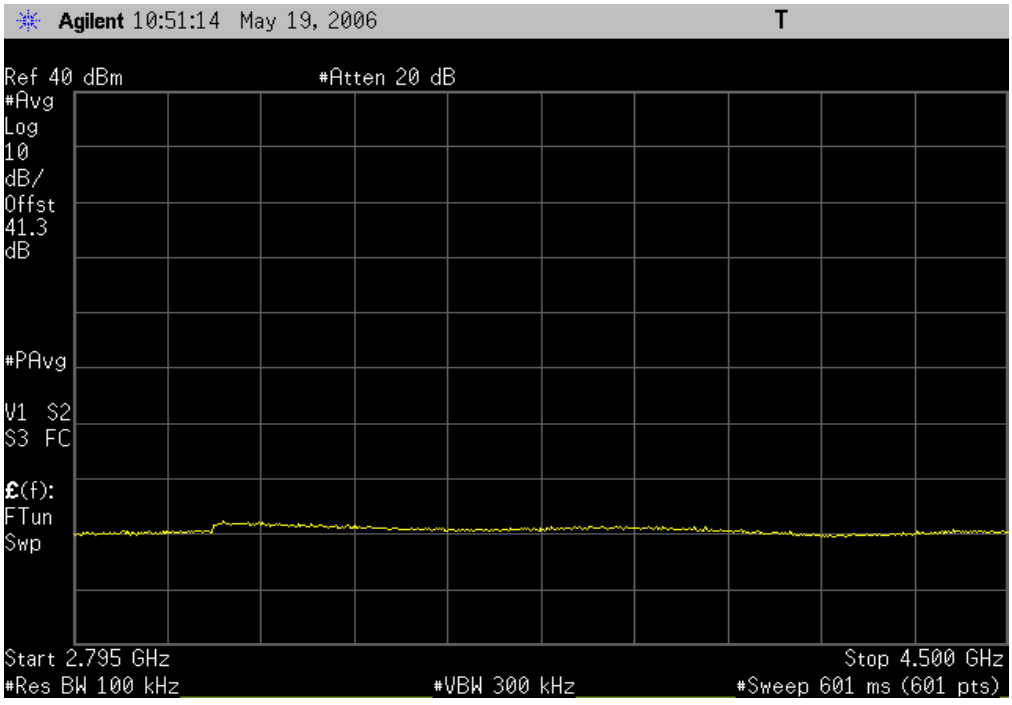
High Channel, 0-1GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



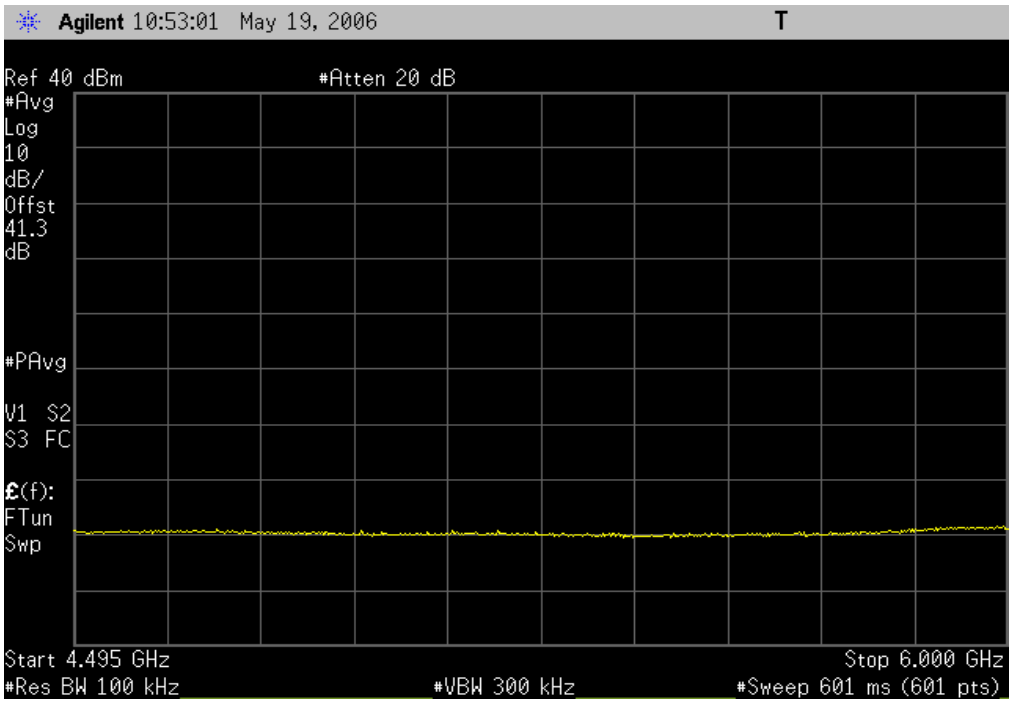
High Channel, 995MHz-2.8GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



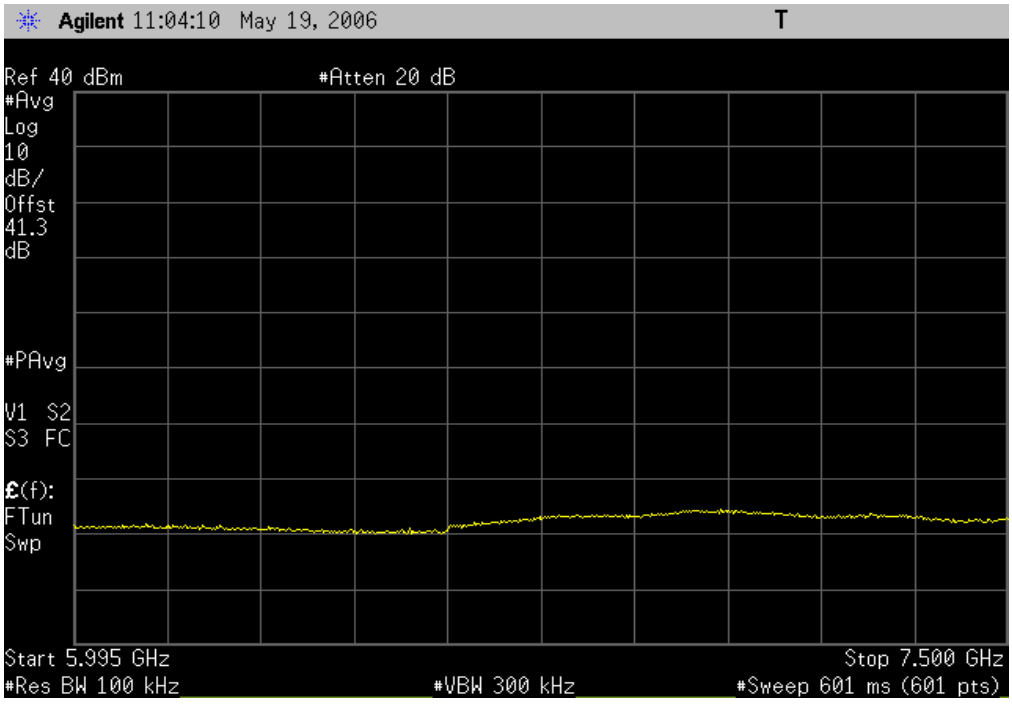
High Channel, 2.795GHz-4.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



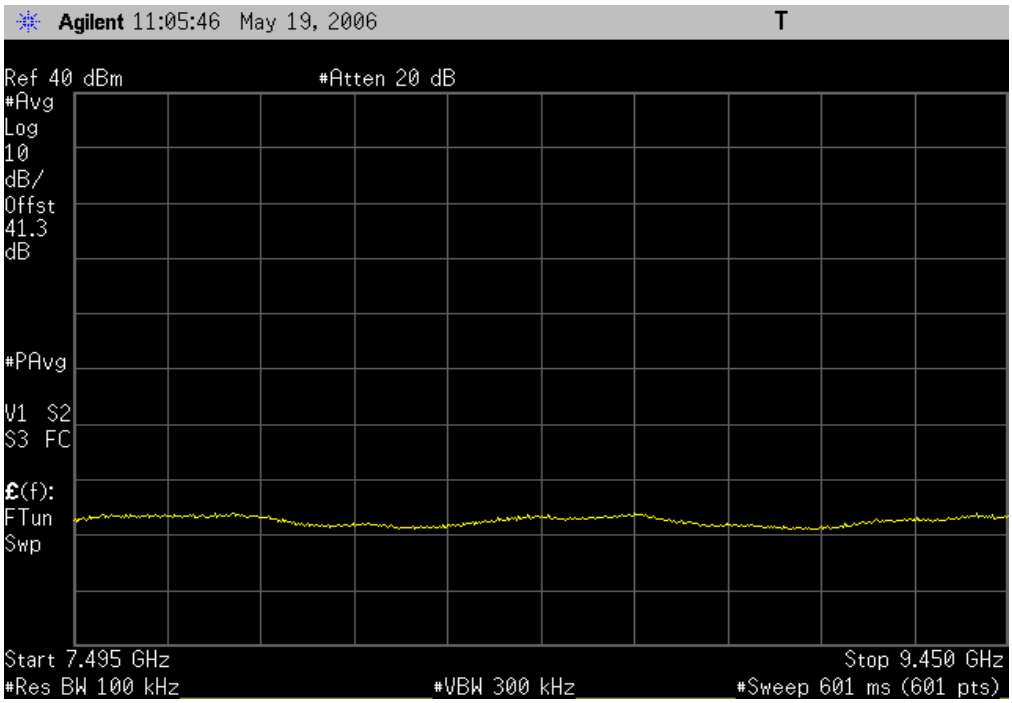
High Channel, 4.495GHz-6GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 5.995GHz-7.5GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



High Channel, 7.495GHz-9.45GHz					
Result:	Pass	**Value:**	< -30 dBm	**Limit:**	≤ -13 dBm



Field Strength of Spurious Radiation

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

MODES OF OPERATION

Transmitting typical sector configuration, 800 and 900MHz bands

POWER SETTINGS INVESTIGATED

-48Vdc

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	10 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HFV	9/28/2005	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	1/4/2006	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Antenna, Dipole	EMCO	3121C	ADE	8/3/2004	24
Signal Generator	HP	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	24
Power Sensor	Hewlett-Packard	8481H	SPB	7/23/2004	24
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

Per 2.1053 and 90.691, the Field Strength of Spurious Radiation was measured in the far-field at an FCC Listed OATS up to 10 GHz. Spectrum analyzer, signal generator, and linearly polarized antennas were used to measure radiated harmonics and spurious emissions. The orientation of the EUT and measurement antenna were manipulated to maximize the level of emissions. The EUT was configured to transmit at the highest output power into a dummy load at low, mid, and high frequencies for both the 800MHz and 900MHz bands.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the dipole antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above.

NORTHWEST EMC

Field Strength of Spurious Radiation

PSA 2006.04.25
EMI 2006.4.26

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	None			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Holly Ashkannejhad	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

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

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

Transmitting typical sector configuration, 800 and 900MHz bands

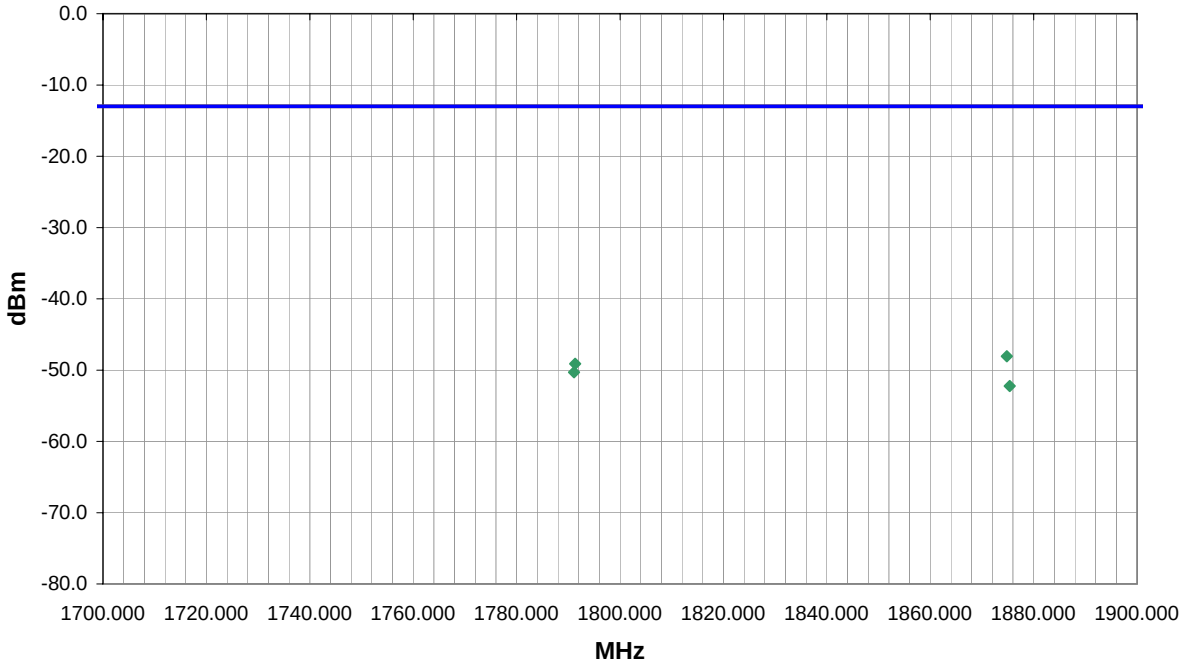
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature Holly Ashkannejhad



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1874.809			280.0	1.2			H-Horn	PK	1.56E-08	-48.1	-13.0	-35.1
1791.108			183.0	1.2			H-Horn	PK	9.34E-09	-50.3	-13.0	-37.3
1791.315			52.0	2.7			V-Horn	PK	1.23E-08	-49.1	-13.0	-36.1
1875.379			302.0	1.9			V-Horn	PK	5.98E-09	-52.2	-13.0	-39.2

NORTHWEST EMC

Field Strength of Spurious Radiation

PSA 2006.04.25
EMI 2006.4.26

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	Dean Busch			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Holly Ashkannejhad	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

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

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

Transmitting typical sector configuration, 800 and 900MHz bands

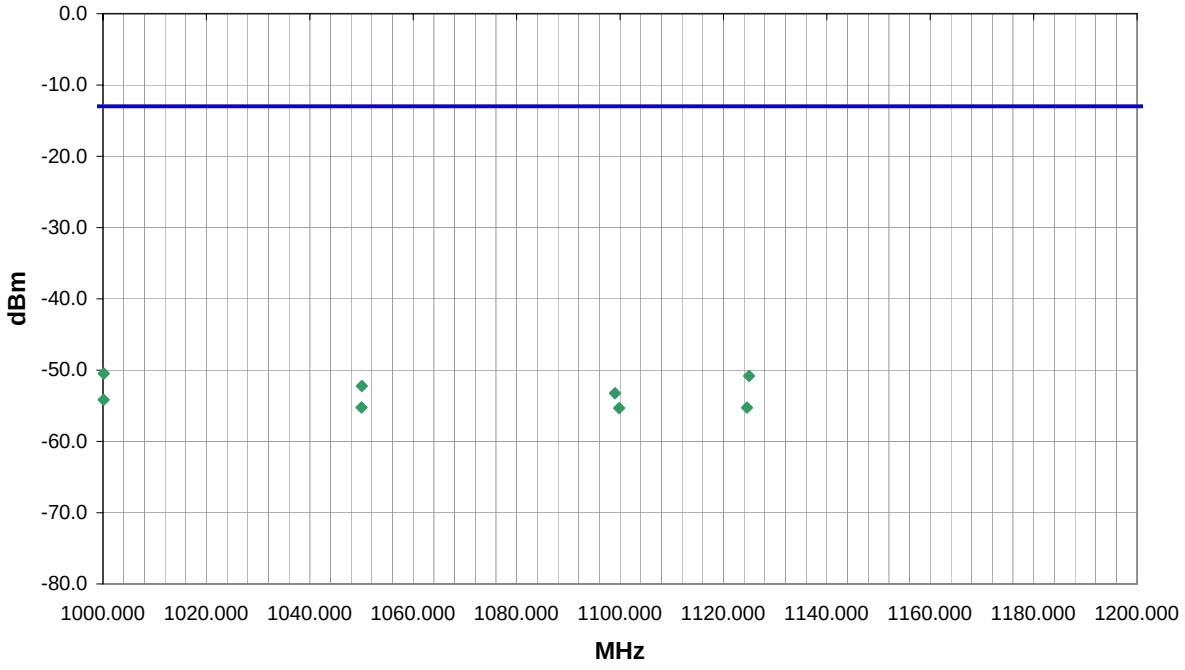
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature Holly Ashkannejhad



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1000.165			184.0	1.0			V-Horn	PK	8.93E-09	-50.5	-13.0	-37.5
1124.965			317.0	1.0			V-Horn	PK	8.29E-09	-50.8	-13.0	-37.8
1000.115			360.0	1.7			H-Horn	PK	3.83E-09	-54.2	-13.0	-41.2
1124.564			17.0	1.2			H-Horn	PK	2.98E-09	-55.3	-13.0	-42.3
1099.841			95.0	1.2			H-Horn	PK	2.94E-09	-55.3	-13.0	-42.3
1050.008			75.0	1.1			H-Horn	PK	2.99E-09	-55.2	-13.0	-42.2
1050.081			37.0	1.0			V-Horn	PK	5.99E-09	-52.2	-13.0	-39.2
1099.035			360.0	1.0			V-Horn	PK	4.73E-09	-53.3	-13.0	-40.3

NORTHWEST EMC

Field Strength of Spurious Radiation

PSA 2006.04.25
EMI 2006.4.26

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	Dean Busch			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Holly Ashkannejhad	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 90.691:2005	ANSI/TIA/EIA-603-B:2002

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

Transmitting typical sector configuration, 800 and 900MHz bands

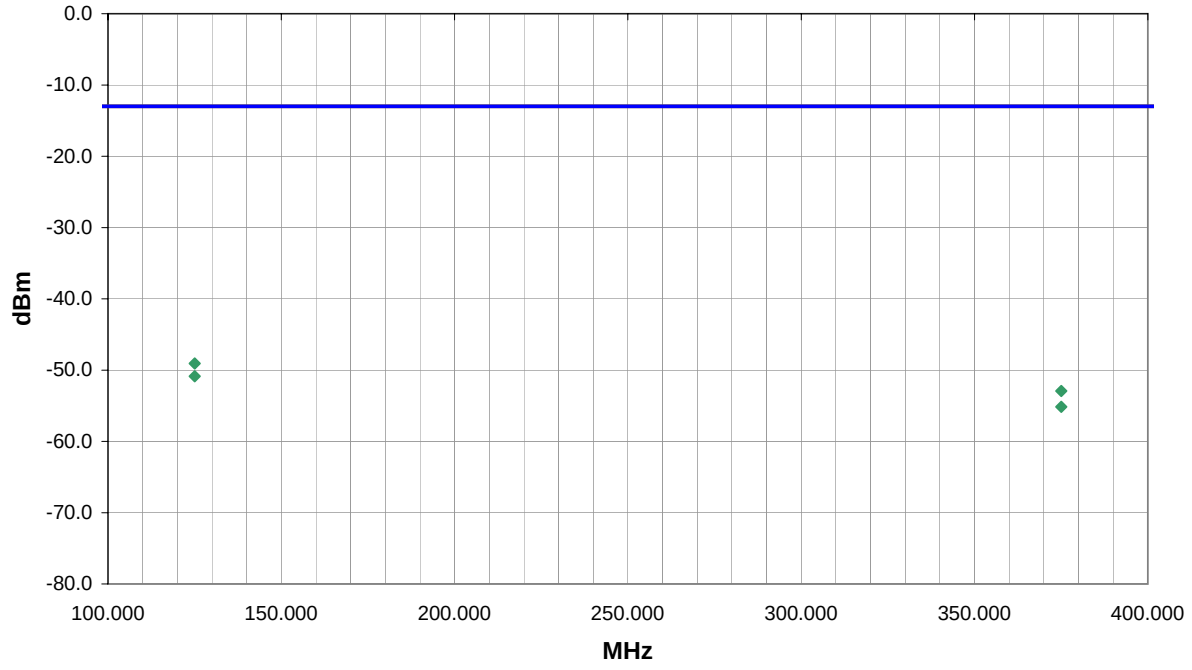
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature Holly Ashkannejhad



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
125.002			215.0	1.6			H-Bilog	PK	8.18E-09	-50.9	-13.0	-37.9
124.998			7.0	1.0			V-Bilog	PK	1.24E-08	-49.1	-13.0	-36.1
375.012			169.0	1.3			V-Bilog	PK	5.08E-09	-52.9	-13.0	-39.9
375.040			71.0	1.4			H-Bilog	PK	3.06E-09	-55.1	-13.0	-42.1

RADIATED EMISSIONS

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

MODES OF OPERATION

Receive mode typical sector configuration, 800 and 900MHz bands

POWER SETTINGS INVESTIGATED

-48Vdc

FREQUENCY RANGE INVESTIGATED

Start Frequency	1 GHz	Stop Frequency	5 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

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

NORTHWEST EMC

RADIATED EMISSIONS DATA SHEET

PSA 2006.04.25
EMI 2006.4.26

EUT:	MCRB			Work Order:	RAFN0062
Serial Number:	Various			Date:	05/19/06
Customer:	Radioframe Networks, Inc.			Temperature:	23°C
Attendees:	None			Humidity:	34%
Project:	None			Barometric Pres.:	29.89
Tested by:	Holly Ashkannejhad	Power:	-48Vdc	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.109:2006	ANSI C63.4:2003

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

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

Receive mode typical sector configuration, 800 and 900MHz bands

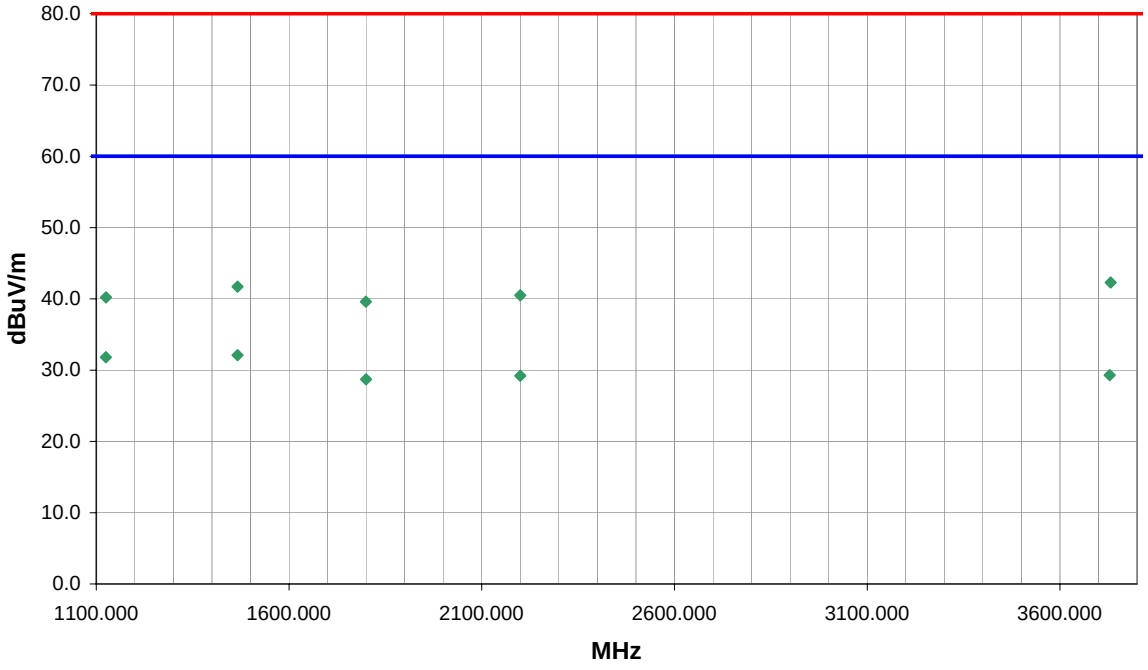
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature Holly Ashkannejhad



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
1466.541	35.6	-3.5	266.0	1.2	3.0	0.0	H-Horn	AV	0.0	32.1	60.0	-27.9
1125.050	36.6	-4.8	22.0	1.2	3.0	0.0	H-Horn	AV	0.0	31.8	60.0	-28.2
3729.053	24.6	4.7	155.0	1.2	3.0	0.0	H-Horn	AV	0.0	29.3	60.0	-30.7
2199.747	29.4	-0.2	107.0	1.2	3.0	0.0	H-Horn	AV	0.0	29.2	60.0	-30.8
1799.796	30.5	-1.8	228.0	1.2	3.0	0.0	H-Horn	AV	0.0	28.7	60.0	-31.3
3731.483	37.6	4.7	155.0	1.2	3.0	0.0	H-Horn	PK	0.0	42.3	80.0	-37.7
1466.692	45.2	-3.5	266.0	1.2	3.0	0.0	H-Horn	PK	0.0	41.7	80.0	-38.3
2199.969	40.7	-0.2	107.0	1.2	3.0	0.0	H-Horn	PK	0.0	40.5	80.0	-39.5
1125.157	45.2	-5.0	22.0	1.2	3.0	0.0	H-Horn	PK	0.0	40.2	80.0	-39.8
1799.479	41.4	-1.8	228.0	1.2	3.0	0.0	H-Horn	PK	0.0	39.6	80.0	-40.4

CONDUCTED EMISSIONS

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

MODES OF OPERATION

Receive mode typical sector configuration, 800 and 900MHz bands.

POWER SETTINGS INVESTIGATED

-48V DC

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8593EM	AAM	12/8/2005	13
LISN	Solar	9252-50-R-24-BNC	LIM	1/9/2006	13

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

ACQ-2006.05.30
EMI 2006.4.13

EUT:	MCRB			Work Order:	RAFN0063
Serial Number:	Various			Date:	06/29/06
Customer:	Radoframe Networks, Inc.			Temperature:	23C
Attendees:	Dean Bush			Humidity:	41%
Project:	None			Barometric Pres.:	29.92
Tested by:	Ethan Schoonover	Power:	-48V DC	Job Site:	Offsite

TEST SPECIFICATIONS	Test Method
FCC 15.107:2006	ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	Negative

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

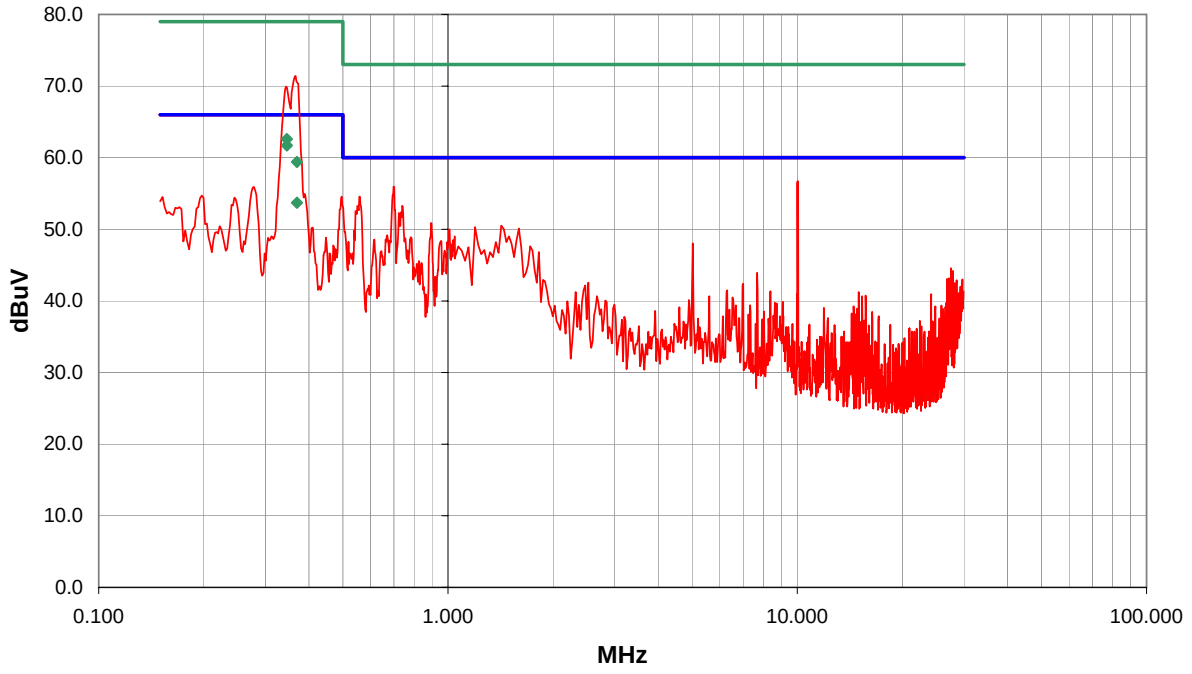
Receive mode typical sector configuration, 800 and 900MHz bands.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.346	41.7			0.0	0.0	20.0		AV		61.7	66.0	-4.3
0.369	33.7			0.0	0.0	20.0		AV		53.7	66.0	-12.3
0.346	42.6			0.0	0.0	20.0		QP		62.6	79.0	-16.4
0.369	39.4			0.0	0.0	20.0		QP		59.4	79.0	-19.6
10.050	36.3			0.0	0.4	20.0				56.7	60.0	-3.3
10.020	36.3			0.0	0.4	20.0				56.7	60.0	-3.3
0.699	35.9			0.0	0.1	20.0				56.0	60.0	-4.0
0.559	34.5			0.0	0.1	20.0				54.6	60.0	-5.4
0.740	33.2			0.0	0.1	20.0				53.3	60.0	-6.7
0.895	30.8			0.0	0.1	20.0				50.9	60.0	-9.1
1.420	30.4			0.0	0.1	20.0				50.5	60.0	-9.5
1.195	30.2			0.0	0.1	20.0				50.3	60.0	-9.7
1.595	30.0			0.0	0.1	20.0				50.1	60.0	-9.9
1.010	29.9			0.0	0.1	20.0				50.0	60.0	-10.0
0.278	35.9			0.0	0.0	20.0				55.9	66.0	-10.1
0.670	29.1			0.0	0.1	20.0				49.2	60.0	-10.8
1.045	28.9			0.0	0.1	20.0				49.0	60.0	-11.0
0.785	28.8			0.0	0.1	20.0				48.9	60.0	-11.1
0.197	34.7			0.0	0.0	20.0				54.7	66.0	-11.3

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

ACQ-2006.05.30
EMI 2006.4.13

EUT:	MCRB			Work Order:	RAFN0063
Serial Number:	Various			Date:	06/29/06
Customer:	Radoframe Networks, Inc.			Temperature:	23C
Attendees:	Dean Bush			Humidity:	41%
Project:	None			Barometric Pres.:	29.92
Tested by:	Ethan Schoonover	Power:	-48V DC	Job Site:	Offsite

TEST SPECIFICATIONS	Test Method
FCC 15.107:2006	ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	Positive

COMMENTS

Antenna ports terminated.

EUT OPERATING MODES

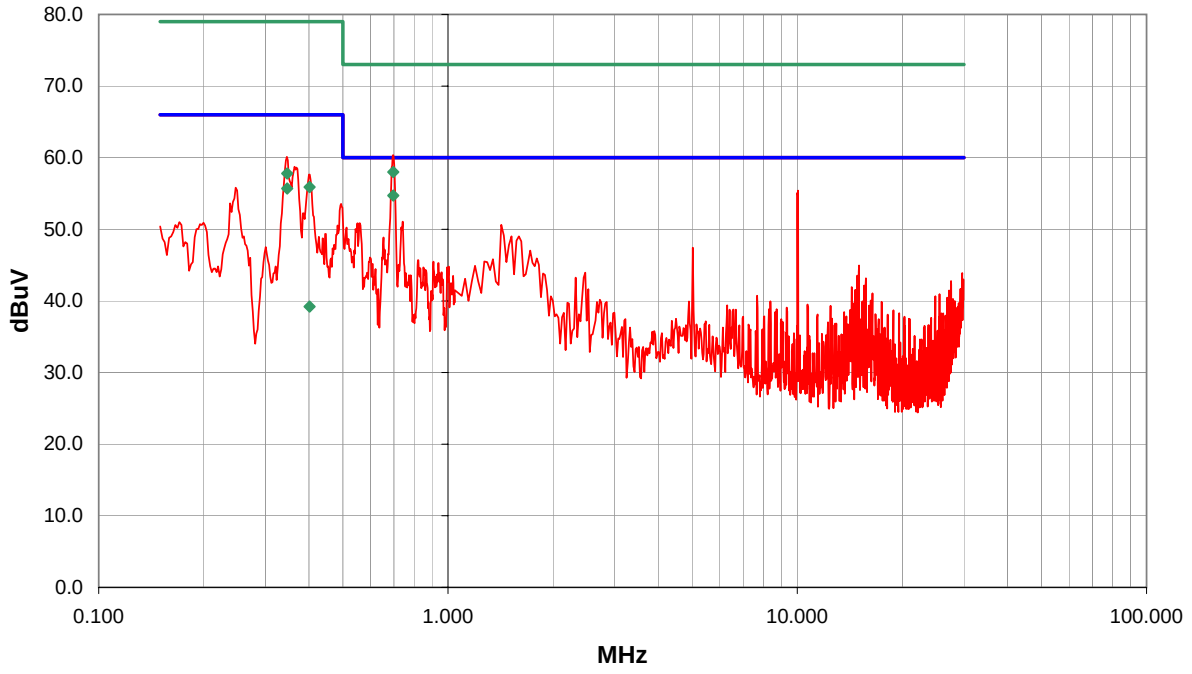
Receive mode typical sector configuration, 800 and 900MHz bands.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.697	34.7			0.0	0.0	20.0		AV		54.7	60.0	-5.3
0.346	35.7			0.0	0.0	20.0		AV		55.7	66.0	-10.3
0.697	38.0			0.0	0.0	20.0		QP		58.0	73.0	-15.0
0.346	37.8			0.0	0.0	20.0		QP		57.8	79.0	-21.2
0.402	35.9			0.0	0.0	20.0		QP		55.9	79.0	-23.1
0.402	19.2			0.0	0.0	20.0		AV		39.2	66.0	-26.8
10.050	35.0			0.0	0.4	20.0				55.4	60.0	-4.6
10.000	34.7			0.0	0.4	20.0				55.1	60.0	-4.9
0.346	40.1			0.0	0.0	20.0				60.1	66.0	-5.9
0.364	38.7			0.0	0.0	20.0				58.7	66.0	-7.3
0.402	37.6			0.0	0.0	20.0				57.6	66.0	-8.4
0.742	31.0			0.0	0.1	20.0				51.1	60.0	-8.9
0.559	30.8			0.0	0.1	20.0				50.9	60.0	-9.1
0.550	30.8			0.0	0.1	20.0				50.9	60.0	-9.1
1.420	30.5			0.0	0.1	20.0				50.6	60.0	-9.4
0.512	30.2			0.0	0.0	20.0				50.2	60.0	-9.8
0.247	35.8			0.0	0.0	20.0				55.8	66.0	-10.2
1.595	28.9			0.0	0.1	20.0				49.0	60.0	-11.0
1.520	28.9			0.0	0.1	20.0				49.0	60.0	-11.0