# Radioframe Networks, Inc.

## OmniCell@Home

May 20, 2008

Report No. RAFN0085 Rev 2

Report Prepared By



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

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## **Certificate of Test**

Issue Date: May 20, 2008 Radioframe Networks, Inc.

Model: OmniCell@Home

Emissions					
Test Description	Specification	Test Method	Pass/Fail		
Effective Isotropic Radiated Power	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Effective Radiated Power	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Power Output	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Power Output	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Occupied Bandwidth	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Occupied Bandwidth	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Out of Band Emissions	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Out of Band Emissions	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Frequency Stability	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Frequency Stability	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Spurious Emissions at Antenna Terminals	FCC 22H:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Spurious Emissions at Antenna Terminals	FCC 24E:2007	ANSI/TIA/EIA-603-B-2002	Pass		
Receiver Conducted Spurious Emissions	FCC 15.111:2007	ANSI C63.4:2003	Pass		

Modifications made to the product See the Modifications section of this report

#### **Test Facility**

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

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

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

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site Filing #3496A).

Approved By:	
The	
Ethan Schoonove	r, Sultan Lab Manager



NVLAP Lab Code: 200630-0

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

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



Revision Number	Description	Date	Page Number

01	Retested output power due to damaged connector on original unit	7/22/08	65-69, 76-102, 130-141
02	Updated all PCS band data	7/24/2008	60-64, 103-129, 142-153,



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

**NVLAP:** Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

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

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

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

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













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

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

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

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

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

**MIC:** Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157*)

SCOPE For details on the Scopes of our Accreditations, please visit: http://www.nwemc.com/accreditations/





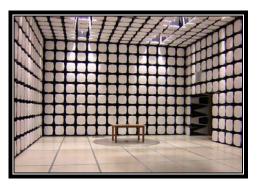
BSMI











California – Orange County Facility Labs OC01 – OC13

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





Oregon – Evergreen Facility Labs EV01 – EV11

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





Washington – Sultan Facility Labs SU01 – SU07

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



Rev 11/17/06

#### Party Requesting the Test

Company Name:	Radioframe Networks, Inc.
Address:	9461 Willows Road NE, Suite 100
City, State, Zip:	Redmond, WA 98052
Test Requested By:	Dean Busch
Model:	OmniCell@Home
First Date of Test:	May 12, 2008
Last Date of Test:	July 23, 2008
Receipt Date of Samples:	May 12, 2008
Equipment Design Stage:	Preproduction
Equipment Condition:	No Damage

#### Information Provided by the Party Requesting the Test

#### Functional Description of the EUT (Equipment Under Test):

Cellular basestation for in-home use. Designed to provide more reliable cell phone coverage in the home.

#### **Testing Objective:**

These tests were selected to satisfy the EMC requirements for the FCC.

## **CONFIGURATION 1 RAFN0085**

EUT				
Description	Manufacturer	Model/Part Number	Serial Number	
EUT - Pico Base Station	Radioframe Networks, Inc.	OmniCell@Home	Unknown	

Peripherals in test setup boundary				
Description Manufacturer Model/Part Number Serial Number				
AC power adapter	CUI, Inc.	DP30B-1202000	None	

Remote Equipment Outside of Test Setup Boundary				
Description Manufacturer Model/Part Number Serial Number				
Remote PC	Dell	Latitude D400	8JTD141	
PC Power Adapter	Dell	ADP-90FB	17971-2BG-7KCQ	

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power	PA	1.85m	PA	AC Mains	EUT - Pico Base Station
LAN	No	4.25m	No	EUT - Pico Base Station	Remote PC
LAN	No	0.85m	No	EUT - Pico Base Station	Unterminated
LAN	No	0.85m	No	EUT - Pico Base Station	Unterminated
LAN	No	0.85m	No	EUT - Pico Base Station	Unterminated
LAN	No	0.85m	No	EUT - Pico Base Station	Unterminated
PA = Cable is permanently attached to the device.			o the device	. Shielding and/or presence of fe	rrite may be unknown.

#### **CONFIGURATION 2 RAFN0085**

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Pico Base Station	Radioframe Networks, Inc.	OmniCell@Home	Unknown

Peripherals in test setup boundary				
Description Manufacturer Model/Part Number Serial Number				
AC power adapter	CUI, Inc.	DP30B-1202000	None	

Remote Equipment Outside of Test Setup Boundary				
Description Manufacturer Model/Part Number Serial Number				
Remote PC	Dell	Latitude D400	8JTD141	
PC Power Adapter	Dell	ADP-90FB	17971-2BG-7KCQ	

Cables								
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2			
DC Power	PA	1.85m	PA	AC Mains	EUT - Pico Base Station			
LAN	No	4.25m	No	EUT - Pico Base Station	Remote PC			
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.								



## Modifications

			Equipment n	nodifications	
Item	Date	Test	Modification	Note	Disposition of EUT
1	5/12/2008	ERP / EiRP of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	5/14/2008	Out of Band Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	5/14/2008	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	5/14/2008	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	5/15/2008	Spurious Emissions at Antenna Terminals	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	5/16/2008	Frequency Stability	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	5/16/2008	Receiver Conducted Spurious Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was complete.
8	7/23/2008	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
9	7/23/2008	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
10	7/23/2008	ERP / EiRP of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was complete.

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	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Pre-Amplifier	Hewlett-Packard	83017A	APL	10/24/2006	24
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

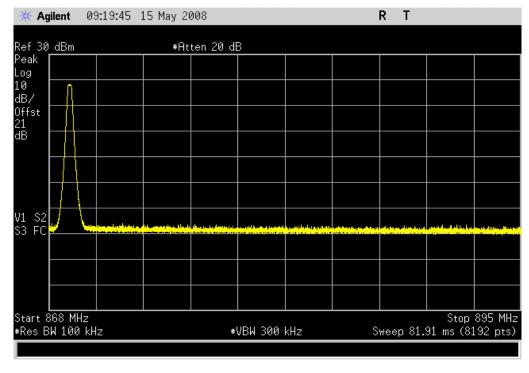
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated 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 port spurious emissions were measured at the RF output terminal of the EUT with 20dB of external attenuation on the RF input of the spectrum analyzer. Analyzer plots utilizing a 100 kHz resolution bandwidth and no video filtering were made for each modulation type from 0 to 10 GHz. The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to -13 dBm.

		SSIONS AT ANTENNA TERMI	NALO	
EMC	: OmniCell@Home		Work Order	RAFN0085
Serial Number				05/15/08
	r: Radioframe Networks, Inc.		Temperature	
Attendees			Humidity:	
	t: None /: Rod Peloquin	Power: 120VAC/60Hz	Barometric Pres. Job Site	
EST SPECIFICA		Test Method	Job Site.	EV00
CC 22H:2007		ANSI/TIA/EIA-603-B-200	2	
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Configuration #	1	Rochy Le Peleng		
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		V	alue Li	mit Result
SM Modulation				
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	In Band 0-1GHz			3 dBm Pass 3 dBm Pass
	995MHz-2.8GHz			dBm Pass 3 dBm Pass
	2.795GHz-4.5GHz			3 dBm Pass 3 dBm Pass
	4.495GHz-6GHz			3 dBm Pass
	5.995GHz-7.5GHz			3 dBm Pass
	7.495GHz-9.5GHz			3 dBm Pass
	Mid Channel			
	In Band	≤-3	0 dBm ≤ -1;	3 dBm Pass
	0-1GHz	≤ - 3	0 dBm ≤ -1:	3 dBm Pass
	995MHz-2.8GHz	≤ - 3	0 dBm ≤ -1:	3 dBm Pass
	2.795GHz-4.5GHz	≤ - 3	0 dBm ≤ -1:	3 dBm Pass
	4.495GHz-6GHz			3 dBm Pass
	5.995GHz-7.5GHz			3 dBm Pass
	7.495GHz-9.5GHz	≤ - 3	0 dBm ≤ -1:	3 dBm Pass
	High Channel		0.10	
	In Band 0-1GHz			3 dBm Pass
	995MHz-2.8GHz			3 dBm Pass 3 dBm Pass
	2.795GHz-4.5GHz			3 dBm Pass
	4.495GHz-6GHz			3 dBm Pass
	5.995GHz-7.5GHz			3 dBm Pass
	7.495GHz-9.5GHz			3 dBm Pass
SPRS Modulation				
	Low Channel			
	In Band			3 dBm Pass
	0-1GHz			3 dBm Pass
	995MHz-2.8GHz			3 dBm Pass
	2.795GHz-4.5GHz			3 dBm Pass
	4.495GHz-6GHz			3 dBm Pass
	5.995GHz-7.5GHz			3 dBm Pass 3 dBm Pass
	7.495GHz-9.5GHz Mid Channel	S-3	i0 dBm ≤ -1:	Pass
	In Band	<-?	0 dBm ≤ -1:	3 dBm Pass
	0-1GHz			3 dBm Pass
	995MHz-2.8GHz			3 dBm Pass
	2.795GHz-4.5GHz			3 dBm Pass
	4.495GHz-6GHz			3 dBm Pass
	5.995GHz-7.5GHz			3 dBm Pass
	7.495GHz-9.5GHz	≤-3	0 dBm ≤ -1:	3 dBm Pass
	High Channel			
	In Band			3 dBm Pass
	0-1GHz			3 dBm Pass
	995MHz-2.8GHz			3 dBm Pass
	2.795GHz-4.5GHz 4.495GHz-6GHz			3 dBm Pass
	4.495GHz-6GHz 5.995GHz-7.5GHz			3 dBm Pass 3 dBm Pass
	5.995GHz-7.5GHz 7.495GHz-9.5GHz			3 dBm Pass

	GSM Modulati	ion, Low Channel, In Band		
Result: Pass	Value:	≤ - 30 dBm	Limit:	≤ -13 dBm



	GSM Modulation, Low Channel, 0-1GHz	1		
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm	

🔆 Ag	jilent 0	9:34:38	15 May 20	908				RT		
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Start 0 #Res B	) Hz W 100 kl	łz		#	VBW 300	kHz	S	weep 103	Sti 6.6 ms (81	op 1 GHz 192 pts)

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	GSM Modulation, I	Low Channel, 995	MHz-2.8GHz		
Result: Pass	Value:	≤ - 30 dBm	Limit:	≤ -13 dBm	

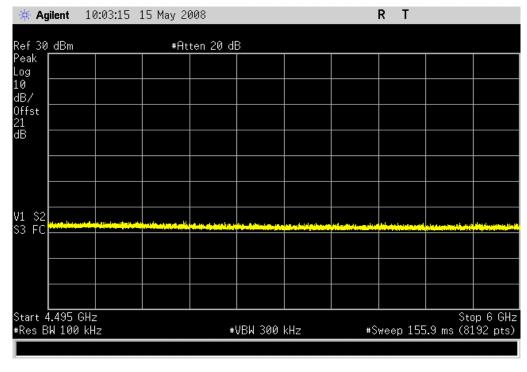
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Res B	W 100 kH	7		#	VBW 300	kH <del>z</del>	Sween 1	87 ms (81	192 nts

 GSM Modulation, Low Channel, 2.795GHz-4.5GHz

 Result:
 Pass
 Value:
 ≤ - 30 dBm
 Limit:
 ≤ -13 dBm

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[ Start_2		2								4.5 GHz
#Res Bl	W 100 k⊢	z		#	VBW 300	kHz	S	weep 170	6.6 ms (81	.92 pts)

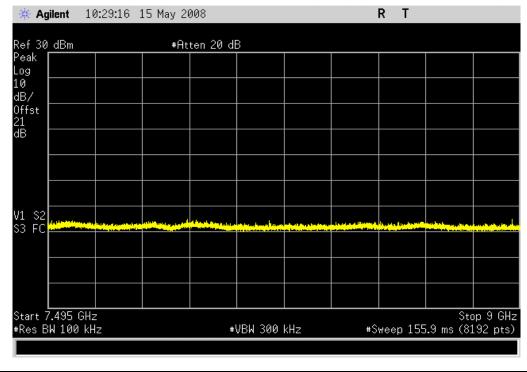
	GSM Modulation, Low Channel, 4.495	GHz-6GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GSM Modulation, Low Channel, 5.995GH:	z-7.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

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	5.995 GH: W 100 kH			#	VBW 300 I	kHz	<b>#</b> S	weep 1 <u>55</u>	Stop 5.9 ms (81	7.5 GHz .92 pts)

	GSM Modulation, Low Channel, 7.49	5GHz-9.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	<b>Limit:</b> ≤ -13 dBm	



	GSM Modulation, Mid Channel, In Band		
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

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	GSM Modulat	ion, Mid Channel, 0-1GHz		
Result: Pass	Value:	≤ - 30 dBm	Limit:	≤ -13 dBm

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Peak .og									
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òtart 0 Hz ⊧Res BW 100 k	Hz		#	VBW 300	kHz	s	weep 103	St 3.6 ms (8	op 1 GH 192 pts

 GSM Modulation, Mid Channel, 995MHz-2.8GHz

 Result:
 Pass
 Value:
 ≤ - 30 dBm
 Limit:
 ≤ -13 dBm

	5 May 2008		R			
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tart 995 MHz Res BW 100 kHz	#\	/BW 300 kHz	#\$	Gweep 18	Stop 87 ms (81	2.8 GH: 92 pts)

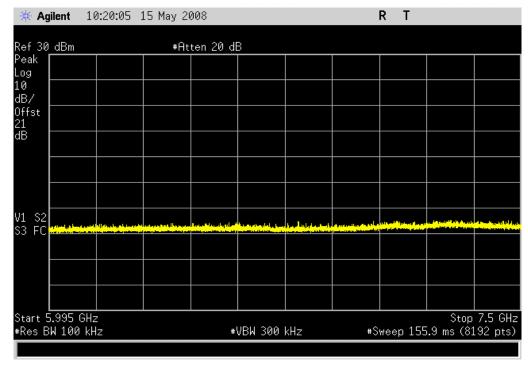
GSM Modulation, Mid Channel, 2.795GHz-4.5GHz								
Result: Pass	<b>Value:</b> ≤ - 30 dBm	<b>Limit:</b> ≤ -13 dBm						

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∟ Start 2.795	GHz							Stop	4.5 GH
Res BW 100	kHz		#	VBW 300	kHz	S	weep 176	6.6 ms (81	192 pts

	GSM Modulation, I	Mid Channel, 4.49	95GHz-6GHz	
Result: Pass	Value:	≤ - 30 dBm	Limit:	≤ -13 dBm

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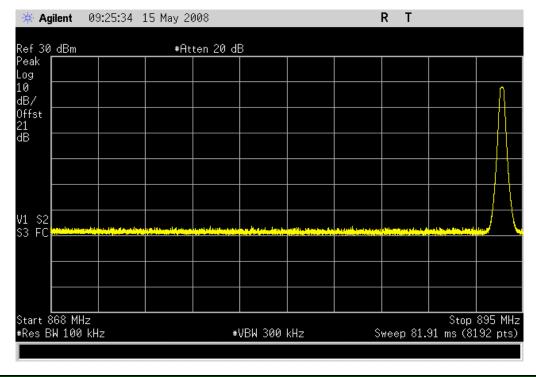
	GSM Modulation, Mid Channel, 5.99	5GHz-7.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	<b>Limit:</b> ≤ -13 dBm	



	GSM Modulation, Mid Channel, 7.495GHz	-9.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

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	.495 GH: √100 kH			#	VBW 300	kHz	 #S	weep 1 <u>55</u>	Sto 5.9 ms (81	p 9 GHz 192 pts)

	GSM Modulation, High Channel, In Ba	and	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GSM Modulation, High Channel, 0-1GHz		
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

🔆 Ag	j <b>ilent</b> 0	9:27:06	15 May 20	908				RT		
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00 1 0										
Start 0 #Res B	) Hz W 100 kl	łz		#	VBW 300	kHz	s	weep 103	St( 3.6 ms (8)	op 1 GHz 192 pts)

XMit 2007.06.13

	GSM Modulation, High Channel	995MHz-2.8GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

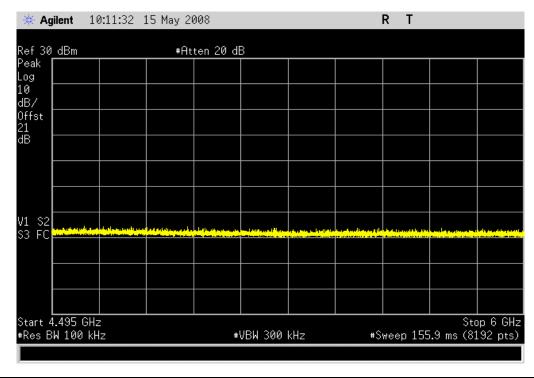
lef 30 dBn 'eak		ten 20 dl				
og Ø						
B/ ffst B						
1 S2 3 FC					und de la complete	all and starting of
tart 995						2.8 GI

 GSM Modulation, High Channel, 2.795GHz-4.5GHz

 Result:
 Pass
 Value:
 ≤ - 30 dBm
 Limit:
 ≤ -13 dBm

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eak 🛛										
) 37										
fst 3										
3										
. S2 3 FC	فأنشاء والمتحيط والمتح	ale in all the prior				dia ministra an	hun unter de altere p	dhachter àtaile à	a tha fill an a fill and a fill a	Alteration
art 2 les Bl	.795 GH: W 100 kH	z  z		#	VBW 300	kHz	S	ween 176	Stop 6.6 ms (81	4.5 GH

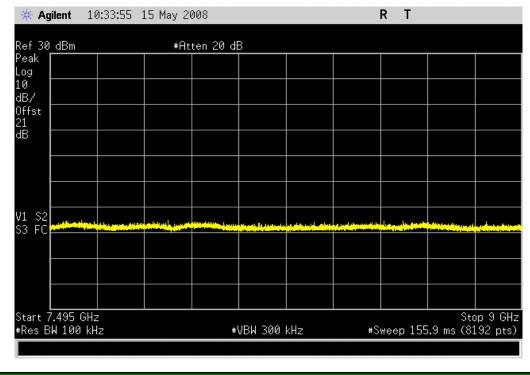
	GSM Modulation, High Channel, 4.49	5GHz-6GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	<b>Limit:</b> ≤ -13 dBm	



	GSM Modulation, High Channel, 5.995GHz-7.5GHz							
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm					

🔆 Ag	j <b>ilent</b> 1	0:17:53	15 May 20	908				RT		
Ref 30	dBm		#At	ten 20 di	В					
Peak Log										
10 dB/										
Offst 21 dB										
dB										
V1 S2 S3 FC				at hat hit daalaa	h in the track play		alder state better		a di nata ku su d	untel estere
Start 5 #Res B	5.995 GH SW 100 k	z Hz		#	VBW 300	kHz	#S	weep 155	Stop 5.9 ms (81	7.5 GHz .92 pts)

	GSM Modulation, High Channel, 7.49	5GHz-9.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, Low Channel, In Band		
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

🔆 Agilent	10	):42:51 1	L5 May 20	008				RT		
Ref 30_dBn	n		#At	ten 20 df	3					
Peak Log										
10 dB/	١									
Offst										
21 dB										
V1 S2		مقاعد من المثلام الى حس		a bhaildean bha	. In case at les te		u su din a das tratan la			
S3 FC 📶		**************************************	······							
L Start 868 M #Res BW 10	MHz 00 kH	z		#	VBW 300	kHz	#\$	weep 81.	Stop 91 ms (81	895 MHz 892 pts)

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

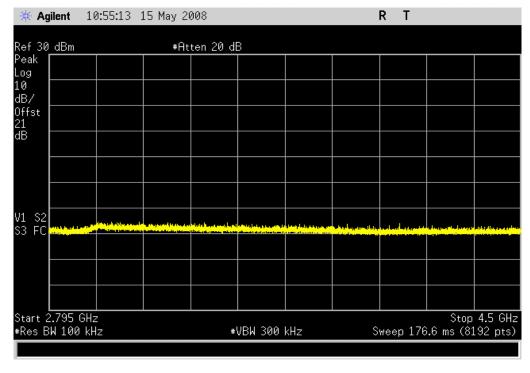
Ref 30	dBm		#At	ten 20 di	B					
⊃eak _og										
.0 [										
lB∕ ∭angleri										
)ffst 21										
21 1B										
J1 S2										
53 FC	the stands	at eller de litte								
Start Ø	Hz								St	op 1 GH
ŧRes Bl	W 100 kH	lz		#	VBW 300	kHz	#S	weep 103	3.6 ms (8	192 pts

 GPRS Modulation, Low Channel, 995MHz-2.8GHz

 Result:
 Pass
 Value:
 ≤ - 30 dBm
 Limit:
 ≤ -13 dBm

	0:49:49	15 May 20	908				RT		
Ref 30 <u>dB</u> m		#At	ten 20 di	3					
Peak Log									
10 dB/									
Offst 🛛 🚽									
21 dB									
V1 S2 S3 FC			alata Majula Jula	and designed as an	nt, digi kabupi dhin	an a là trabatria	, in the state of the	ikiki dini pangila	
••• •••									
Start 995 MHz #Res BW 100 kH	 Iz		#	VBW 300	kHz		Sweep 1∶	Stop 87 ms (81	2.8 GHz .92 pts)

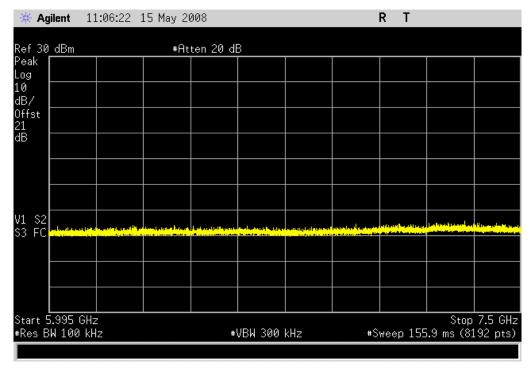
	GPRS Modulation, Low Channe	el, 2.795GHz-4.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBr	n Limit:	≤ -13 dBm



	GPRS Modulation, Low Channel, 4.495	GHz-6GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit: ≤	-13 dBm

🔆 Agile	int 10	:56:26 1	L5 May 20	908				RT		
Ref 30 d	Bm		#At	ten 20 di	3					
Peak Log										
10 dB/										
Offst 21 dB										
B										
/1 S2	ele tres de alte	a jina ya kaji sebili ji	i la di i danisa			a dan da da Institut	le contra en elle la	han altain da ba	n e nala tilana	da an ting a stati
òtart 4.4 ≠Res BW	95 GHz 100 kH	z		#	VBW 300	kHz	<b>#</b> S	weep 155	Sto 5.9 ms (81	p 6 GHz .92 pts)

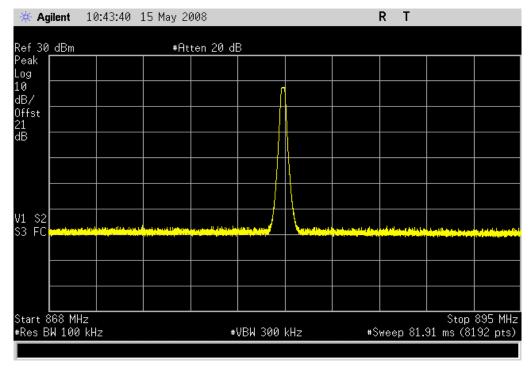
	GPRS Modulation, Low Channel, 5.	.995GHz-7.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, Low Channel, 7	7.495GHz-9.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

🔆 Agilen	t 11:07:59	15 May 20	008				RT		
Ref 30_dB	m	#At	ten 20 di	В					
Peak Log									
10 dB/									
Offst 21 dB									
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\$3 FC							and descent		
L								Sto	p 9 GHz
#Res BW 1	00 kHz		#	VBW 300	kHz	S	weep 155	5.9 ms (81	.92 pts)

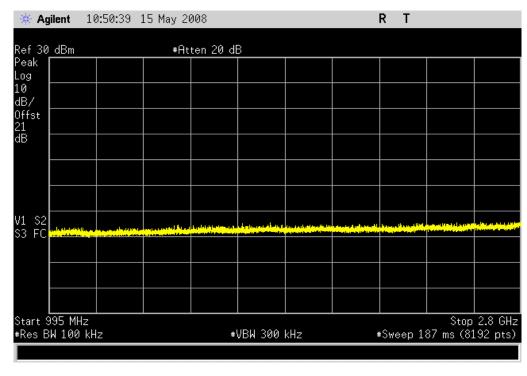
	GPRS Modulation, Mid Channel, In Band	d	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, Mid Channel, 0-1GF	lz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

f 30 <u>dBm</u>		#At	ten 20 di	В				
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	GPRS Modulation, Mid Channel, 995N	1Hz-2.8GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	<b>Limit:</b> ≤ -13 dBm	

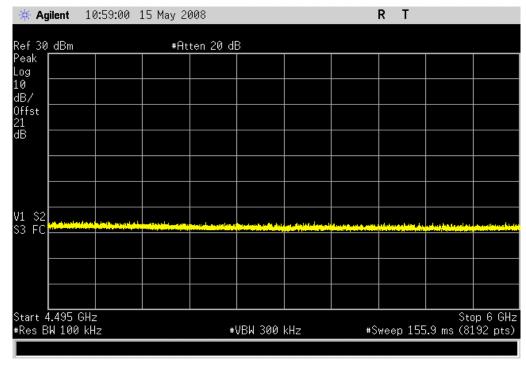


 GPRS Modulation, Mid Channel, 2.795GHz-4.5GHz

 Result:
 Pass
 Value:
 ≤ - 30 dBm
 Limit:
 ≤ -13 dBm

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1 S2 3 FC	the state of the s	generative en		وموارية المحجو العامل	a hatta percifica a la factoria	den bita da due distan	Distriction of the second states of the second states of the second states of the second states of the second s	a hater the different	e. Mertikan data	t in the line of the li
tart 2 Res B	.795 G⊦ W 100 k	lz Hz		#	VBW 300	kHz	S	ween 176	Stop 6.6 ms (81	4.5 GH 92 pts

	GPRS Modulation, N	1id Channel, 4.495	GHz-6GHz	
Result: Pass	Value: ≤	≤ - 30 dBm	Limit:	≤ -13 dBm

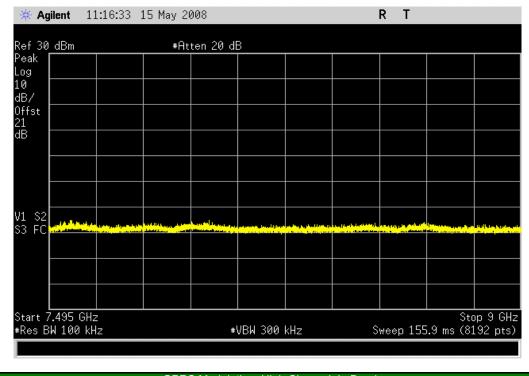


	GPRS Modulation, Mid Channel, 5.995	GHz-7.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

_	:05:17 1	.5 May 20					RT		
≷ef30 <u>dBm</u>		#Ht	ten 20 di	<u> </u>					
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IB									
1 \$2 3 FC <b>4 11 11 11 11 11</b>	r foskallas foskalast	untel Altranet, M	lin de henrikk nige	hina tea Nationa	and the first of the second	ta la territor de			
tart 5.995 GHz Res BW 100 kH:	2		#	VBW 300	kHz	#S	weep 155	Stop 5.9 ms (81	7.5 GH 192 pts

XMit 2007.06.13

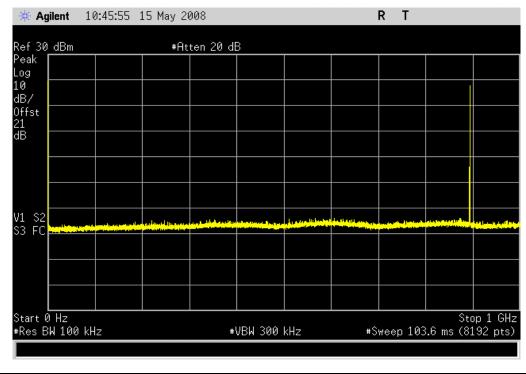
	GPRS Modulation, Mid Channel, 7.49	95GHz-9.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, High Channel, In Ba	and	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

🔆 Agilent	10:44:22	15 May 20	908				RT		
Ref 30_dBm		#At	ten 20 di	В					
Peak Log									
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21 dB									
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S3 FC									
L	Hz Hz ) kHz		#	L VBW 300	kHz	#S	ween 81		 895 MHz  92 pts)
								01-110-(VI	

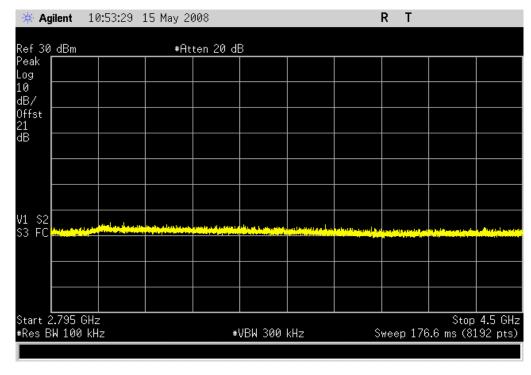
	GPRS Modulation,	High Channel, 0-1GHz	
Result: Pass	Value: ≤ - :	30 dBm Limit:	≤ -13 dBm



	GPRS Modulation, High Channel, 995MHz	z-2.8GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm

🔆 Agile	ent 10	):51:33 1	15 May 20	008				RT		
Ref 30 d	lBm		#At	ten 20 df	3					
Peak Log										
10 dB/										
Offst   21 dB										
dB										
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Start 99! #Res BW		z		#1	VBW 300 I	kHz	+	Sweep 1	Stop 87 ms (81	2.8 GHz .92 pts)

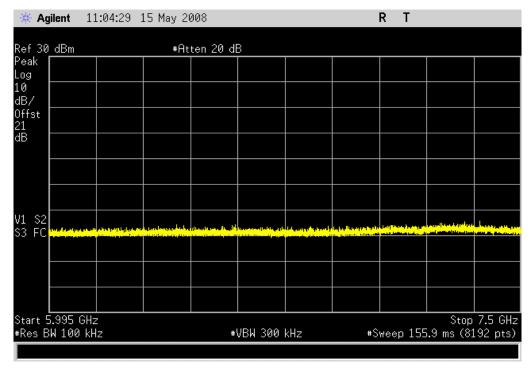
	GPRS Modulation, High Channel, 2.79	5GHz-4.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, High Chan	nel, 4.495GHz-6GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dB	n Limit:	≤ -13 dBm

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Ref 30_	dBm		#At	ten 20 di	3					
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dB										
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Start 4 ≢Res Bl	.495 GH W 100 k	z Hz		#	VBW 300	kHz	#S	weep 155	Sto i.9 ms (81	op 6 GHz 192 pts)

	GPRS Modulation, High Channel, 5.995	GHz-7.5GHz	
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm



GPRS Modulation, High Channel, 7.495GHz-9.5GHz								
Result: Pass	<b>Value:</b> ≤ - 30 dBm	Limit:	≤ -13 dBm					

🔆 Ag	ilent 1	1:16:33	15 May 20	908				RT		
Ref 30	dBm		#At	ten 20 di	В					
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V1 S2 S3 FC	وفدادا واري				adamateria da cal di base	an dha ka shuddatha la	te lindeletet.			thalls has believe and
	'.495 GH W 100 k			#	VBW 300	kHz	S	weep 155	Sto 5.9 ms (81	op 9 GHz 192 pts)

NORTHWEST

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

XMit 2007.06.13



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	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

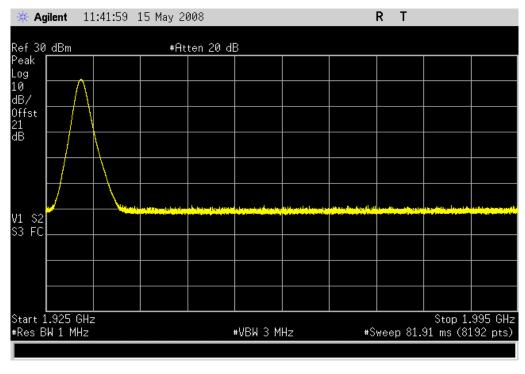
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated 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 port spurious emissions were measured at the RF output terminal of the EUT with 30dB of external attenuation on the RF input of the spectrum analyzer. Analyzer plots utilizing a 1MHz resolution bandwidth and no video filtering were made for each modulation type from 0 to 20 GHz. The peak conducted power of spurious emissions, up to the  $10^{th}$  harmonic of the transmit frequency, were investigated to ensure they were less than or equal to -13 dBm.

NORTHWEST	SPURIOUS EMIS	SSIONS AT ANTENNA TERMIN		XMit 2007.0
EMC				
-	T: OmniCell@Home		Work Order: RAFN008	5
Serial Number	r: Radioframe Networks, Inc.		Date: 05/15/08 Temperature: 24°C	
Attendees	· · · · · · · · · · · · · · · · · · ·		Humidity: 41%	
	t: None		Barometric Pres.: 1027.5 m	В
	y: Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV06	
ST SPECIFICA	TIONS	Test Method		
C 24E:2007		ANSI/TIA/EIA-603-B-2002		
OMMENTS				
one				
Deviations	DM TEST STANDARD			
onfiguration #	2	Rochen Le Reling		
	Signatu	ure s		
		Va	lue Limit	Resul
M Modulation	Low Channel			
	In Band	≤ - 25	5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	2.795 GHz-9 GHz		5 dBm ≤ -13 dBm	Pas
	8.995 GHz-14 GHz		5 dBm ≤ -13 dBm	Pas
	13.995 GHz-20 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	Mid Channel In Band	< 29	5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz		5 dBm ≤ -13 dBm	Pas
	2.795 GHz-9 GHz		5 dBm ≤ -13 dBm	Pas
	8.995 GHz-14 GHz		5 dBm ≤ -13 dBm	Pas
	13.995 GHz-20 GHz		5 dBm ≤ -13 dBm	Pas
	High Channel			
	In Band	≤ - 25	5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	2.795 GHz-9 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	8.995 GHz-14 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	13.995 GHz-20 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
RS Modulation	Low Channel			
	In Band	≤ - 25	5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	2.795 GHz-9 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	8.995 GHz-14 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	13.995 GHz-20 GHz	≤ - 25	5 dBm ≤ -13 dBm	Pas
	Mid Channel			
	In Band		5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz		5 dBm ≤ -13 dBm	Pas
	2.795 GHz-9 GHz		5 dBm ≤ -13 dBm	Pas
	8.995 GHz-14 GHz		5 dBm ≤ -13 dBm	Pas
	13.995 GHz-20 GHz High Channel	≤ - 25	5 dBm ≤ -13 dBm	Pas
	In Band	<_ ?	5 dBm ≤ -13 dBm	Pas
	0-2.8 GHz		5 dBm ≤ -13 dBm	Pas
				1 43
				Pae
	2.795 GHz-9 GHz 8.995 GHz-14 GHz	≤ - 25	5 dBm ≤ -13 dBm 5 dBm ≤ -13 dBm	Pas Pas

	GSM Modulat	ion, Low Channel, In Band		
Result: Pass	Value:	≤ - 25 dBm	Limit:	≤ -13 dBm



	GSM Modulation, Low Channel, 0-2.8 (	GHz		
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm	

🔆 Agilent	11:53:00	15 May 20	908				RT		
Ref 30_dBm		#At	ten 20 di	3					
Peak Log									
10 dB/									
Offst 21 dB									
dB									
				I	الغارب والعار	. In successful to	بالمعادل مريد م		a los ellestered
V1 S2							, <u></u>		
Start 0 Hz #Res BW 1 M	Hz			₩VBW 3 M	Hz	#\$	weep 81.	Stop 91 ms (81	2.8 GHz 192 pts)

Result: Pass

## SPURIOUS EMISSIONS AT ANTENNA TERMINALS

	GSM Modulation, Low Channel, 2.7	'95 GHz-9 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

Ref 30	dBm		#At	Atten 20 dB						
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ffst 1 B										
D										
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1 S2 3 FC				ala illa la dalla da	ithin and a long of a second					
510										
tart 2 Res B	2.795 GHz WW 1 MHz	2			#VBW 3 M	н <u>г</u>	#S	weep 81.	Sto 91 ms (81	op 9 G⊢ 192 pts

GSM Modulation, Low Channel, 8.995 GHz-14 GHz Value: ≤ - 25 dBm Limit: ≤ -13 dBm

🔆 Agilent	12:06:01	15 May 20	908				RT		
Ref 30 <u>d</u> Bm		#At	ten 20 df	3					
Peak Log									
10 dB/									
Offst 21 dB									
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all and the second		والمراجع والمحاجر	and the states		and Mathematica	and a line of the set	lahan ka ka shudha		
V1 S2 S3 FC									
Start 8.995 ( #Res BW 1 M	GHz Hz			≢VBW 3 M	Hz	<b>#</b> \$	weep 81.	Stop 91 ms (81	) 14 GHz .92 pts)

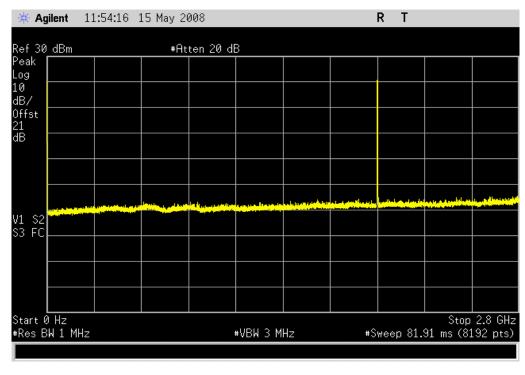
	GSM Modulation, Low Channel, 13.995	GHz-20 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	<b>Limit:</b> ≤ -13 dBm	

lef 30 Peak	0_dBm		#At	ten 20 di	B					
ear. .og										
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lffst 1 IB										
	data da stilar	a te da litera		a line a la la secola	and also also as	de serie - s	tilinet de ren 1	1) dol and the bo	interest for public strategy and	
1 S2 3 FC	2									
tart Roci	13.99 GH: 3W 1 MHz	Z			₩VBW 3 M	Н-7	#5	ween 81 '	stop 91 ms (81	o 20 GH 192 n+s

	GSM Modulation, Mid Channel, In Band		
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

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Ref 30_dl	Bm		#At	ten 20 df	3					
Peak Log										
10 dB/										
Offst 21 dB										
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			di in							and an a state to the
V1 S2 S3 FC∟					and a second sec					
Start 1.9; #Res BW :	25 GHz 1 MHz				⊧ ₩VBW 3 M	Hz	#\$	weep 81.	Stop 1. 91 ms (81	995 GHz 192 pts)

	GSM Modulatio	on, Mid Channel, 0-2.8 GHz		
Result: Pass	Value:	≤ - 25 dBm	Limit:	≤ -13 dBm



	GSM Modulation, Mid Channel, 2.795 GH	lz-9 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

🔆 Ag	jilent 🗌	12:01:33	15 May 20	908				RT		
Ref 30	dBm		#At	ten 20 di	В					
Peak Log										
10 dB/										
dD7 Offst 21 dB										
dΒ										
		hand the second second						diala an bhilu	al other second	a bablilan daga at
V1 S2 S3 FC				Bénéra Bandaha ang	and the second		Number of Street of Street			an a
	2.795 GI WW 1 MH:				₩VBW 3 M	Hz	#S	weep 81.	Sto 91 ms (81	op 9 GHz 192 pts)

Result: Pass

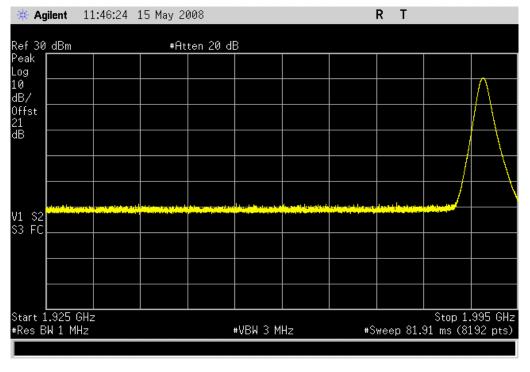
### SPURIOUS EMISSIONS AT ANTENNA TERMINALS

	GSM Modulation, Mid Channel, 8.995	GHz-14 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

Ref 30	dBm		#At	*Atten 20 dB						
èak .og										
0										
B/ ffst 1 B										
В										
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1 S2 3 FC		and the birds of the								and a second
S FC										
									<u> </u>	
itart ö Res R	.995 GH: W 1 MHz	Z			⊭VBW 3 M	Hz	#5	ween 81 '	Stop 91 ms (81	) 14 GH

GSM Modulation, Mid Channel, 13.995 GHz-20 GHz Value: ≤ - 25 dBm Limit: ≤ -13 dBm

	GSM Modulati	on, High Channel, In Band		
Result: Pass	Value:	≤ - 25 dBm	Limit:	≤ -13 dBm



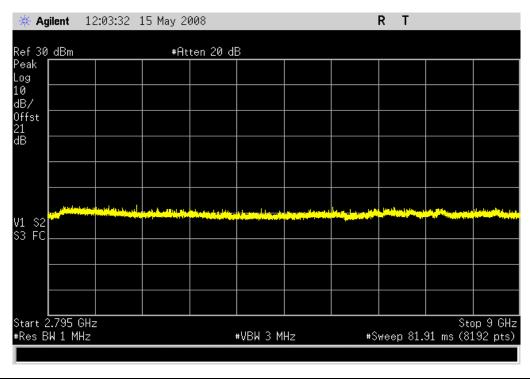
	GSM Modulation, High Channel, 0-2.8 G	GHz		
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm	

🔆 Agilent	11:57:46	15 May 20	908				RT		
Ref 30 <u>d</u> Bm		#At	ten 20 di	В					
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Offst 21 dB									
dB									
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V1 S2 S3 FC									
Start 0 Hz #Res BW 1 M	Hz		:	₩VBW 3 M	Hz	#S1	veep 81.	Stop 91 ms (81	2.8 GHz .92 pts)

Result: Pass

### SPURIOUS EMISSIONS AT ANTENNA TERMINALS

GSM Modulation, High Channel, 2.795 GHz-9 GHz						
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm			



GSM Modulation, High Channel, 8.995 GHz-14 GHz Value: ≤ - 25 dBm Limit: ≤ -13 dBm

🔆 Agilen	t 12:	10:13 1	.5 May 20	908				RT		
Ref 30 dB	m		#At	ten 20 di	3					
Peak Log										
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\$3 FC										
L Start 8.99	IS GHz								Stop	) 14 GHz
#Res BW 1	MHz				#VBW 3 MI	Hz	#\$	weep 81.	91 ms (81	.92 pts)

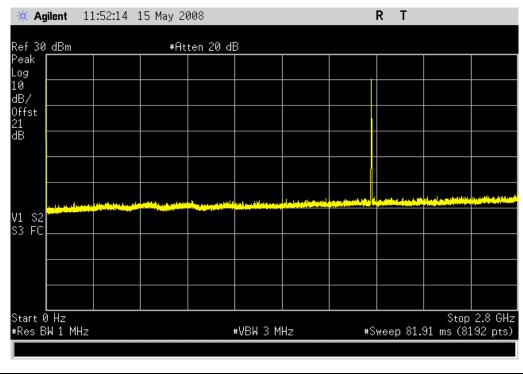
	GSM Modulation, High Channel, 13.995	GHz-20 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

Ref 30	dBm		#At	ten 20 di	B					
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	<u></u>									
tart 1 Ree Ri	3.99 GHz W 1 MHz	2			#VBW 3 M	Н-7	#5	waan 81	Stop 91 ms (81	0 20 GH

	GPRS Modulation, Low Channel, In Ba	ind	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

∰ <b>A</b> g	gilent 1	1:47:16	15 May 20	008				RT		
Ref 30	dBm		#At	ten 20 dl	В					
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V1 S2 S3 FC										
00 1 0										
Start 1 #Res B	1.925 GH 3W 1 MHz	lz			#VBW 3 M	Hz	#S	weep 81.	Stop 1. 91 ms (81	.995 GHz 192 pts)

	GPRS Modulation	on, Low Channel, 0-2.8 GHz		
Result: Pass	Value:	≤ - 25 dBm	Limit:	≤ -13 dBm



GPRS Modulation, Low Channel, 2.795 GHz-9 GHz							
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm				

🔆 Ag	ilent 1	2:00:43	15 May 20	908				RT		
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	.795 GH: W 1 MHz	2			#VBW 3 M	Hz	<b>#</b> \$	weep 81.	5to 91 ms (81	op 9 GHz 192 pts)

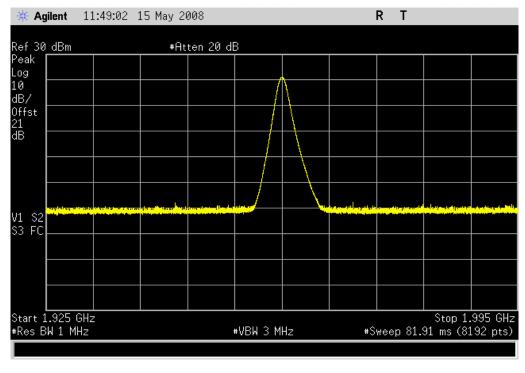
	GPRS Modulation, Low Channel, 8.99	5 GHz-14 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	<b>Limit:</b> ≤ -13 dBm	

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1 52									
3 FC									
tart 8	.995 GH: W 1 MHz	Z			#VBW 3 M	 	weep 81.	Stop	5 14 GH

	GPRS Modulation, Low Channel, 13.995 G	GHz-20 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

🔆 Ag	j <b>ilent</b> 1	2:14:13	15 May 20	908				RT		
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V1 S2 S3 FC										
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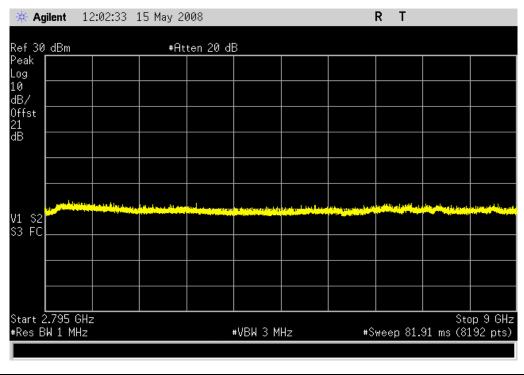
	GPRS Modulat	tion, Mid Channel, In Band		
Result: Pass	Value:	≤ - 25 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, Mid Channel, 0-2.8 G	Hz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

🔆 Agilent	11:55:19	15 May 20	908				RT		
Ref 30 <u>d</u> Bm		#At	ten 20 di	3					
Peak Log									
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V1 S2 S3 FC									
Start 0 Hz #Res BW 1 M	Hz			₩VBW 3 M	Hz	#S	weep 81.	Stop 91 ms (81	2.8 GHz .92 pts)

	GPRS Modulation, Mid Channel, 2.7	'95 GHz-9 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm



	GPRS Modulation, Mid Channel, 8.995	GHz-14 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

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V1 S2 S3 FC										
Start 8 #Res B	3.995 GI WW 1 MH:	lz z			#VBW 3 M	Hz	#S	weep 81.	Stop 91 ms (81	) 14 GHz .92 pts)

	GPRS Modulation, Mid Channel, 13.995	GHz-20 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	<b>Limit:</b> ≤ -13	dBm

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B/   ffst								
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1 S2 3 FC								
tart 13.							C+or	5 20 GH

	GPRS Modulation, High Channel, In Ba	and	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

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Ref 30	dBm		#Ĥt	ten 20 di	В					
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Offst 21 dB										$ \land $
dB										
V1 S2 S3 FC										
55 FC										
Start 1 #Res B	L.925 GH 3W 1 MH:	Hz z			₩VBW 3 M	Hz	#\$	weep 81.	Stop 1. 91 ms (81	.995 GHz L92 pts)

	GPRS Modulation,	High Channel, 0-2.8 GHz		
Result: Pass	Value: ≤	- 25 dBm	Limit:	≤ -13 dBm

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1 S2									
tart Ø H Res BW	z 1 MHz			#VBW 3 M	Hz	#Si	weep 81.	Stop 91 ms (81	2.8 GH 192 pts

 GPRS Modulation, High Channel, 2.795 GHz-9 GHz

 Result:
 Pass
 Value:
 ≤ - 25 dBm
 Limit:
 ≤ -13 dBm

<b>₩ Ag</b> Ref 30	ilent 1 dBm		#At	ten 20 di	B					
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tart 2 Res <u>B</u>	.795 GH: W 1 MHz	Z			₩VBW 3 M	Hz	#\$	weep 81.	Sto 91 ms (81	op 9 GH 192 pts

	GPRS Modulation, High Channel, 8.995	GHz-14 GHz	
Result: Pass	<b>Value:</b> ≤ - 25 dBm	Limit:	≤ -13 dBm

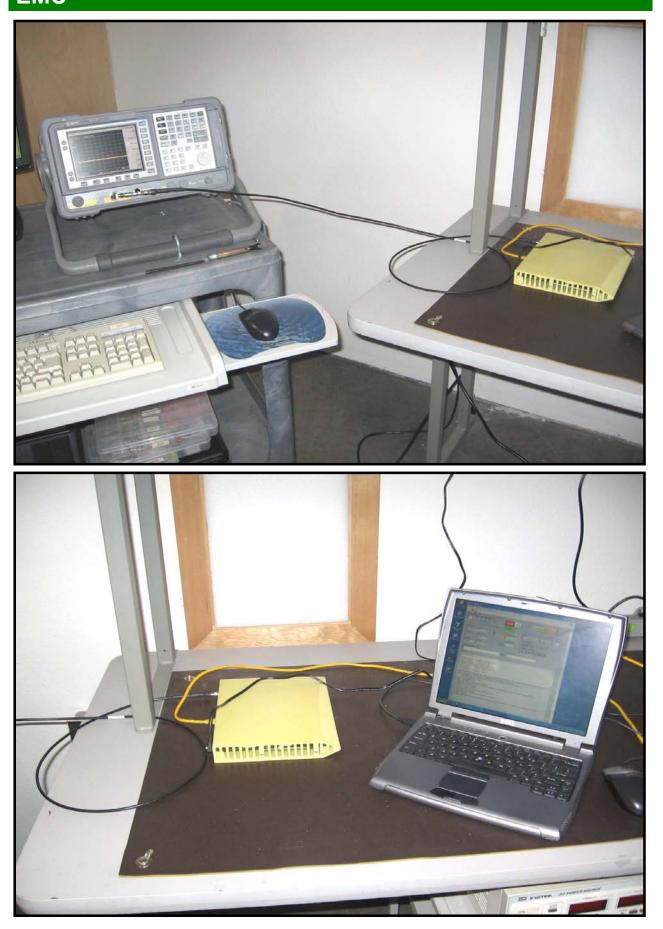
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tart 8.995	GHz 1Hz			#VBW 3 M			Stop 91 ms (81	14 GH

 GPRS Modulation, High Channel, 13.995 GHz-20 GHz

 Result:
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 Value:
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 Limit:
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🔆 Ag	j <b>ilent</b> 1	2:18:35	15 May 20	908				RT		
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Start 1 #Res B	3.99 GH: W 1 MHz	Z			₩VBW 3 M	Hz	#\$	weep 81.	Stop 91 ms (81	) 20 GHz .92 pts)

XMit 2007.06.13



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	E4407B	AAU	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

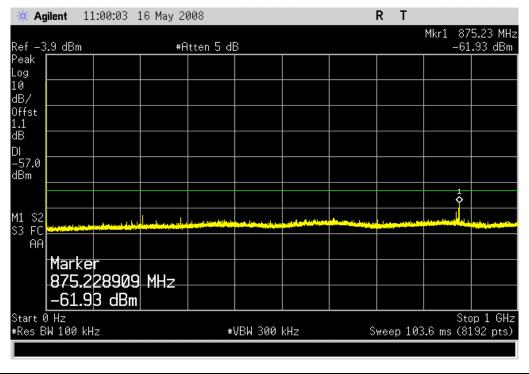
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated 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 a direct connection between the Receive only RF port of the EUT and a spectrum analyzer. The spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC	Re	eceiver Co	nducted Sp	urious E	missions	\$	XMit 2007.06.13
EUT:	OmniCell@Home					Work Order:	RAFN0085
Serial Number:	None					Date: 0	5/16/08
Customer:	Radioframe Networks, Inc					Temperature: 2	24°C
Attendees:	None					Humidity: 3	39%
Project:	None					Barometric Pres.: 1	017.6 mb
Tested by:	Holly Ashkannejhad		Po	wer: 120VAC/6	0Hz	Job Site:	EV06
TEST SPECIFICAT	IONS			Test Metho	bd		
FCC 15.111:2007				ANSI C63.	4:2003		
COMMENTS							
None							
DEVIATIONS FROM	I TEST STANDARD						
No Deviations							
Configuration #	2	Signati	ire Holy Ander	N			
					Value	Lim	it Results
Receive port, Low c							
	0 - 1 GHz				≤ -61 dBm	≤ - 57 dBm	Pass
	995 MHz - 2.8 GHz				≤ -68 dBm	≤ - 57 dBm	Pass
	2.795 GHz - 5 GHz				≤ -68 dBm	≤ - 57 dBm	Pass
Receive port, Mid ch	nannel						
	0 - 1 GHz				≤ -63 dBm	≤ - 57 dBm	Pass
	995 MHz - 2.8 GHz				≤ -68 dBm	≤ - 57 dBm	Pass
	2.795 GHz - 5 GHz				≤ -69 dBm	≤ - 57 dBm	Pass
Receive port, High o	hannel						
	0 - 1 GHz				≤ -63 dBm	≤ - 57 dBm	Pass
	995 MHz - 2.8 GHz				≤ -69 dBm	≤ - 57 dBm	Pass
	2.795 GHz - 5 GHz				≤ -69 dBm	≤ - 57 dBm	Pass

	Receive port	, Low channel, 0 - 1 GHz		
Result: Pass	Value:	≤ -61 dBm	Limit:	≤ - 57 dBm

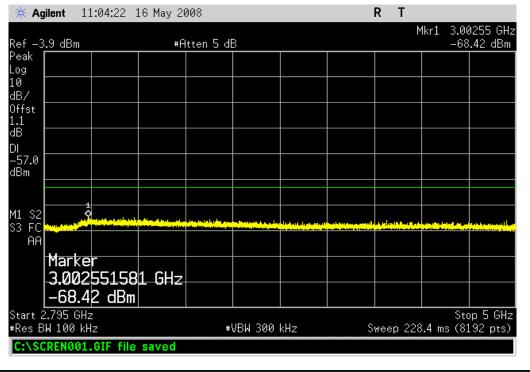


 Receive port, Low channel, 995 MHz - 2.8 GHz

 Result:
 Pass
 Value:
 ≤ -68 dBm
 Limit:
 ≤ - 57 dBm

🔆 Agilent 11:01:20 16 May 20	008		F	₹Т		
	ltten 5 dB			١		6315 GHz .89 dBm
Peak Log						
10 dB/						
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dB DI						
-57.0 dBm						
M1 S2 S3 FC together and the state of the Marine	den la bis de la secte de la company de la					A di se di
AA						
Marker 2.663154071 GHz						
-68.89 dBm						
Start 995 MHz #Res BW 100 kHz	#VBW 300	kHz		Sweep <u>1</u>	Stop 87 ms (81	2.8 GHz 192 pts)
C:\SCREN001.GIF file saved						

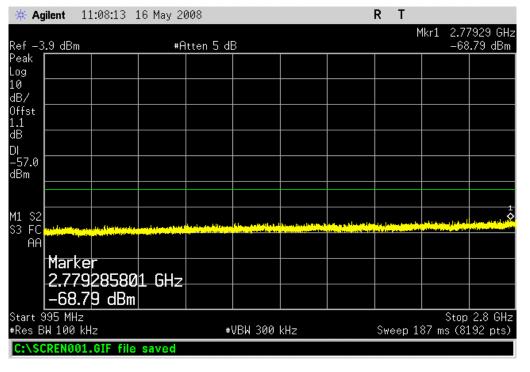
Receive port, Low channel, 2.795 GHz - 5 GHz						
Result: Pass	Value:	≤ -68 dBm	Limit:	≤ - 57 dBm		



Receive port, Mid channel, 0 - 1 GHz					
Result: Pass	<b>Value:</b> ≤ -63 dBm	Limit:	≤ - 57 dBm		

🔆 Agilent	11:17:04	16 May 20	908				RT		
Ref -3 <u>.9 dBr</u>	n	#A	tten 5 dl	3					5.23 MHz .11 dBm
Peak Log									
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-57.0 dBm									
M1 S2 S3 FC	أفأر وجودتها الاوري			Martin and a state	فتوأد فمرقو فيارونه	nda en dellandarja	a sebara para tanàna di Ala		a liga ing sing digi si digi si
AA									
Mar 875	<er .228909</er 	MHz							
	.11 dBm								
Start 0 Hz #Res BW 100	kHz		#	VBW 300 I	kHz	S	weep 10	Sto 3.6 ms (81	op 1 GHz 192 pts)
C:\SCREN0	01.GIF file	saved							

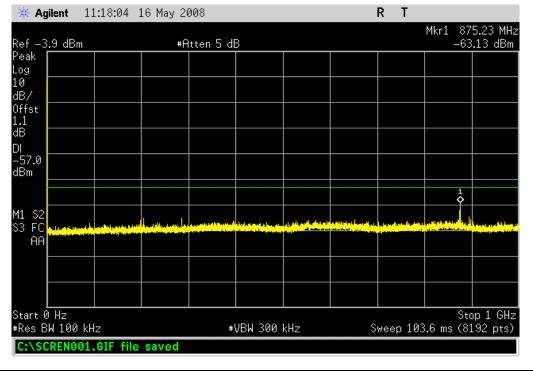
Receive port, Mid channel, 995 MHz - 2.8 GHz						
Result: Pas	ss Value:	≤ -68 dBm	Limit:	≤ - 57 dBm		



Receive port, Mid channel, 2.795 GHz - 5 GHz						
Result: Pass	<b>Value:</b> ≤ -69 dBm	<b>Limit:</b> ≤ - 57 dBm				

<b>* Agilent</b> 11:07:13 16	May 2008	RT	
Ref -3 <u>.9 dBm</u>	#Atten 5 dB	Mkı	r1 2.97106 GHz -69.08 dBm
Peak Log			
10 dB/			
Offst 1.1 dB			
DI			
dBm			
<u>1</u>			
M1 S2 S3 FC		the staff array of the state of the state of the state state of the state of the state of the state of the state	. Non all the days of the state of the
Marker 2.971055426	GH7		
-69.08 dBm			
Start 2.795 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 228.4	Stop 5 GHz ms (8192 pts)
C:\SCREN001.GIF file sa			

	Receive port, High channel, 0 - 1	GHz	
Result: Pass	<b>Value:</b> ≤ -63 dBm	Limit:	≤ - 57 dBm



 Receive port, High channel, 995 MHz - 2.8 GHz

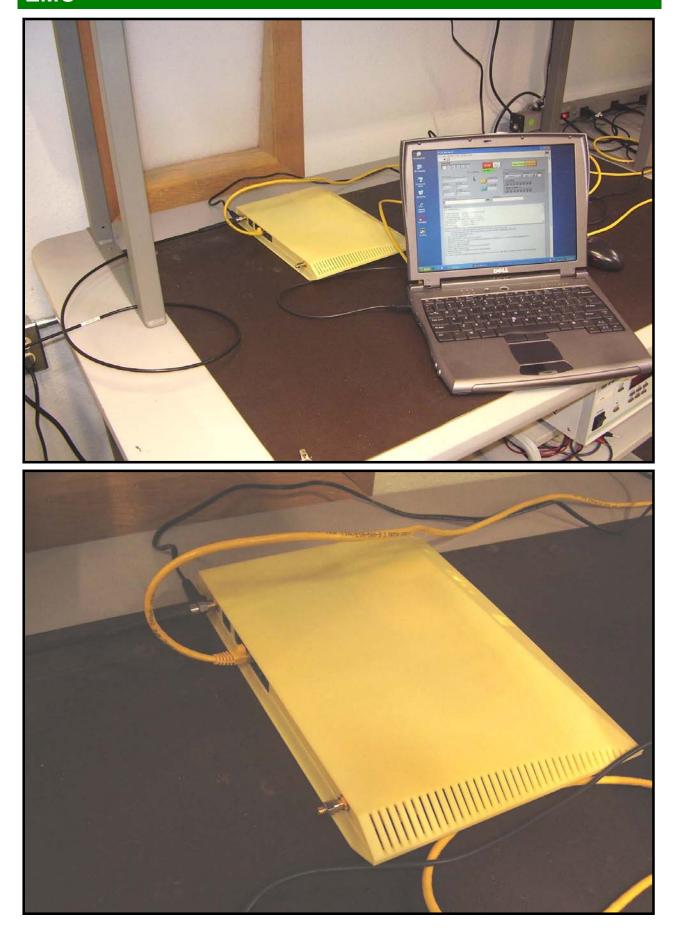
 Result:
 Pass
 Value:
 ≤ -69 dBm
 Limit:
 ≤ - 57 dBm

🔆 Agilent	11:18:52	16 May 20	908			RT		
Ref -3 <u>.9 dBr</u>	n	#A	tten 5 df	3		٢		9647 GHz 9.6 dBm
Peak Log								
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Offst 1.1								
dB DI								
-57.0 dBm								
M1 S2 S3 FC markets	أفرو فالأور أناخذ ومحرور المساولة	Last Marth Taylor Mart	e el letreterite	united in a film of the	la secolation de	ante a dista de la la	alles such and	litere pisti dal
AA								
Mar 2.79	ker 3647417	8 GHz						
-6	9.6 dBm							
Start 995 M⊢ #Res BW 100			#	VBW 300 I	kHz	Sweep 1	Stop 87 ms (81	2.8 GHz 192 pts)
C:\SCREN0	01.GIF file	saved						

Receive port, High channel, 2.795 GHz - 5 GHz						
Result: Pass	Value	≤ -69 dBm	Limit:	≤ - 57 dBm		

🔆 Agilent 11:20:05 16 M	ay 2008	R	Т
Ref -3.9 dBm	#Atten 5 dB		Mkr1 3.22302 GHz -69.48 dBm
Peak Log			
10 dB/			
0ffst 1.1 dB			
DI I I			
-57.0 dBm			
	and the share a low of the product of the second state of the seco	None of the state	والمحاوية والمحافظ والم
AA		a Managana ang ang ang ang ang ang ang ang	
Marker 3.223024661 G	iHz		
-69.48 dBm			
Start 2.795 GHz #Res BW 100 kHz	#VBW 300 k	Hz Sweep	Stop 5 GHz 228.4 ms (8192 pts)
C:\SCREN001.GIF file sav	ed		

## Receiver Conducted Spurious Emissions



### Effective Isotropic Radiated Power

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	
GSM	
GPRS	

#### CHANNELS INVESTIGATED

Low channel, 1930.2MHz Mid Channel, 1960MHz High Channel 1989.8MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

**EMC** 

FREQUENCY RANGE INVESTIGATED						
Start Frequency	1930MHz	Stop Frequency	1989.8MHz			

#### 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
Antenna, Horn	ETS	3115	AIB	11/14/2007	12
EV12 Cables		Double Ridge Horn Cables	EVT	6/17/2008	13
Pre-Amplifier	Miteq	AMF-3D00100800-32-13P	AVF	6/17/2008	13
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Antenna, Horn	ETS	3115	AHW	7/21/2008	24
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

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

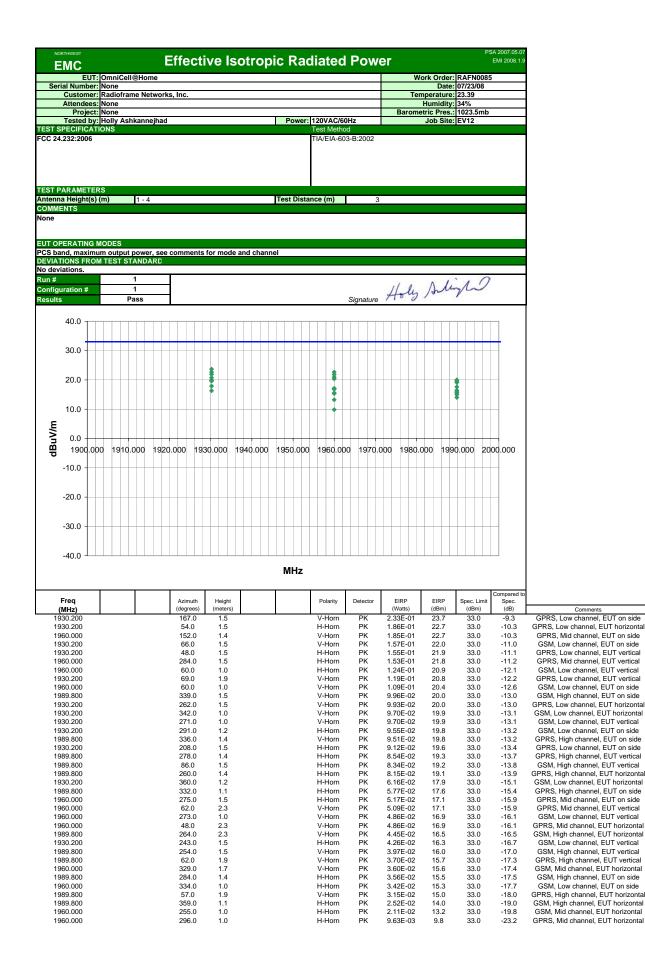
#### MEASUREMENT UNCERTAINTY

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

#### TEST DESCRIPTION

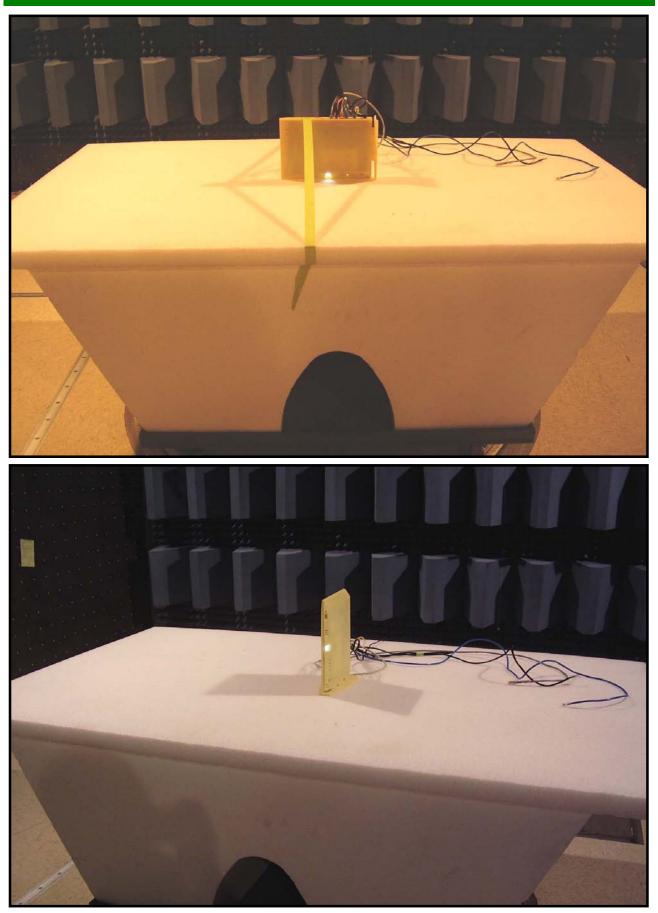
The antennas to be used with the EUT were tested. The EUT was transmitting and/or receiving while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization,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

The amplitude and frequency of the highest emissions were noted. The EUT was then replaced with a horn antenna. A signal generator was connected to the horn antenna and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the dipole antenna and its gain (dBi); the effective radiated power for each radiated spurious emission was determined.



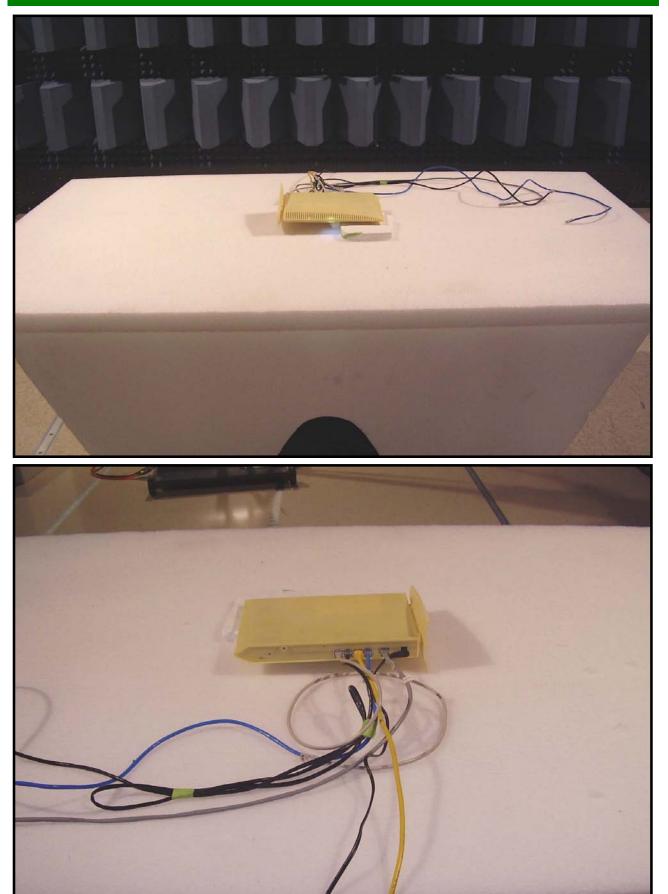


## Effective Isotropic Radiated Power





## Effective Isotropic Radiated Power



## **EFFECTIVE RADIATED POWER**

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	
Cell band, GSM	
Cell band, GPRS	

CHANNELS TESTED
Low channel, 869.2 MHz
Mid channel, 881.4 MHz
High channel, 893.8 MHz

#### POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED				
Start Frequency	869 MHz	Stop Frequency	894 MHz	

#### SAMPLE CALCULATIONS

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

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	10/23/2007	13
Antenna, Dipole (part of ADA)	ETS	3121C-DB4	ADAA	NCR	0
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Agilent	E8257D	TGX	12/7/2007	13

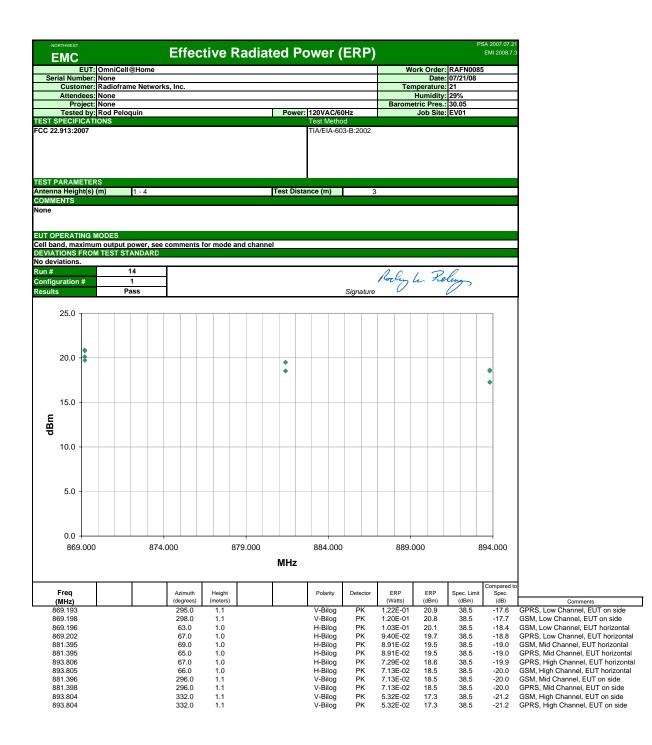
Frequency Range	Peak Data	Quasi-Peak Data	Average Data
(MHz)	(kHz)	(kHz)	(kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

#### **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.

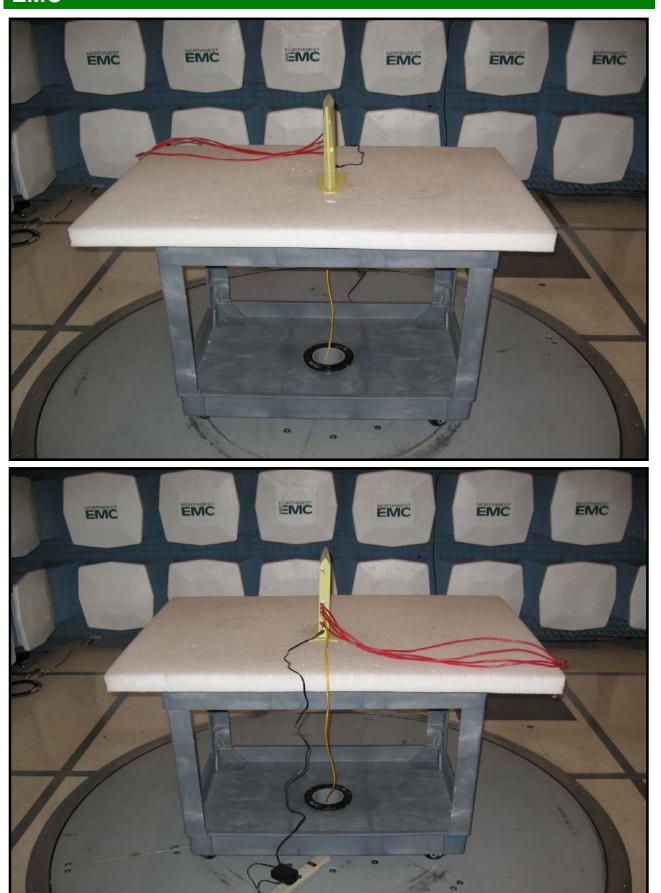
#### TEST DESCRIPTION

The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarizationThe amplitude and frequency of the highest emission were noted. The EUT was then replaced with a ½ wave dipole that was successively tuned to the highest emission. A signal generator was connected to the dipole, and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded. The signal generator, amplifier, and cable were then connected to an analyzer and the power output was recorded. By factoring in the dipole antenna gain (dBi), the effective radiated power for the maximum fundamental emission was determined.

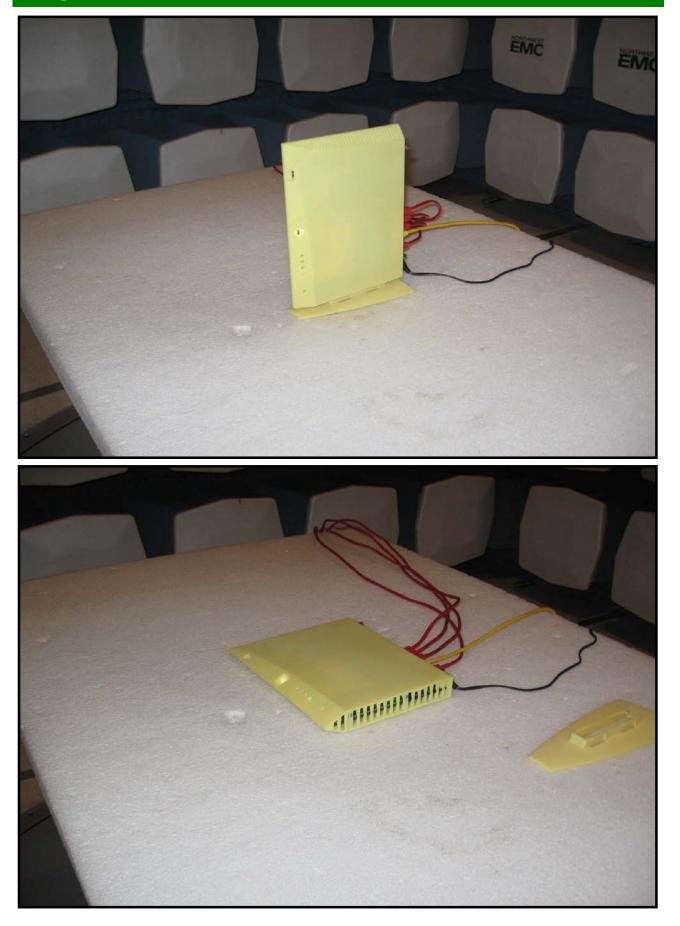


## EFFECTIVE RADIATED POWER

PSA 2007.05.07



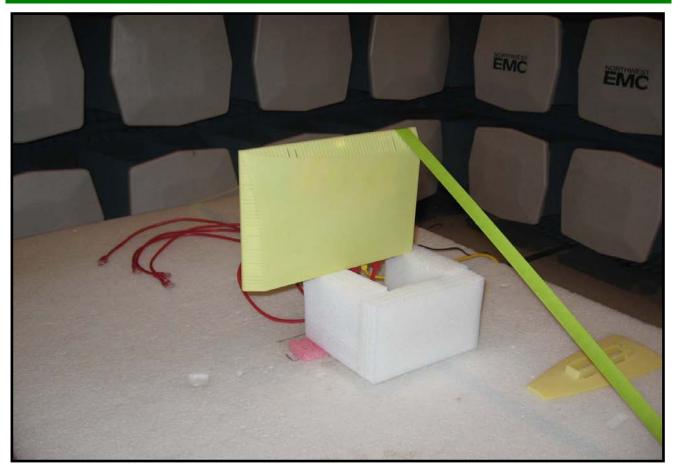
## EFFECTIVE RADIATED POWER





## EFFECTIVE RADIATED POWER

PSA 2007.05.07



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
AC Power Source	Instek	APS-9050	TPK	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	13
Chamber, Temp./Humidity Chamber	Cincinnati Sub Zero (CSZ)	ZH-32-2-2-H/AC	TBA	8/7/2007	12

#### **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

#### Variation of Supply Voltage

The primary supply voltage was varied from 85% to 115% of nominal. The EUT can only be operated from the public AC mains, so an AC lab supply was used to vary the supply voltage from 115% to 85% of 120 V, 60 Hz.

#### Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-20° to +50° C) and at 10°C intervals.

Measurements were made at the single transmit frequency using a direct connection between the EUT and a spectrum analyzer. The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT.

NORTHWEST EMC		Frequency	v Stability	XMit 2007.06.
EUT:	OmniCell@Home			Work Order: RAFN0085
Serial Number:	None			Date: 05/15/08
Customer:	Radioframe Networks, Inc	<b>).</b>		Temperature: 25°C
Attendees:	Nha Tran			Humidity: 40%
Project:	None			Barometric Pres.: 1025 mb
	Holly Ashkannejhad		Power: 120VAC/60Hz nominal	Job Site: EV06
TEST SPECIFICATI	ONS		Test Method	
FCC 22H:2007			ANSI/TIA/EIA-603-B-2002	
COMMENTS				
Cellular Band, Maxi	imum output power, Mid c	hannel		
No Deviations	TEST STANDARD			
No Deviations				
Configuration #	2	Signature Holy /	hley	

#### Frequency Stability with Variation of Ambient Temperature (Primary Supply = 120VAC, 60 Hz)

Temp	Assigned Frequency	Measured Frequency	Tolerance	Specification
(°C)	(MHz)	(MHz)	(ppm)	(ppm)
50	881.40000	881.400790	0.90	1
40	881.40000	881.400760	0.86	1
30	881.40000	881.399470	0.60	1
20	881.40000	881.400580	0.66	1
10	881.40000	881.400150	0.17	1
0	881.40000	881.400370	0.42	1
-10	881.40000	881.400760	0.86	1
-20	881.40000	881.400790	0.90	1
-30	881.40000	881.400820	0.93	1

#### Frequency Stability with Variation of Primary Supply Voltage (Ambient Temperature = 20°C)

Voltage (VAC, 60 Hz)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
138 (115%)	881.40000	881.400670	0.76	1
132 (110%)	881.40000	881.400780	0.88	1
126 (105%)	881.40000	881.400390	0.44	1
120 (100%)	881.40000	881.400840	0.95	1
114 (95%)	881.40000	881.399470	0.60	1
108 (90%)	881.40000	881.400780	0.88	1
102 (85%)	881.40000	881.400830	0.94	1



## Frequency Stability



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
AC Power Source	Instek	APS-9050	TPK	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	13
Chamber, Temp./Humidity Chamber	Cincinnati Sub Zero (CSZ)	ZH-32-2-2-H/AC	TBA	8/7/2007	12

#### 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

#### Variation of Supply Voltage

The primary supply voltage was varied from 85% to 115% of nominal. The EUT can only be operated from the public AC mains, so an AC lab supply was used to vary the supply voltage from 115% to 85% of 120 V, 60 Hz.

#### Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-20° to +50° C) and at 10°C intervals.

Measurements were made at the single transmit frequency using a direct connection between the EUT and a spectrum analyzer. The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT.

NORTHWEST EMC		Frequency	Stability	XMit 2007.06.1
EUT:	OmniCell@Home			Work Order: RAFN0085
Serial Number:	None			Date: 05/15/08
Customer:	Radioframe Networks, In	с.		Temperature: 25°C
Attendees:	Nha Tran			Humidity: 40%
Project:	None			Barometric Pres.: 1025 mb
	Holly Ashkannejhad		Power: 120VAC/60Hz nominal	Job Site: EV06
TEST SPECIFICATI	ONS		Test Method	
FCC 24E:2007			ANSI/TIA/EIA-603-B-2002	
COMMENTS				
PCS Band, Maximu	m Output Power, Mid cha	nnel		
No deviations	TEST STANDARD			
No deviations			-	
Configuration #	2	Signature Holy A	light	

#### Frequency Stability with Variation of Ambient Temperature (Primary Supply = 120VAC, 60 Hz)

Temp	Assigned Frequency	Measured Frequency	Tolerance	Specification
(°C)	(MHz)	(MHz)	(ppm)	(ppm)
50	1960.00000	1960.000900	0.46	1
40	1960.00000	1960.000760	0.39	1
30	1960.00000	1960.000880	0.45	1
20	1960.00000	1960.000300	0.15	1
10	1960.00000	1960.000980	0.50	1
0	1960.00000	1960.000430	0.22	1
-10	1960.00000	1960.000850	0.43	1
-20	1960.00000	1960.000730	0.37	1
-30	1960.00000	1960.000700	0.36	1

#### Frequency Stability with Variation of Primary Supply Voltage (Ambient Temperature = 20°C)

Voltage (VAC, 60 Hz)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
138 (115%)	1960.00000	1960.000920	0.47	1
132 (110%)	1960.00000	1960.000870	0.44	1
126 (105%)	1960.00000	1960.000450	0.23	1
120 (100%)	1960.00000	1960.000910	0.46	1
114 (95%)	1960.00000	1960.000730	0.37	1
108 (90%)	1960.00000	1960.000580	0.30	1
102 (85%)	1960.00000	1959.999050	0.48	1



# Frequency Stability



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
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	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 99% bandwidth was measured utilizing the analyzer's peak detector and measuring the carrier's 26 dB occupied bandwidth based on the peak output power level measured. A plot was taken to show the occupied bandwidth is contained within the allowable transmit band.

A direct connection was made between the EUT and a spectrum analyzer. At 3 kHz the spectrum analyzer's resolution bandwidth was sufficiently narrow to plot the actual bandwidth of the signal and not the filter response curve of the spectrum analyzer. The resolution bandwidth was approximately equal to 1% of the 20dB bandwidth and the video bandwidth was greater than or equal to the resolution bandwidth.

The occupied bandwidth was measured with the EUT configured in the modes called out in the data sheets.

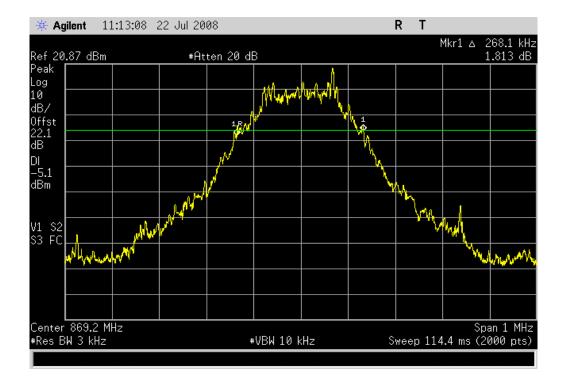
EMC		occupi	ed Bandwidth	Week On the DATE	005
EUT Serial Number	: OmniCell@Home r: None			Work Order: RAFN0 Date: 5/14/20	
Customer	r: Radioframe Networks,	nc.		Temperature: 25°C	
	: Nha Tran t: None			Humidity: 35% Barometric Pres.: 1030.8	mB
	: Holly Ashkannejhad &	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV06	
ST SPECIFICAT	TIONS		Test Method		
C 22H:2007			ANSI/TIA/EIA-603-B-2002		
OMMENTS ellular Band					
enular banu					
	M TEST STANDARD				
o deviations	2	11	ly Arlingh		
onfiguration #	2	Signature Ho	ly proper		
			Value	Limit	Result
SM modulation	High power Atten = 0				
	High power, Atten = 0 Low channel	el, 869.2MHz			
		Reference Level Plot	20.87 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	268.1 kHz -24.8 dBm	N/A ≤ - 13 dBm	N/A Pass
	Mid channe	l, 881.4MHz	-24.0 0011		
		Reference Level Plot	20.11 dBm	N/A	N/A
	High change	Occupied Bandwidth el, 893.8MHz	262.6 kHz	N/A	N/A
	High chann	Reference Level Plot	20.24 dBm	N/A	N/A
		Occupied Bandwidth	263.6 kHz	N/A	N/A
	Mid a sugar Attack	Band Edge	-26.4 dBm	≤ - 13 dBm	Pass
	Mid power, Atten = 3	el, 869.2MHz			
	Low chains	Reference Level Plot	12.7 dBm	N/A	N/A
		Occupied Bandwidth	263.6 kHz	N/A	N/A
		Band Edge	-37.38 dBm	≤ - 13 dBm	Pass
	Mid channe	I, 881.4MHz Reference Level Plot	12.5 dBm	N/A	N/A
		Occupied Bandwidth	263.8 kHz	N/A	N/A
	High chann	el, 893.8MHz			
		Reference Level Plot Occupied Bandwidth	12.5 dBm 263.6 kHz	N/A N/A	N/A N/A
		Band Edge	-33.5 dBm	≤ - 13 dBm	Pass
	Low power, Atten = 6	2010 2090	0000 0200	- To dain	1 400
	Low channe	el, 869.2MHz			
		Reference Level Plot Occupied Bandwidth	6.5 dBm 264.132 kHz	N/A N/A	N/A N/A
		Band Edge	-41.19 dBm	≤ - 13 dBm	Pass
	Mid channe	l, 881.4MHz			
		Reference Level Plot	6.4 dBm	N/A	N/A
	High chann	Occupied Bandwidth el, 893.8MHz	268.1 kHz	N/A	N/A
	r light chann	Reference Level Plot	6.4 dBm	N/A	N/A
		Occupied Bandwidth	263.1 kHz	N/A	N/A
		Band Edge	-39.4 dBm	≤ - 13 dBm	Pass
RS modulation	High power, Atten = 0				
		el, 869.2MHz			
		Reference Level Plot	20.79 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	263.1 kHz -25.4 dBm	N/A ≤ - 13 dBm	N/A Pass
	Mid channe	I, 881.4MHz	-25.4 UBIII		rass
		Reference Level Plot	20.06 dBm	N/A	N/A
		Occupied Bandwidth	264.1 kHz	N/A	N/A
	High chann	el, 893.8MHz Reference Level Plot	20.19 dBm	N/A	N/A
		Occupied Bandwidth	263.1 kHz	N/A	N/A
		Band Edge	-26.17 dBm	≤ - 13 dBm	Pass
	Mid power, Atten = 3	N 960 2MHz			
	Low channe	el, 869.2MHz Reference Level Plot	12.7 dBm	N/A	N/A
		Occupied Bandwidth	272.6 kHz	N/A N/A	N/A
		Band Edge	-34.99 dBm	≤ - 13 dBm	Pass
	Mid channe	I, 881.4MHz Reference Level Plot	12.7 dBm	NI/A	N/A
		Occupied Bandwidth	12.7 dBm 263.1 kHz	N/A N/A	N/A N/A
	High chann	el, 893.8MHz			
		Reference Level Plot	12.4 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	264.1 kHz -33.11 dBm	N/A ≤ - 13 dBm	N/A Pass
	Low power, Atten = 6	Band Edge	-33.11 UBM		ra55
		el, 869.2MHz			
		Reference Level Plot	6.4 dBm	N/A	N/A
		Occupied Bandwidth	264.1 kHz	N/A	N/A
	Mid channe	Band Edge I, 881.4MHz	-42.75 dBm	≤ - 13 dBm	Pass
		Reference Level Plot	6.5 dBm	N/A	N/A
	_	Occupied Bandwidth	264.1 kHz	N/A	N/A
	High chann	el, 893.8MHz			
		Reference Level Plot Occupied Bandwidth	6.4 dBm 272.1 kHz	N/A N/A	N/A N/A

	GSM modulation , High power, Atten :	= 0, Low channel, 869.2	2MHz, Referenc	e Level Plot
Result: N/A	Value:	20.87 dBm	Limit:	N/A

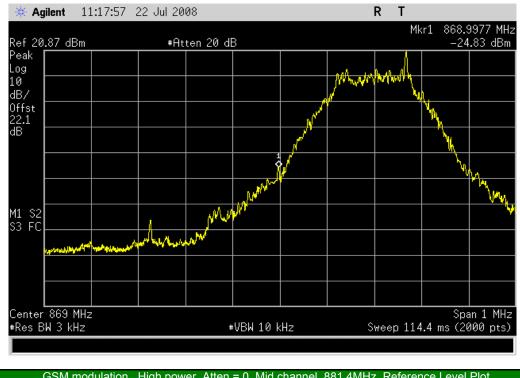
20 <u>.87 dBm</u>	#Atten	20 dB					
ak							
,							
st 1							
S2 FC							
nter 869.2 MHz s BW 1 MHz		#VBW 3	MHz	s	weep 19.	Spa 99 ms (20	an 2 M 000 p

 GSM modulation , High power, Atten = 0, Low channel, 869.2MHz, Occupied Bandwidth

 Result:
 N/A
 Value:
 268.1 kHz
 Limit:
 N/A



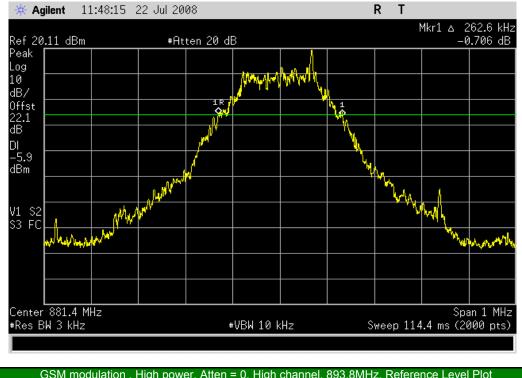
GSM modulation , High power, Atten = 0, Low channel, 869.2MHz, Band Edge					
Result: Pass	Value: -24.8 dBm	<b>Limit:</b> ≤ - 13 dBm			



	GSM modulation, High power, Atten	= 0, Mid channel,	881.4MHz, Reference	e Level Plot
Result: N/A	Value:	20.11 dBm	Limit:	N/A

<b>* Agilent</b> 11:46:06	22 Jul 2008		RT	
Ref 20.11 dBm	#Atten 20 d	В		
Peak Log				
10				
0ffst 22.1 dB				
dB				
V1 S2 S3 FC				
Center 881.4 MHz #Res BW 1 MHz		#VBW 3 MHz	Sweep 19	Span 2 MHz .99 ms (2000 pts)

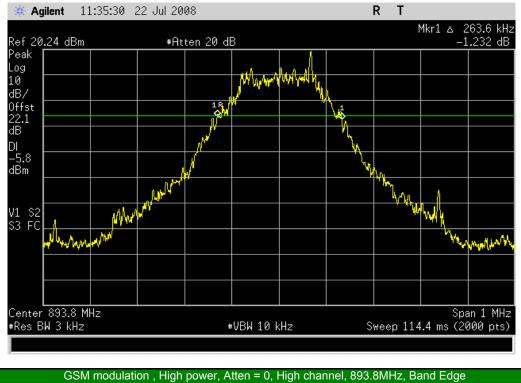
	GSM modulation , High power, Atten	= 0, Mid channel, 881.4MHz,	Occupied	Bandwidth
Result: N/A	Value:	262.6 kHz	Limit:	N/A



	GSM modulation , High power, Atten =	= 0, High chanr	el, 893.8MHz, Referenc	e Level Plot	
Result: N/A	Value:	20.24 dBm	Limit:	N/A	

🔆 Agilent	11:31:45	22 Jul 20	98				RT		
Ref 20.24 dl	Зm	#At	ten 20 di	В					
Peak Log									
10 dB/									
0ffst 22.1									
dB									
V1 S2 S3 FC									
Center 893. #Res BW 1 M	8 MHz Hz			#VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)

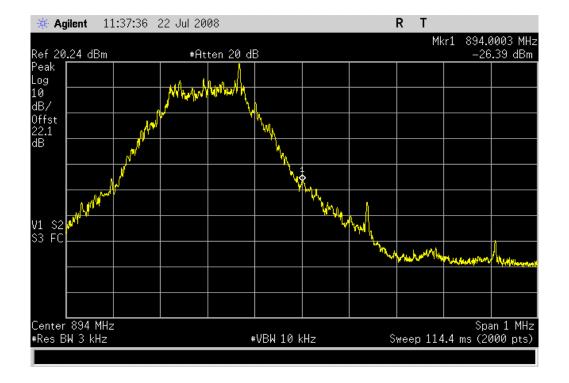
	GSM modulation , High power, Atten =	= 0, High channel, 893.8MHz,	Occupied	d Bandwidth
Result: N/A	Value:	263.6 kHz	Limit:	N/A



Result: Pass

-26.4 dBm Value:

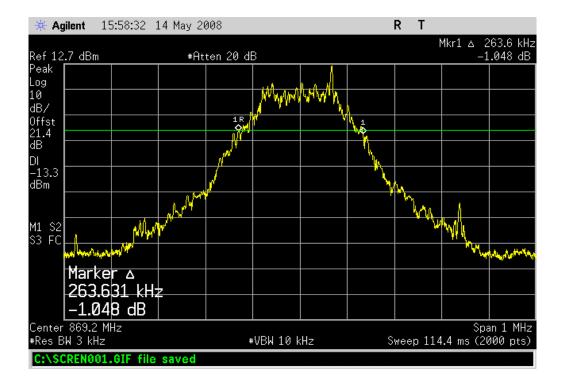
Limit: ≤ - 13 dBm



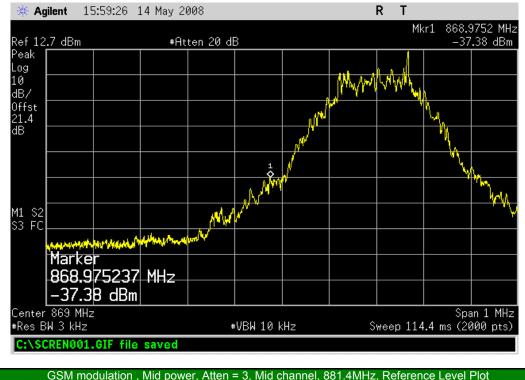
	GSM modulation , Mid power, Atten = 3,	, Low channel, 869.2MHz, R	Reference	Level Plot
Result: N/A	Value: 1	2.7 dBm	Limit:	N/A

ef 12 <mark>.7 dBm</mark>	#F	Atten 20 d	В			
og						· · · · · · · · · · · · · · · · · · ·
09 0 B/						
ffst 1.4						
B						
1 52						
3 FC						
enter 869.2 MHz Res BW 1 MHz			#VBW 3 MH	z	Sweep 19	Span 2 ۱ 99 ms (2000 p

	GSM modulation , Mid power, Atten =	= 3, Low channel, 869.2MHz	, Occupied	Bandwidth
Result: N/A	Value:	263.6 kHz	Limit:	N/A



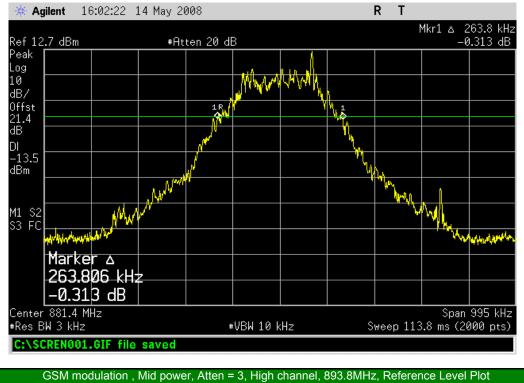
	GSM modulation , Mid power, Atten = 3, Low channel,	869.2MHz, Band	Edge
Result: Pass	Value: -37.38 dBm	Limit:	≤ - 13 dBm



	GSM modulation , Mid power, Atten =	3, Mid channel, 881.4M	Hz, Reference	e Level Plot
Result: N/A	Value:	12.5 dBm	Limit:	N/A

🔆 Agilent	16:01:09	14 May 20	908				RΤ		
Ref 12.7 dBm		#At	ten 20 di	3					
Peak Log									
10 dB/									
0ffst 21.4									
dB									
M1 S2 S3 FC									
Center 881.4 #Res BW 1 MH				₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SCRENØ@	1.GIF file	saved							

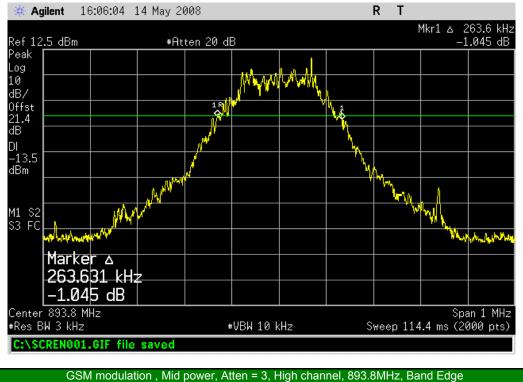
	GSM modulation , Mid power, Atten =	3, Mid channel, 881.4MHz,	Occupied	Bandwidth
Result: N/A	Value:	263.8 kHz	Limit:	N/A



	GSM modulation , Mid power, Atten = 3, High	h channel, 893.8MHz, Referenc	e Level Plot
Result: N/A	Value: 12.5	dBm Limit:	N/A

🔆 🔆 Ag	<b>ilent</b> 16	:04:34	14 May 20	908				RT		
Ref 12	.5 dBm		#Ati	ten 20 di	В					
Peak Log								·		
10 dB/										
Offst 21.4										
dB										
M1 S2 S3 FC										
	Ref L	ovol								
	12.50									
	893.8 MH W 1 MHz	IZ			₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SC	REN001.	GIF file	saved							

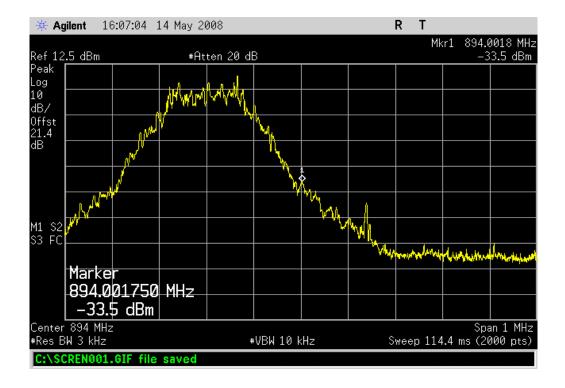
	GSM modulation , Mid power, Atten =	= 3, High channel, 893.8MHz,	Occupied	l Bandwidth
Result: N/A	Value:	263.6 kHz	Limit:	N/A



Limit:

≤ - 13 dBm

Result: Pass Value: -33.5 dBm



	GSM modulation , Low power, Atten =	= 6, Low channel,	869.2MHz, Reference	e Level Plot
Result: N/A	Value:	6.5 dBm	Limit:	N/A

ef 6.5 dBm	#	Atten 20 d	B				
'eak							
og Ø			<u> </u>				<b></b>
B/							
ffst 1.4							
B							
11 S2							
enter 869.2 MHz				_	Succer 1	Sp: 0.00 mo 40	an 2 MH
Res BW 1 MHz C:\SCREN001.G			₩VBW 3 MH	۷	Sweep I	9.99 ms (2	ooo pts

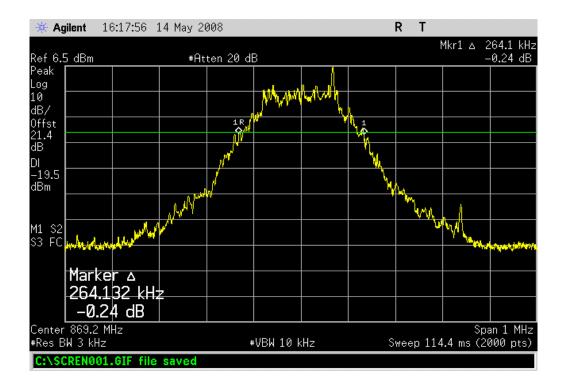
Result: N/A

264.132 kHz

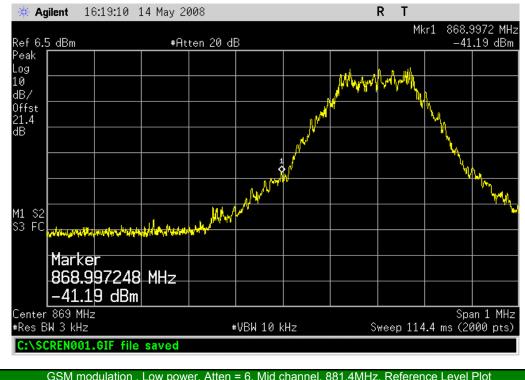
Value:

N/A

Limit:



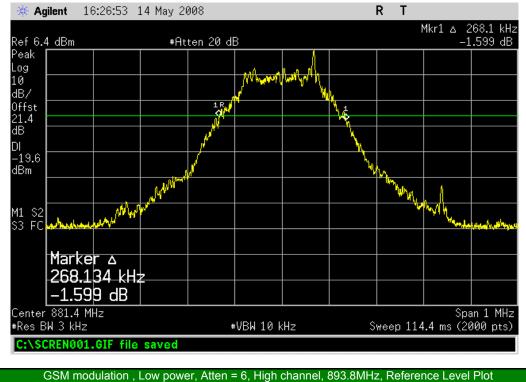
	GSM modulation , Low power, At	tten = 6, Low channel,	869.2MHz, Band	Edge
Result: Pass	Value:	-41.19 dBm	Limit:	≤ - 13 dBm



	GSM modulation , Low power, Atten :	= 6, Mid chan	nel, 881.4MHz, Reference Level Plot
Result: N/A	Value:	6.4 dBm	Limit: N/A

🔆 Ag	ilent 1	6:21:39	14 May 20	908				RT		
Ref 6.4	1 dBm		#Ati	ten 20 di	В					
Peak Log										
10 dB/										
Offst 21.4										
dB										
M1 S2 S3 FC										
	Ref L	ovol								
	6.40									
Cantar	001 / 14	 								
	881.4 M W 1 MHz	ΠZ			#VBW 3 M	Hz	S	weep 19.	3pa 99 ms (20	an 2 MHz 000 pts)
C:\SC	REN001	.GIF file	saved							

	GSM modulation , Low power, Atten	= 6, Mid channel, 881.4MHz,	Occupied	l Bandwidth
Result: N/A	Value:	268.1 kHz	Limit:	N/A

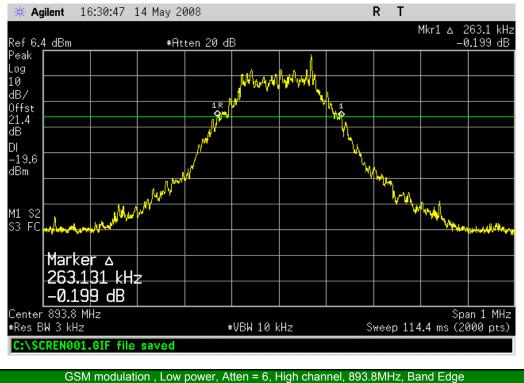


	GSM modulation , Low power, Atten =	6, High channel, 893.8MHz,	Reference	e Level Plot
Result: N/A	Value:	6.4 dBm	Limit:	N/A

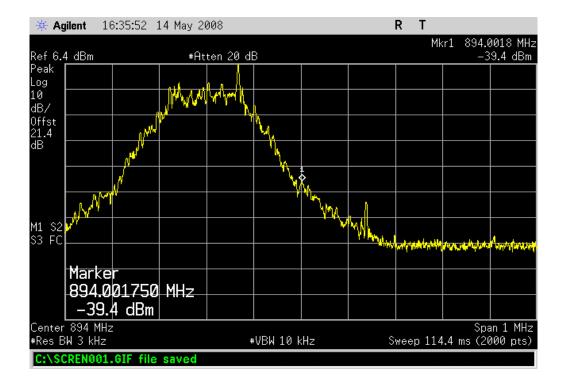
🔆 Ag	ilent 19	6:28:32	14 May 20	908				RT		
Ref 6.4	dBm		#Ati	ten 20 df	3					
Peak Log								·		·
10 dB/										
Offst 21.4										
dB										
M1 S2 S3 FC										
	<u> </u>									
	Span 2.000	00000	Ø MHz							
	893.8 M W 1 MHz	Hz			₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SC	REN001	GIF file	saved							

≤ - 13 dBm

	GSM modulation , Low power, Atten =	= 6, High channel, 893.8MHz,	Occupie	d Bandwidth
Result: N/A	Value:	263.1 kHz	Limit:	N/A



Result:PassValue:-39.4 dBmLimit:

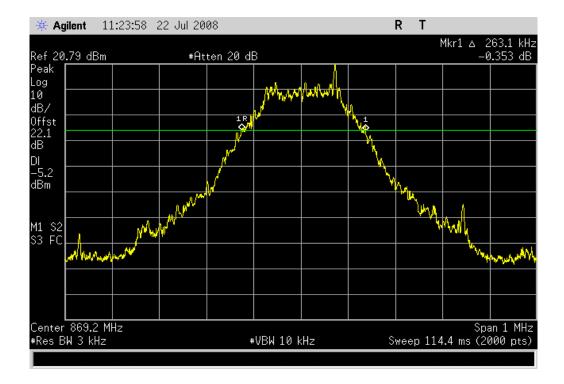


	GPRS modulation, High power, Atten	= 0, Low channel, 869.2MHz	, Referenc	e Level Plot
Result: N/A	Value:	20.79 dBm	Limit:	N/A

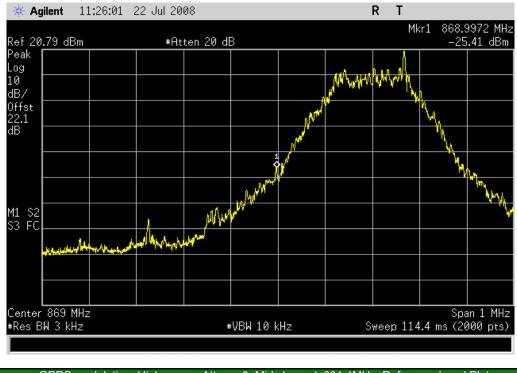
əf 20 <u>.79 dBm</u>	#Atı	ten 20 dB					
eak g							
3/							
ifst 2.1							
3							
. S2 3 FC							
						_	~
enter 869.2 MHz les BW 1 MHz		#VBW	3 MHz	S	weep 19.9	Spa 39 ms (20	in 2 M 100 nt

 GPRS modulation, High power, Atten = 0, Low channel, 869.2MHz, Occupied Bandwidth

 Result:
 N/A
 Value:
 263.1 kHz
 Limit:
 N/A



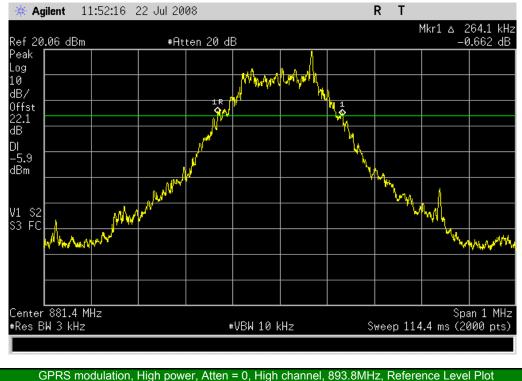
	GPRS modulation, High power, Atten = 0, Low channe	el, 869.2MHz, Band Edge	
Result: Pass	Value: -25.4 dBm	<b>Limit:</b> ≤ - 13 dBm	



	GPRS modulation, High power, Atten = 0, Mid channel, 881.4MHz, Reference Level Plot						
Result: N/A	Value:	20.06 dBm	Limit:	N/A			

🔆 Agilent	11:49:26	22 Jul 2008	3			I	RT		
Ref 20.06 dE	3m	#Atte	en 20 dE	3					
Peak Log		+							
10 dB/									
Offst 22.1									
dB									
M1 S2 S3 FC									
Center 881.4 #Res BW 1 M			+	ŧVBW 3 M	Hz	Si	чеер 19.	Spa 99 ms (20	an 2 MHz 000 pts)

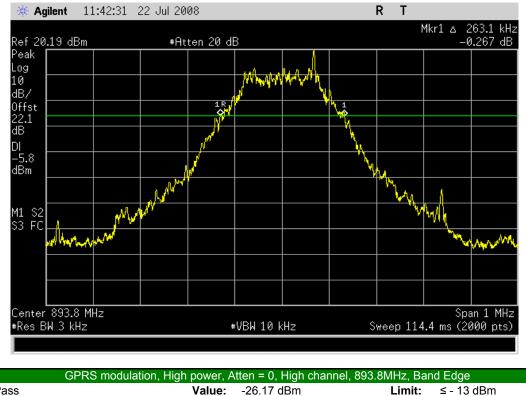
	GPRS modulation, High power, Atten	= 0, Mid channel, 881.4MHz,	Occupied	l Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A



	GPRS modulation, High power, Atten	= 0, High channel, 893.8	8MHz, Referenc	e Level Plot
Result: N/A	Value:	20.19 dBm	Limit:	N/A

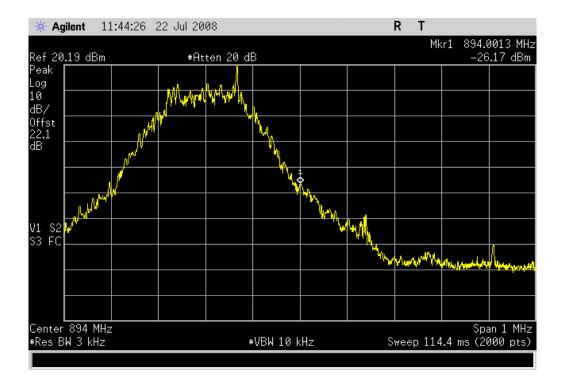
🔆 Agilent	11:39:51	22 Jul 200	8			I	RТ		
Ref 20.19 d	Bm	#Atte	en 20 dE	3					
Peak Log		+							
10 dB/									
0ffst 22.1									
dB									
V1 S2 S3 FC									
Center 893. #Res BW 1 M			+	ŧVBW 3 M	Hz	Si	weep 19.	Spa 99 ms (20	an 2 MHz )00 pts)

	GPRS modulation, High power, Atten =	0, High channel, 893.8MHz,	Occupie	d Bandwidth
Result: N/A	Value:	263.1 kHz	Limit:	N/A



Result: Pass

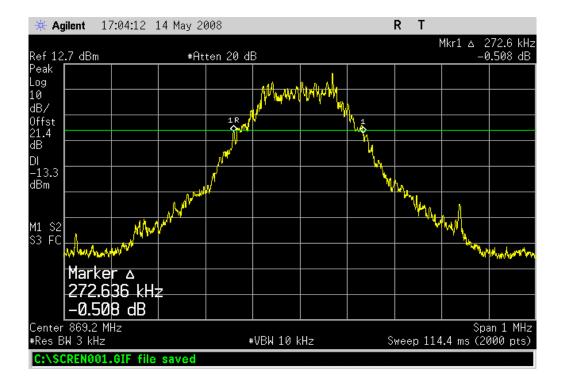
Value: -26.17 dBm



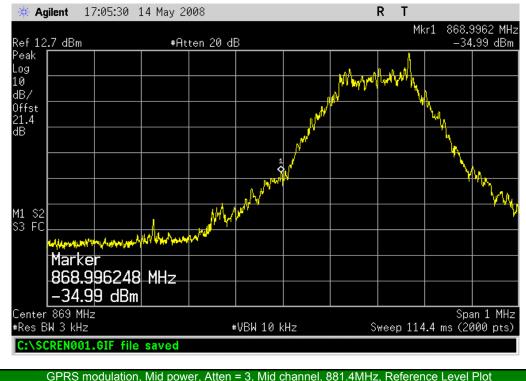
	GPRS modulation, Mid power, Atten =	= 3, Low channel	, 869.2MHz, Reference	e Level Plot	
Result: N/A	Value:	12.7 dBm	Limit:	N/A	

ef 12.7 dBm	#f	Atten 20 d	łВ					
eak 🛛 👘								
og Ø B/								
ffst 1.4								
B								
11 S2 3 FC								
enter 869.2 MHz							Sn:	 an 2 MH
Res BW 1 MHz C:\SCREN001.GI			#VBW 3 N	1Hz	S	weep 19.	99 ms (2)	000 pts

	GPRS modulation, Mid power, Atten	= 3, Low channe	, 869.2MHz, Occupied	d Bandwidth	
Result: N/A	Value:	272.6 kHz	Limit:	N/A	



GPRS modulation, Mid power, Atten = 3, Low channel, 869.2MHz, Band Edge							
Result: Pass	Value: -34.99 (	IBm Limit:	≤ - 13 dBm				



	GPRS modulation, Mid power, Atten	= 3, Mid chan	nel, 881.4MHz, Reference Level Plot
Result: N/A	Value:	12.7 dBm	Limit: N/A

🔆 Agilent 17	2:07:03 14 May 2	008				RT		
Ref 12.7 dBm	#At	ten 20 dB						
Peak Log								
10 dB/								
Offst 21.4								
dB								
M1 S2 S3 FC								
								<u> </u>
Center 881.4 MH #Res BW 1 MHz	1Z	#	VBW 3 MH	lz	S	weep 19.	Spa 99 ms (20	n 2 MHz 100 pts)
C:\SCREN001.	GIF file saved							

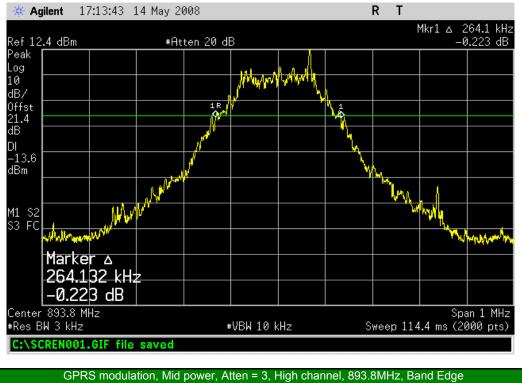
	GPRS modulation, Mid power, Atten	= 3, Mid channel, 881.4MHz,	Occupied	l Bandwidth
Result: N/A	Value:	263.1 kHz	Limit:	N/A



	GPRS modulation, Mid power, Atten =	<ol> <li>3, High channel</li> </ol>	, 893.8MHz, Referenc	e Level Plot	
Result: N/A	Value:	12.4 dBm	Limit:	N/A	

🔆 Agi	<b>lent</b> 17	<b>:12:25</b> 1	L4 May 20	908				RT		
Ref 12.	4 dBm		#Ati	ten 20 di	3					
Peak Log										
10 dB/										
Offst 21.4										
dB										
M1 S2 S3 FC										
	Ref L 12.40									
	10	abiii								
	893.8 M⊧ √1 MHz	łz			#VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
_		GIF file	saved							

	GPRS modulation, Mid power, Atten =	= 3, High channel, 893.8MHz,	Occupie	d Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A

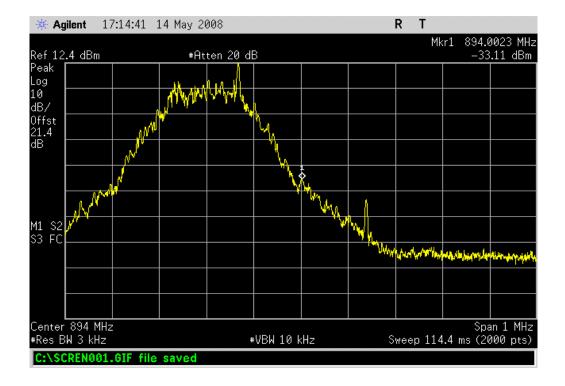


Result: Pass

Value: -33.11 dBm

Limit:

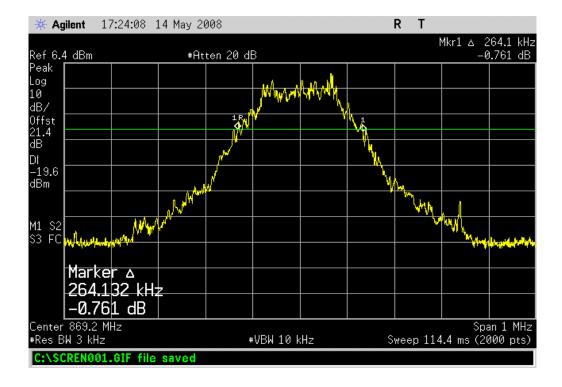
≤ - 13 dBm



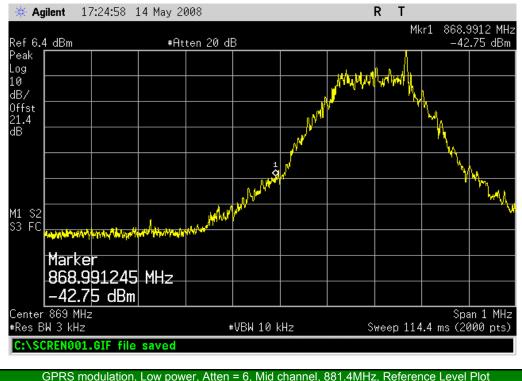
	GPRS modulation, Low power, Atten :	= 6, Low char	nnel, 869.2MHz, Referenc	e Level Plot	
Result: N/A	Value:	6.4 dBm	Limit:	N/A	

ef 6.4 dBm	#	Atten 20 dB			
eak og					
0 B/					
ffst 1.4					
в					
1 \$2					
3 FC					
enter 869.2 MHz Res BW 1 MHz			BW 3 MHz	Sween 1	Span 2 MH 9.99 ms (2000 pts

	GPRS modulation, Low power, Atten	= 6, Low channel, 869.2MHz,	Occupied	d Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A



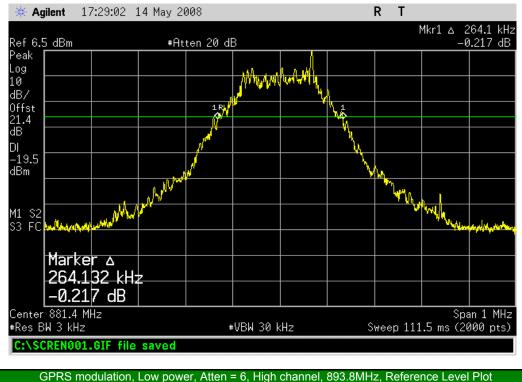
	GPRS modulation, Low power, Atten = 6, Low channel,	, 869.2MHz, Band Edge
Result: Pass	Value: -42.75 dBm	<b>Limit:</b> ≤ - 13 dBm



	GPRS modulation, Low power, Atten	= 6, Mid chai	nnel, 881.4MHz, Reference Level Plot
Result: N/A	Value:	6.5 dBm	Limit: N/A

🔆 Agilen	t 17:27:31	14 May 20	108				RT		
Ref 6.5 dl	Bm	#Att	:en 20 df	3					
Peak Log									
10 dB/									
Offst 21.4									
dB									
M1 S2 S3 FC									
C - m + - m - 00	1 A MU.								
Center 88 #Res BW 1				₩VBW 3 M	Hz	S	weep 19.	օր։ 99 ms (20	an 2 MHz )00 pts)
C:\SCRE	N001.GIF fi	e saved							

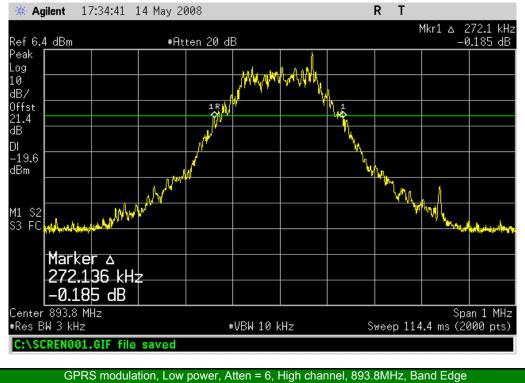
	GPRS modulation, Low power, Atten	= 6, Mid channel, 881.4MHz,	Occupied	l Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A



	GPRS modulation, Low power, Atten = 6, Hig	h channel, 893.8MHz, Referenc	e Level Plot
Result: N/A	Value: 6.4 dl	Bm Limit:	N/A

🔆 Agiler	nt 17	:33:09 1	14 May 20	908				RT		
Ref 6.4 d	IBm		#At	ten 20 df	3					
Peak Log										
10 dB/										
0ffst 21.4										
dB										
M1 S2 S3 FC										
	<u></u>	1-								
Center 89 #Res BW 3	93.8 MH 1 MHz	12			ŧVBW 3 M	Hz	S	weep 19.	5pa 99 ms (20	n 2 MHz 100 pts)
C:\SCR	N001.	GIF file	saved							

	GPRS modulation, Low power, Atten :	= 6, High channel, 893.8MHz,	Occupied	d Bandwidth
Result: N/A	Value:	272.1 kHz	Limit:	N/A

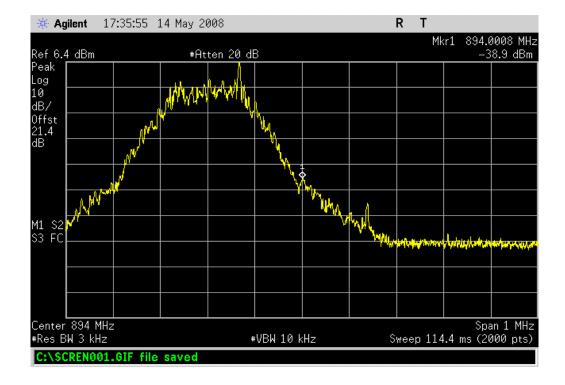


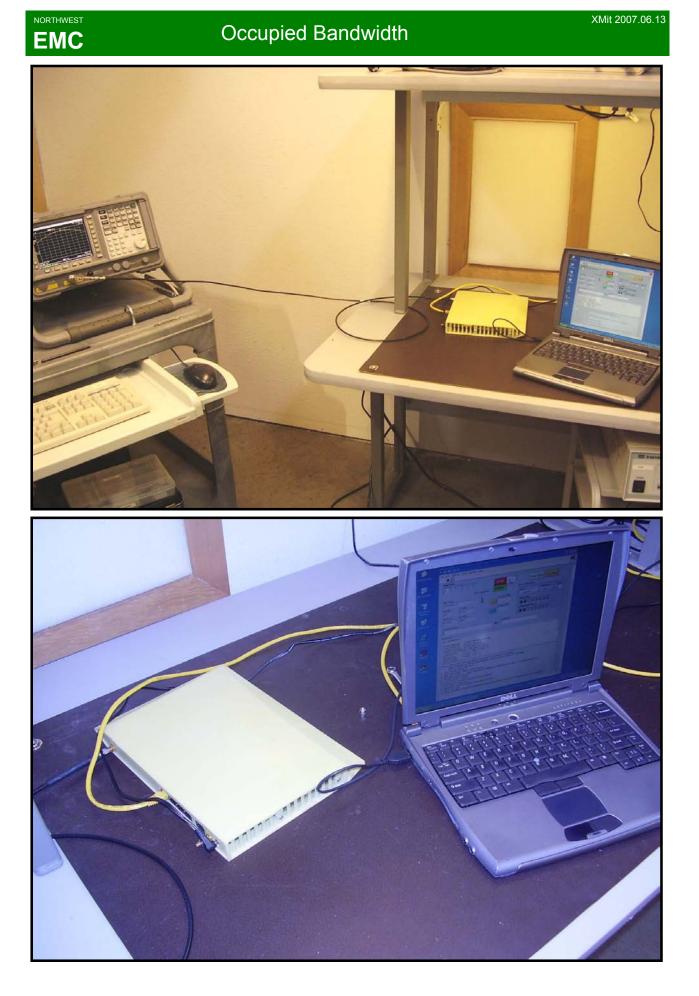
Result: Pass

Value: -38.9 dBm

Limit:

≤ - 13 dBm





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
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	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 99% bandwidth was measured utilizing the analyzer's peak detector and measuring the carrier's 26 dB occupied bandwidth based on the peak output power level measured. A plot was taken to show the occupied bandwidth is contained within the allowable transmit band.

A direct connection was made between the EUT and a spectrum analyzer. At 3 kHz the spectrum analyzer's resolution bandwidth was sufficiently narrow to plot the actual bandwidth of the signal and not the filter response curve of the spectrum analyzer. The resolution bandwidth was approximately equal to 1% of the 20dB bandwidth and the video bandwidth was greater than or equal to the resolution bandwidth.

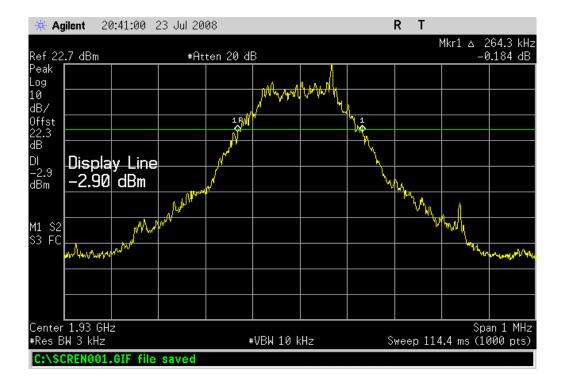
The occupied bandwidth was measured with the EUT configured in the modes called out in the data sheets.

Serial Number: Customer:	OmniCell@Home None			Work Order: RAF	N0085
Customer:	None			<b>D</b> : 07/0	
	Radioframe Networks, In			Date: 07/2 Temperature: 23.3	
Attendees:	Nha Tran	<u>.</u>		Humidity: 34%	)
Project:				Barometric Pres.: 1023	
Tested by: ST SPECIFICATI	Holly Ashkannejhad	Power:	120VAC/60Hz Test Method	Job Site: EV0	6
C 24E:2007	ONS		ANSI/TIA/EIA-603-B-2002		
					-
OMMENTS CS Band					
,5 Band					
EVIATIONS FROM	I TEST STANDARD				
onfiguration #	2	Signature Holy Arligh	2		
		Signature Hory / /			
			Value	Limit	Results
SM modulation	High power, Atten = 0				
	Low channel	, 1930.2MHz			
		Reference level plot	22.7 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	264.3 kHz -26.96 dBm	N/A ≤ -13 dBm	N/A Pass
	Mid channel,		-20.30 UDIII		F d 35
		Reference level plot	22.5 dBm	N/A	N/A
	1 Park also	Occupied Bandwidth	264.3 kHz	N/A	N/A
	High channe	I, 1989.8MHz Reference level plot	22.6 dBm	N/A	N/A
		Occupied Bandwidth	272.3 kHz	N/A N/A	N/A
		Band Edge	-23.24 dBm	≤ -13 dBm	Pass
	Mid power, Atten = 3	1020 200			
	Low channel	l, 1930.2MHz Reference level plot	14.6 dBm	N/A	N/A
		Occupied Bandwidth	264.6 kHz	N/A	N/A
		Band Edge	-33.54 dBm	≤ -13 dBm	Pass
	Mid channel,		14.9 dBm	N/A	N/A
		Reference level plot Occupied Bandwidth	14.9 dBm 263.1 kHz	N/A N/A	N/A N/A
	High channe	I, 1989.8MHz	200.1 1012		
		Reference level plot	14.5 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	264.1 kHz	N/A ≲ ₋13 dBm	N/A Pass
1	Low power, Atten = 6	Band Edge	-29.82 dBm	≤ -13 dBm	Pass
	Low power, Atten - 0	, 1930.2MHz			
		Reference level plot	8.3 dBm	N/A	N/A
		Occupied Bandwidth	264.6 kHz	N/A	N/A
	Mid channel,	Band Edge	-39.9 dBm	≤ -13 dBm	Pass
	mid chariffel,	Reference level plot	8.9 dBm	N/A	N/A
		Occupied Bandwidth	264.6 kHz	N/A	N/A
	High channe	I, 1989.8MHz	0.0 10	N1/A	
		Reference level plot Occupied Bandwidth	8.6 dBm 264.1 kHz	N/A N/A	N/A N/A
		Band Edge	-36.02 dBm	≤ -13 dBm	Pass
PRS modulation	11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1				
	High power, Atten = 0	1930 2MHz			
	Low channel	Reference level plot	22.5 dBm	N/A	N/A
		Occupied Bandwidth	263.6 kHz	N/A	N/A
		Band Edge	-26.96 dBm	≤ -13 dBm	Pass
	Mid channel,	, 1960MHz Reference level plot	20 24 40	NI/A	N/A
		Occupied Bandwidth	22.34 dBm 274.3 kHz	N/A N/A	N/A N/A
	High channe	I, 1989.8MHz			
		Reference level plot	22.4 dBm	N/A	N/A
		Occupied Bandwidth	272.3 kHz	N/A	N/A
	Mid power, Atten = 3	Band Edge	-23.2 dBm	≤ -13 dBm	Pass
		l, 1930.2MHz			
		Reference level plot	14.5 dBm	N/A	N/A
		Occupied Bandwidth	264.6 kHz	N/A	N/A
	Mid channel,	Band Edge	-33.73 dBm	≤ -13 dBm	Pass
	wid channel,	Reference level plot	15.0 dBm	N/A	N/A
		Occupied Bandwidth	264.3 kHz	N/A	N/A
	High channe	l, 1989.8MHz			
		Reference level plot	14.5 dBm	N/A	N/A
		Occupied Bandwidth Band Edge	264.6 kHz -29.88 dBm	N/A ≤ -13 dBm	N/A Pass
I	Low power, Atten = 6		-23.00 0011		1 000
		l, 1930.2MHz			
		Reference level plot	8.2 dBm	N/A	N/A
		Occupied Bandwidth	273.1 kHz	N/A	N/A
	Mid channel,	Band Edge	-39.58 dBm	≤ -13 dBm	Pass
	wid channel,	Reference level plot	8.9 dBm	N/A	N/A
		Occupied Bandwidth	263.6 kHz	N/A	N/A
	High channe	l, 1989.8MHz			
		Reference level plot Occupied Bandwidth	8.5 dBm 273.1 kHz	N/A N/A	N/A N/A

	GSM modulation, High power, Atten =	0, Low channel, 1930.2M	Hz, Referen	ce level plot
Result: N/A	Value:	22.7 dBm	Limit:	N/A

ef 22 <u>.7 dBm</u>	#Ĥ	Atten 20 ·	dB					
eak								+
og								
B/								
ffst 2.3								
B								
		_	_		_			
11 S2								
3 FC								
Center 1.93 GHz						<u> </u>	Sp	an 1 MH
Res BW 1 MHz			#VBW 3∣	MHZ		Sweep S	0.99 ms (1	000 pt:

	GSM modulation, High power, Atten =	= 0, Low channel, 1930.2MHz	, Occupie	d Bandwidth
Result: N/A	Value:	264.3 kHz	Limit:	N/A



	GSM modulation, High power, Atten = 0, Low channel	el, 1930.2MHz, Band Edge
Result: Pass	Value: -26.96 dBm	<b>Limit:</b> ≤ -13 dBm



	GSM modulation, High power, Atten = 0, Mid channel,	1960MHz, Reference level plot
Result: N/A	Value: 22.5 dBm	Limit: N/A

🔆 🔆 Agi	ilent 2	0:43:43	23 Jul 20	08			RT		
Ref 22.	5 dBm		#At	ten 20 di	3				
Peak [ Log [									
10 dB/									
Offst 22.3 dB									
dB.									
M1 S2 S3 FC-									
	1.96 GH W 1 MHz	Z			₩VBW 3 M	Hz	Sweep <u>9</u> .	Spa 99 ms (10	an 2 MHz )00 pts)
C:\SC	REN001	.GIF file	saved						

	GSM modulation, High power, Atten	= 0, Mid channel, 1960MHz,	Occupied	Bandwidth
Result: N/A	Value:	264.3 kHz	Limit:	N/A



Result:	N/A	
ntesuit.		

Value: 22.6 dBm

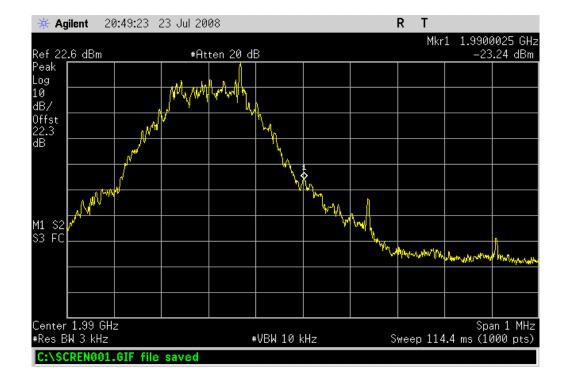
🔆 👫 Ag	j <b>ilent</b> 20	0:46:40	23 Jul 20	98			RT		
Ref 22	.6 dBm		#At	ten 20 di	3				
Peak Log									
10 dB/									
0ffst 22.3 dB									
dB									
M1 S2									
S3 FC									
Center	1.99 GH	 z						 Spa	an 2 MHz
	#Res BW 1 MHz			₩VBW 3 MHz			Sweep 9.99 ms (1000 pts)		
C:\SC	CREN001.	GIF file	saved						

	GSM modulation, High power, Atten =	0, High channel, 1989.8M	/Hz, Occupied	d Bandwidth
Result: N/A	Value:	272.3 kHz	Limit:	N/A



Result: Pass

Value: -23.24 dBm

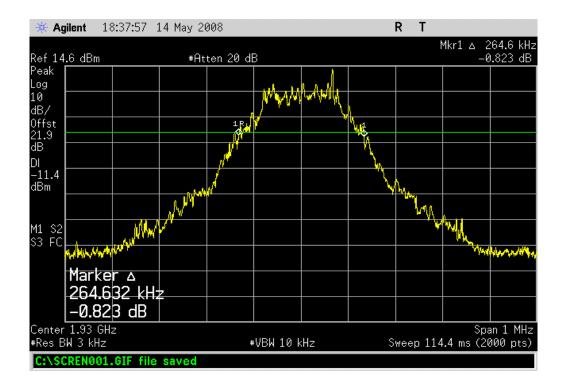


N/A

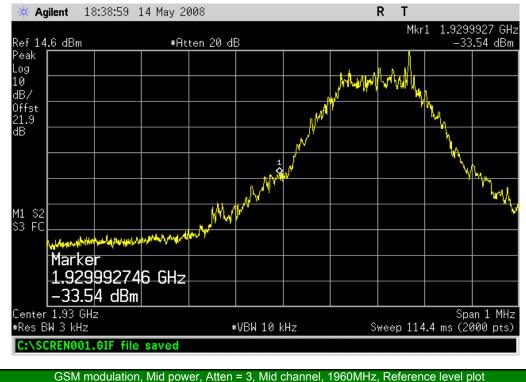
	GSM modulation, Mid power, Atten =	3, Low channel	1930.2MHz, Referenc	e level plot
Result: N/A	Value:	14.6 dBm	Limit:	N/A

ef 14.6 dBm	<b>#</b> A	tten 20 dB			
eak og				<u> </u>	 
09 0 B/					
ffst 1.9 B					
1 S2					
enter 1.93 GHz Res BW 1 MHz			VBW 3 MHz	 weep 19.	 an 2 MH 200 pt/

Result: N/A Value: 264.6 kHz Limit:



	GSM modulation, Mid power, Atten = 3, Low channel,	, 1930.2MHz, Band	d Edge
Result: Pass	Value: -33.54 dBm	Limit:	≤ -13 dBm



	GSM modulation, Mid power, Atten	= 3, Mid chann	el, 1960MHz, Reference	e level plot	
Result: N/A	Value:	14.9 dBm	Limit:	N/A	

🔆 Agilent	18:40:15	14 May 20	908				RT		
Ref 14.9 dBn	1	#At	ten 20 df	3					
Peak Log									
10 dB/									
0ffst 21.9									
dB									
M1 S2 S3 FC									
								Ĺ	
Center 1.96 #Res BW 1 MI				₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz )00 pts)
C:\SCREN0	01.GIF file	saved							

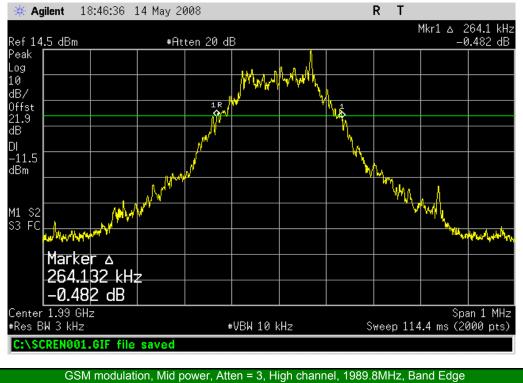
	GSM modulation, Mid power, Atten =	= 3, Mid channel, 1960MHz	, Occupied	Bandwidth
Result: N/A	Value:	263.1 kHz	Limit:	N/A



	GSM modulation, Mid power, Atten =	3, High channel,	1989.8MHz, Reference level plot
Result: N/A	Value:	14.5 dBm	Limit: N/A

<b>* Agilent</b> 18:42:54	14 May 2008			RT		
Ref 14.5 dBm	#Atten 20 df	3				
Peak Log						
10 dB/						
0ffst 21.9						
dB						
M1 S2						
\$3 FC						
Ref Level						
14.50 dBm						
Center 1.99 GHz					Sna	n 2 MHz
#Res BW 1 MHz		⊭VBW 3 MHz	Ś	Sweep 19.	99 ms (20	100 pts)
C:\SCREN001.GIF file	saved					

	GSM modulation, Mid power, Atten =	3, High channel, 1989.8MHz,	Occupied	d Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A

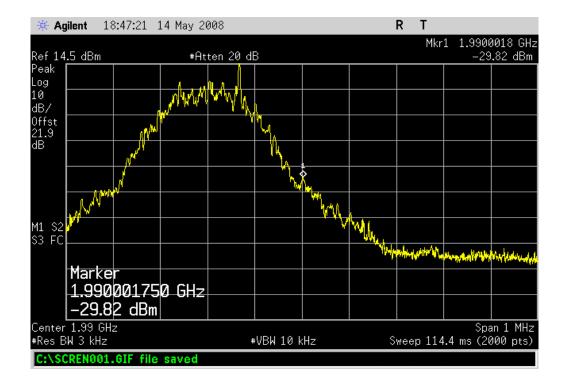


Result: Pass

Value: -29.82 dBm

Limit:

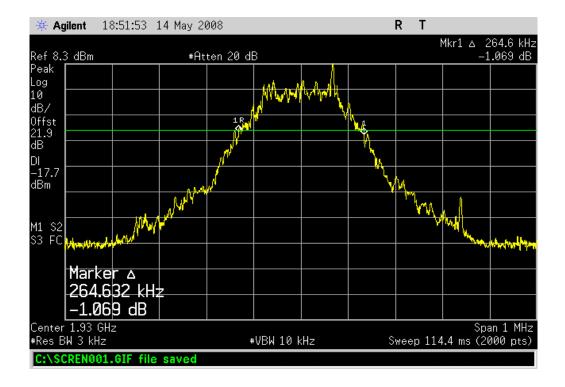
≤ -13 dBm



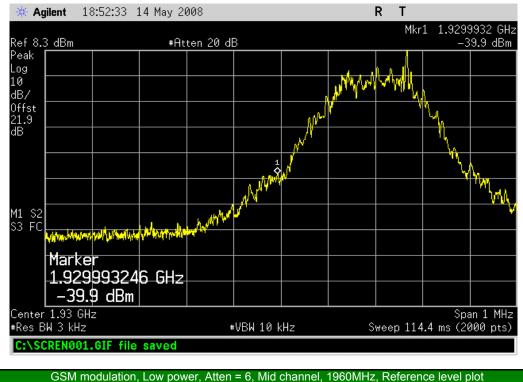
	GSM modulation, Low power, Atten = 6, Lo	w channel, 1930.2MHz, Reference	level plot
Result: N/A	Value: 8.3 c	IBm Limit:	N/A

ef 8. <u>3</u> dBm	#Atten 20	dB				
eak og						<u>-</u>
09						
ffst 1.9 B						
1 S2						
enter 1.93 GHz Res BW 1 MHz		 #VBW 3 N	 ∕IU→	 HOOD 19	Sp 99 ms (2	 an 2 MH 200 pts

	GSM modulation, Low power, Atten = 6, Low char	nnel, 1930.2MHz, Occupied Bandwidth
Result: N/A	Value: 264.6 kHz	Limit: N/A



	GSM modulation, Low power, Atten = 6, Low channel,	1930.2MHz, Ban	d Edge
Result: Pass	Value: -39.9 dBm	Limit:	≤ -13 dBm



	GSM modulation, Low power, Atten =	6, Mid channel, 1960MH	lz, Reference	e level plot
Result: N/A	Value:	8.9 dBm	Limit:	N/A

🔆 Agilent	18:55:05	14 May 20	908				RT		
Ref 8.9 dBm		#At	ten 20 di	3					
Peak Log									
10 dB/									
0ffst 21.9									
dB									
M1 S2 S3 FC									
Center 1.96 #Res BW 1 M				₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SCRENØ	01.GIF file	saved							

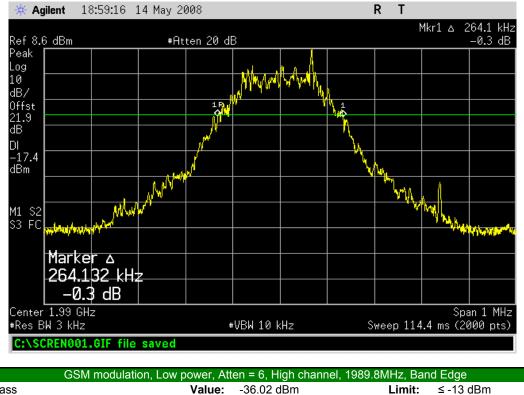
	GSM modulation, Low power, Atten	= 6, Mid channel, 1960MHz	, Occupied	Bandwidth
Result: N/A	Value:	264.6 kHz	Limit:	N/A



	GSM modulation, Low power, Atten =	6, High channel, 198	9.8MHz, Reference	ce level plot
Result: N/A	Value:	8.6 dBm	Limit:	N/A

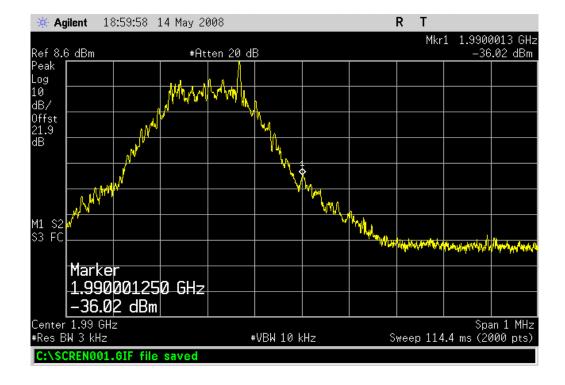
🔆 Agilent	18:58:18	14 May 20	108				RT		
Ref 8.6 dBr	n	#Att	:en 20 df	3					
Peak Log									
10 dB/									
0ffst 21.9									
dB									
M1 S2 S3 FC									
Sp	2n								
2.0	0000000	0 MHz							
C									
Center 1.99 #Res BW 1				₩VBW 3 M	Hz	S	weep 19.	5pa 99 ms (20	an 2 MHz )00 pts)
C:\SCREN	001.GIF file	saved							

	GSM modulation, Low power, Atten = 6	6, High channel, 1989.8MHz,	Occupied	l Bandwidth
Result: N/A	Value:	264.1 kHz	Limit:	N/A



Result: Pass

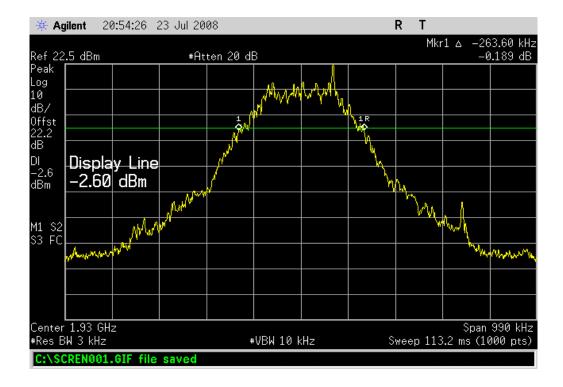
Value: -36.02 dBm



	GPRS modulation, High power, Atten	= 0, Low channel, 1930.2M	Hz, Referer	ice level plot
Result: N/A	Value:	22.5 dBm	Limit:	N/A

f 22.5 dBm	<u>#</u> At	ten 20 dB				
ak						
g   }/						
fst 2.2						
3						
. S2 FC						
art 1.929 GHz es BW 1 MHz		#	VBW 3 MH:	 Sweep 9	Stop 1. .99 ms (10	.931 G 000 pt

	GPRS modulation, High power, Atten =	= 0, Low channel, 1930.2MHz	, Occupie	d Bandwidth
Result: N/A	Value:	263.6 kHz	Limit:	N/A



	GPRS modulation, High power, Att	ten = 0, Low channel,	1930.2MHz, Bar	nd Edge
Result: Pass	Value:	-26.96 dBm	Limit:	≤ -13 dBm



Result: N/A

Value: 22.34 dBm

🔆 Agilent	20:56:04	23 Jul 201	98			RТ		
Ref 22.34 d	Bm	#Ati	ten 20 di	3				
Peak Log								
10 dB/								
Offst 22.2								
dB								
M1 S2								
S3 FC								
L Center 1.96	GHz						Spa	an 2 MHz
#Res BW 1 N	1Hz			₩VBW 3 M	Hz	Sweep 9.	99 ms (10	)00 pts)
C:\SCREN®	001.GIF file	saved						

	GPRS modulation, High power, Atten	= 0, Mid channel, 1960MHz,	Occupied	l Bandwidth
Result: N/A	Value:	274.3 kHz	Limit:	N/A



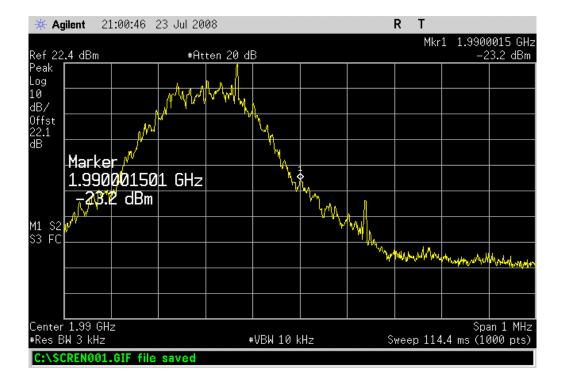
Value: 22.4 dBm

🔆 🔆 Ag	j <b>ilent</b> 20	0:58:34 2	23 Jul 201	98			RT		
Ref 22	.4 dBm		#Ati	ten 20 di	В				
Peak Log							·		
10 dB/									
0ffst 22 <b>.</b> 1									
dB	Cnon								
	Span 2.000	00000	0 MHz						
M1 S2 S3 FC									
	1.99 GH W 1 MHz	z			#VBW 3 M	Hz	 Sweep <u>9.</u>	Spa 99 ms (10	an 2 MHz 000 pts)
C:\\$0	REN001	GIF file	saved						

	GPRS modulation, High power, Atten =	= 0, High channel	, 1989.8MHz, Occupie	ed Bandwidth
Result: N/A	Value:	272.3 kHz	Limit:	N/A



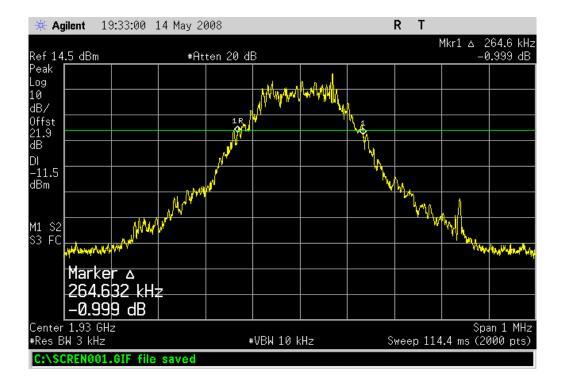
	GPRS modulation, High p	ower, Atte	en = 0, High channel, 1989.8	MHz, Ban	id Edge
Result: Pa	Pass	Value:	-23.2 dBm	Limit:	≤ -13 dBm



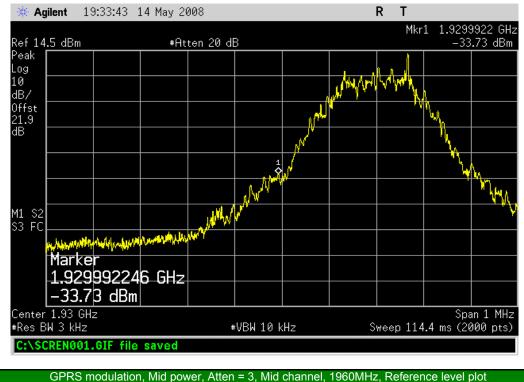
	GPRS modulation, Mid power, Atten =	= 3, Low channel,	1930.2MHz, Reference lev	rel plot
Result: N/A	Value:	14.5 dBm	Limit: N/A	

ef 14 <u>.5 dBm</u>	#	Atten 20	dB				
eak og							 
09 0 B/							
ffst 1.9							
B							
1 52							
3 FC							
enter 1.93 GHz Res BW 1 MHz			#VBW 3 M	IHz	SI	veep 1 <u>9</u> .	 an 2 MH 000 pts

	GPRS modulation, Mid power, Atten =	3, Low channel, 1930.2MHz,	Occupied	d Bandwidth
Result: N/A	Value:	264.6 kHz	Limit:	N/A



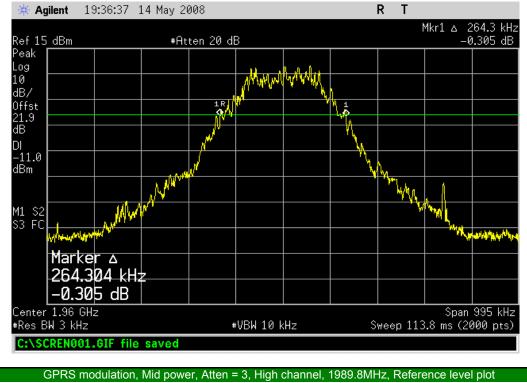
	GPRS modulation, Mid power, Atten = 3, Low channel, 1930.2MHz, Band Edge							
Result: Pass	Value: -33.73 dBm	<b>Limit:</b> ≤ -13 dBm						



	GPRS modulation, Mid power, Atten	= 3, Mid channel, 1	960MHz, Reference	e level plot
Result: N/A	Value:	15.0 dBm	Limit:	N/A

🔆 Agi	<b>ilent</b> 19	9:35:36	14 May 20	908				RT		
Ref 15	dBm		#Ati	ten 20 di	3					
Peak Log										
10 dB/										
0ffst 21.9										
dB										
M1 S2 S3 FC										
	Ref L 15.00									
	1.96 GH: W 1 MHz	Ζ			₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz )00 pts)
C:\SC	REN001.	GIF file	saved							

	GPRS modulation, Mid power, Atten	= 3, Mid channel, 1960MHz,	Occupied	Bandwidth
Result: N/A	Value:	264.3 kHz	Limit:	N/A



	GPRS modulation, Mid power, Atten =	3, High channel	, 1989.8MHz, Referen	ce level plot	
Result: N/A	Value:	14.5 dBm	Limit:	N/A	

🔆 🔆 Ag	ilent 19	:38:29	14 May 20	908				RT		
Ref 14	.5 dBm		#Ati	ten 20 di	В					
Peak Log										
10 dB/										
Offst 21.9										
dB										
M1 S2 S3 FC										
	Ref L 14.50	dBm								
	1.99 GH: W 1 MHz	2			₩VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SC	REN001.	GIF file	saved							

	GPRS modulation, Mid power, Atten =	3, High channel, 1989.8MHz	, Occupie	d Bandwidth
Result: N/A	Value:	264.6 kHz	Limit:	N/A



Result: Pass

Value: -29.88 dBm

Limit:

≤ -13 dBm



	GPRS modulation, Low power, Atten =	= 6, Low channel, 1930.2MHz	, Referen	ce level plot
Result: N/A	Value:	8.2 dBm	Limit:	N/A

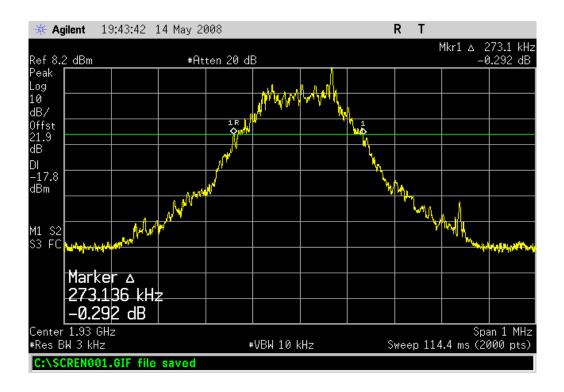
ef 8.2 dBm	#f	Atten 20	dB					
eak							+	
9 9 B/								
ffst 1.9								
В							ļ	
1 \$2								
3 FC								
enter 1.93 GHz Res BW 1 MHz			 ₩VBW 3 N	1Hz	S	weep 1 <u>9</u> .	1 Sp .99 ms (2	 an 2 Mł 000 pt:

Result: N/A

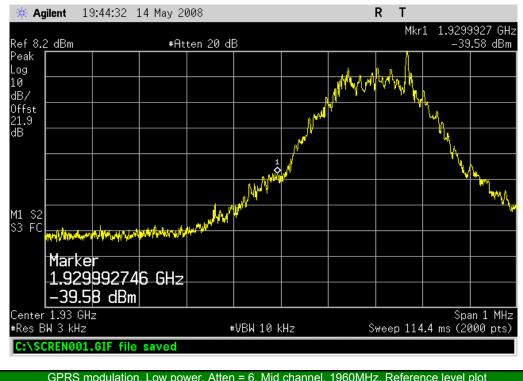
Value: 273.1 kHz

Limit:

N/A



	GPRS modulation, Low power, Atten = 6, Low channel	, 1930.2MHz, Band Edge	
Result: Pass	Value: -39.58 dBm	<b>Limit:</b> ≤ -13 dBm	



	GPRS modulation, Low power, Atten	= 6, Mid channel, 19	960MHz, Referenc	e level plot
Result: N/A	Value:	8.9 dBm	Limit:	N/A

🔆 Agilent	19:46:21	14 May 20	908				RT		
Ref 8.9 dBm		#At	ten 20 di	В					
Peak Log									
10 dB/									
0ffst 21.9									
dB									
M1 S2 S3 FC									
Center 1.96 #Res BW 1 M	GHz Hz			#VBW 3 M	Hz	S	weep 19.	Spa 99 ms (20	an 2 MHz 000 pts)
C:\SCREN0	01.GIF file	saved							

	GPRS modulation, Low power, Atten	= 6, Mid channel, 1960MHz,	Occupied	Bandwidth
Result: N/A	Value:	263.6 kHz	Limit:	N/A



	GPRS modulation, Low power, Atten =	= 6, High channel, 1989.8MF	Iz, Referer	nce level plot
Result: N/A	Value:	8.5 dBm	Limit:	N/A

🔆 🔆 Agi	ilent 1	9:49:24 1	L4 May 20	908				RΤ		
Ref 8.5	dBm		#Atı	ten 20 di	3					
Peak [ Log [										
10 dB/										
Offst 21.9										
dB										
M1 S2 S3 FC										
	Span									
	2.000	00000	0 MHz							
	1 00 00									
	1.99 GH W 1 MHz	Ζ			₩VBW 3 M	Hz	S	weep 19.	5pa 99 ms (20	an 2 MHz 000 pts)
C:\SC	REN001	GIF file	saved							

	GPRS modulation, Low power, Atten =	<ol> <li>6, High channel,</li> </ol>	1989.8MHz, Occupie	ed Bandwidth
Result: N/A	Value:	273.1 kHz	Limit:	N/A

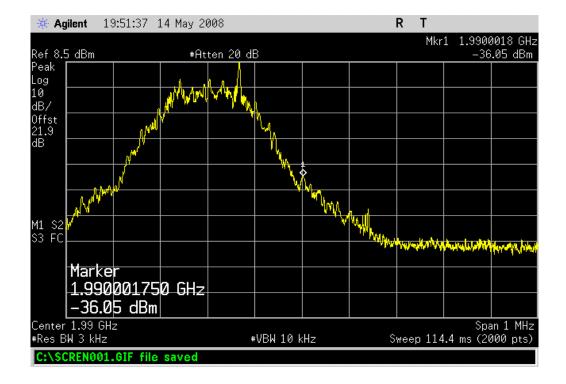


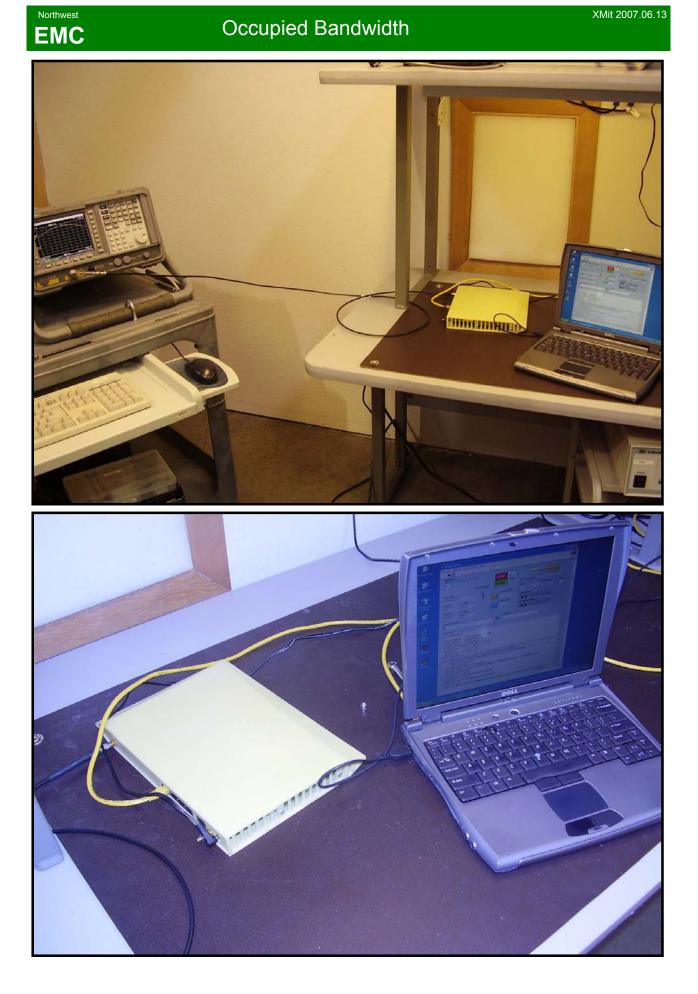
Result: Pass

Value: -36.05 dBm

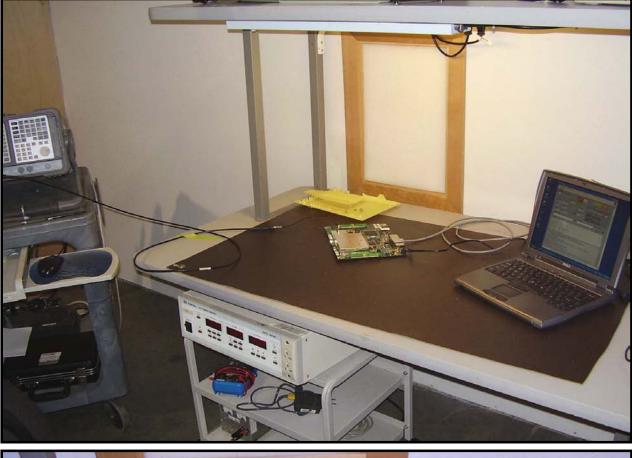
Limit:

≤ -13 dBm











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
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

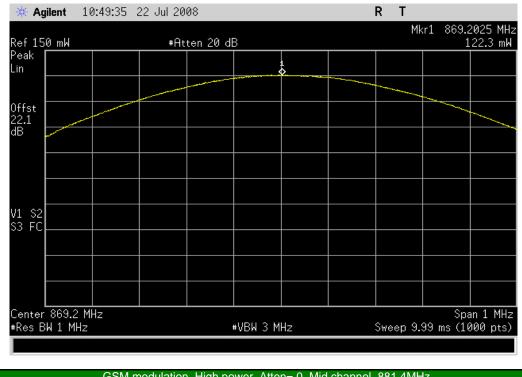
Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated 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 peak output power was measured with the EUT set to the parameters called out in the data sheets. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Prior to making the measurements the setup including cables and attenuator was calibrated with a signal generator and a power meter.

NORTHWEST				XMit 2007.0
EMC		Output Power		
EUT	: OmniCell@Home		Work Order: RAFN0	085
Serial Number				08 & 7-22-08
	: Radioframe Networks, Inc.		Temperature: 24°C	
	: Nha Tran		Humidity: 35%	
Project			Barometric Pres.: 30.44	
	: Holly Ashkannejhad & Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV06	
EST SPECIFICAT	TIONS	Test Method		
CC 22H:2007		ANSI/TIA/EIA-603-B-2002		
OMMENTS				
ellular Band				
	M TEST STANDARD			
o deviations				
onfiguration #	2	11 l. Alinh		
	Signature	Holy Aligh		
		Value	e Limit	Resu
SM modulation		Futur		11000
	High power, Atten= 0			
	Low channel, 869.2MHz	122.3 mW	7 W	Pass
	Mid channel, 881.4MHz	102.5 mW	7 W	Pass
	High channel, 893.8MHz	105.8 mW	7 W	Pass
	Mid power, Atten = 3			_
	Low channel, 869.2MHz	18.43 mW	7 W	Pass
	Mid channel, 881.4MHz	17.93 mW	7 W	Pass
	High channel, 893.8MHz	17.78 mW	7 W	Pass
	Low power, Atten = 6	4.512 mW	7 \\/	Pass
	Low channel, 869.2MHz	4.512 mW	7 W 7 W	Pass
	Low channel, 869.2MHz Mid channel, 881.4MHz	4.363 mW	7 W	Pass
PRS modulation	Low channel, 869.2MHz			
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0	4.363 mW 4.372 mW	7 W 7 W	Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz	4.363 mW 4.372 mW 119.9 mW	7 W	Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz	4.363 mW 4.372 mW 119.9 mW 101.5 mW	7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz	4.363 mW 4.372 mW 119.9 mW	7 W 7 W 7 W	Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW	7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3 Low channel, 869.2MHz	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW 18.53 mW	7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3 Low channel, 869.2MHz Mid channel, 861.4MHz	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW 18.53 mW 18.66 mW	7 W 7 W 7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3 Low channel, 869.2MHz Mid channel, 861.4MHz High channel, 893.8MHz	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW 18.53 mW	7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 881.4MHz High channel, 893.8MHz Low power, Atten = 6	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW 18.53 mW 18.66 mW 17.56 mW	7 W 7 W 7 W 7 W 7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass Pass Pass
PRS modulation	Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz High power, Atten= 0 Low channel, 869.2MHz Mid channel, 881.4MHz High channel, 893.8MHz Mid power, Atten = 3 Low channel, 869.2MHz Mid channel, 861.4MHz High channel, 893.8MHz	4.363 mW 4.372 mW 119.9 mW 101.5 mW 104.4 mW 18.53 mW 18.66 mW	7 W 7 W 7 W 7 W 7 W 7 W 7 W 7 W	Pass Pass Pass Pass Pass Pass Pass

	GSM modulation, High power, A	tten= 0, Low channel, 869.2MH	2
Result: Pass	Value: 122.3	3 mW Limit:	7 W



	GSM modulation, High power, Atten= 0, M	Mid channel, 881.4MHz	
Result: Pass	Value: 102.5 mW	Limit:	7 W

🔆 🔆 Agi	lent 1	0:51:23	22 Jul 20	08			RΤ		
Ref 150	∂mW		#At	ten 20 dl	В		М	kr1 881. 1	3935 MHz 102.5 mW
Peak [ Lin									
Offst 22.1 dB									
ad F									
V1 S2 S3 FC									
Contor	881.4 M							<u> </u>	an 1 MHz
<del>center</del> ≢Res B∤	001.4 M √1 MHz				#VBW 3 M	Hz	Sweep 9.	эр 99 ms (1	an i MH2 000 pts)

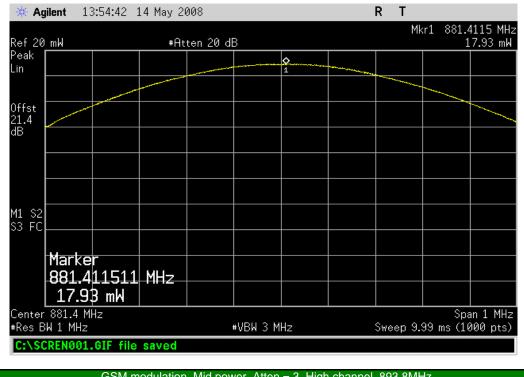
	GSM modulation, High power, Atten= 0, High of	channel, 893.8MHz	
Result: Pass	Value: 105.8 mW	Limit: 7 W	

ef 150 mW	#Ĥ	tten 20 dB			Mkr1	893.8015 M 105.8 m
'eak						103.0 m
in			•			
Iffst						
12.1 IB						
1 S2						
Center 893.8 MHz Res BW 1 MHz		*VBW	3 MHz	SI	veep 9.99 n	Span 1 MH ns (1000 pt:

	GSM modulation, Mid power, Atten = 3, Low	w channel, 869.2MHz	
Result: Pass	Value: 18.43 mW	Limit: 7 W	

🔆 Agilent	13:51:38	14 May 20	008			RT		
Ref 20 mW		#At	ten 20 dl	В		М		2075 MHz .8.43 mW
Peak Lin				··································	<b>\$</b> 1	 		
0ffst 21.4								
dB								
M1 S2 S3 FC								
	rker 9.207507	MHZ						
	8.43 mW							
Center 869 #Res BW 1				#VBW 3 M	Hz	Sweep <u>9</u>	Spa 99 ms (10	an 1 MHz 000 pts)
C:\SCREN	001.GIF file	saved						

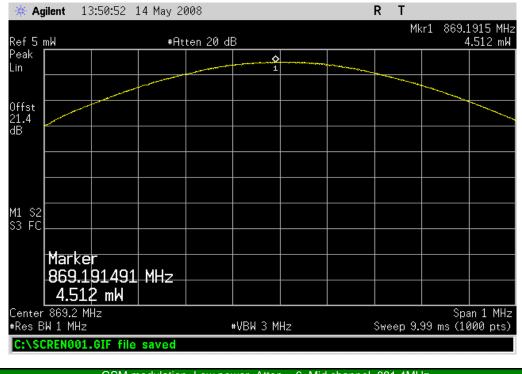
		GSM modulation, Mid	power, Atte	n = 3, Mid channel, 881.4MH	Ζ
Result:	Pass	Value	<b>e:</b> 17.93 r	nW Limit:	7 W



	GSM modulation, N	Mid power	, Atten = 3, High channel, 89	93.8MHz	
Result: F	Pass V	<b>/alue:</b> 1	7.78 mW	Limit:	7 W

🔆 🔆 Ag	jilent 13	3:57:48 1	14 May 20	908			RT		
Ref 20	mW		#At	ten 20 di	3		M		7905 MHz .7 <b>.</b> 78 mW
Peak Lin					<b></b>				
Offst 21.4 dB									
dB									
M1 S2 S3 FC									
55 10									
	Marke	r 90490	мц⊸						
	17.78		-11112						
	893.8 M W 1 MHz	Hz			₩VBW 3 M	——— Hz	Sween 9.	Spa 99 ms (10	an 1 MHz 200 nts)
		GIF file	saved						

	GSM modulation, Low powe	er, Atten = 6, Low channel, 869	9.2MHz	
Result: Pass	Value: 4	4.512 mW L	.imit:	7 W



	GSM modulation, Low power, Atten = 6, Mid channel, 881.4MHz							
Result: F	Pass	Value:	4.363 mW	Limit:	7 W			

🔆 Ag	<b>ilent</b> 13	8:55:25 1	14 May 20	908			RT		
			<u>`</u>	~~ "	_		Mł		4255 MHz
Ref 5 r	nW		#Ht	ten 20 dl	5			4	.363 mW
Peak Lin						\$			
Offst 21.4 dB									
dB									
M1 S2 S3 FC									
	Marke 881.4	r 25525	MHz						
	4.36	3 mW							
	881.4 MI W 1 MHz	Hz			#VBW 3 M	Hz	Sweep <u>9</u> .	Spa 99 ms (10	an 1 MHz 000 pts)
C:\\$C	REN001.	GIF file	saved						

		GSM modulation, Low po	wer, Atten = 6	, High channel, 893.8MH:	<u> </u>	
Result:	Pass	Value:	4.372 mW	Limit:	7 W	



	GPRS modulation, High power, Atten= 0, Low	channel, 869.2MHz	
Result: Pass	Value: 119.9 mW	Limit: 7 W	

🔆 Agilent	10:50:18	22 Jul 20	08			RT		
Ref 15 <u>0</u> mW		#At	ten 20 di	3		MI		2025 MHz 19.9 mW
Peak Lin								
Offst 22.1 dB								
V1 S2								
\$3 FC								
Center 869.2 #Res BW 1 MM	MHz Hz			⊧VBW 3 M	Hz	Sweep 9.	   Sp:  99 ms (10	an 1 MHz 000 pts)

XMit 2007.06.13

NOR	. nv	VESI
Е	V	

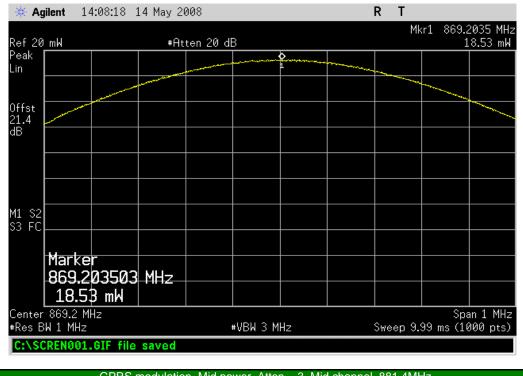
	GPRS modulation, High powe	er, Atten= 0, Mid channel, 8	881.4MHz	<u> </u>
Result: Pass	<b>Value:</b> 10	01.5 mW	Limit:	7 W

ef 150 mW	#	Atten 20 dB		Mkr1	L 881.3855 M 101.5 m
eak					
ffst 2.1				 	
B					
1 S2					
enter 881.4 MH Res BW 1 MHz	z	#\	/BW 3 MHz	Sweep 9 <u>.99</u>	Span 1 MH ms (1000 pts

	GPRS modulation, High power, Atten= 0, High channel, 893.8MHz									
Result: Pass	Value: 104.4 mW	Limit: 7 W								

🔆 Agila	ent 10	0:50:18	22 Jul 20	08			RΤ			
Ref 15 <u>0</u>	mW		#At	ten 20 di	3			Mkr1		025 MHz 19.9 mW
Peak Lin						1				
Offst 22.1 dB										
V1 S2 S3 FC_										
Center 8	269.2 M								Spa	n 1 MHz
#Res BW	1 MHz			:	₩VBW 3 M	Hz	Sweep S	9.99 m	s (10	100 pts)

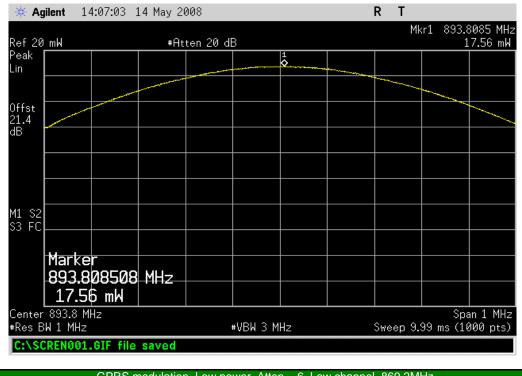
	GPRS modulation, Mid power, Atten = 3, I	Low channel, 869.2MHz
Result: Pass	Value: 18.53 mW	Limit: 7 W



GPRS modulation, Mid power, Atten = 3, Mid channel, 881.4MHz									
Result: Pass	Value: 18.66 mW	Limit: 7 W							

🔆 Agilent 14:07:39	14 May 2008		RT	
Ref 20_mW	#Atten 20 d	В	Mł	r1 881.4205 MHz 18.66 mW
Peak Lin		1		
and the second se				Strengton and the second second
Offst 21.4 dB				
M1 S2 S3 FC				
Marker				
881.420520	MHz			
18.66 mW				
Center 881.4 MHz #Res BW 1 MHz		₩VBW 3 MHz	Sweep 9.	Span 1 MHz 99 ms (1000 pts)
C:\SCREN001.GIF file	saved			

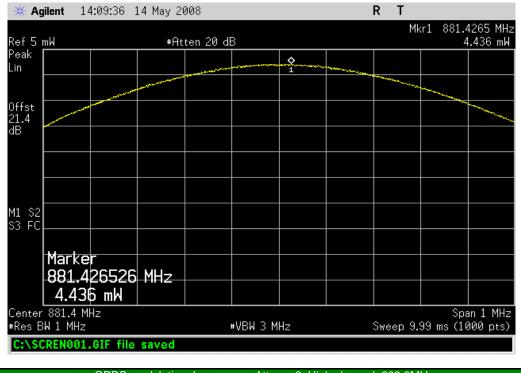
	GPRS modulation, Mid power, Atten = 3, High channel, 893.8MHz								
Result: Pass	Value:	17.56 mW	Limit:	7 W					



	GPRS modulation, Low power, Atten = 6, Low channel, 869.2MHz								
Result: Pass	Value:	4.414 mW	Limit:	7 W					

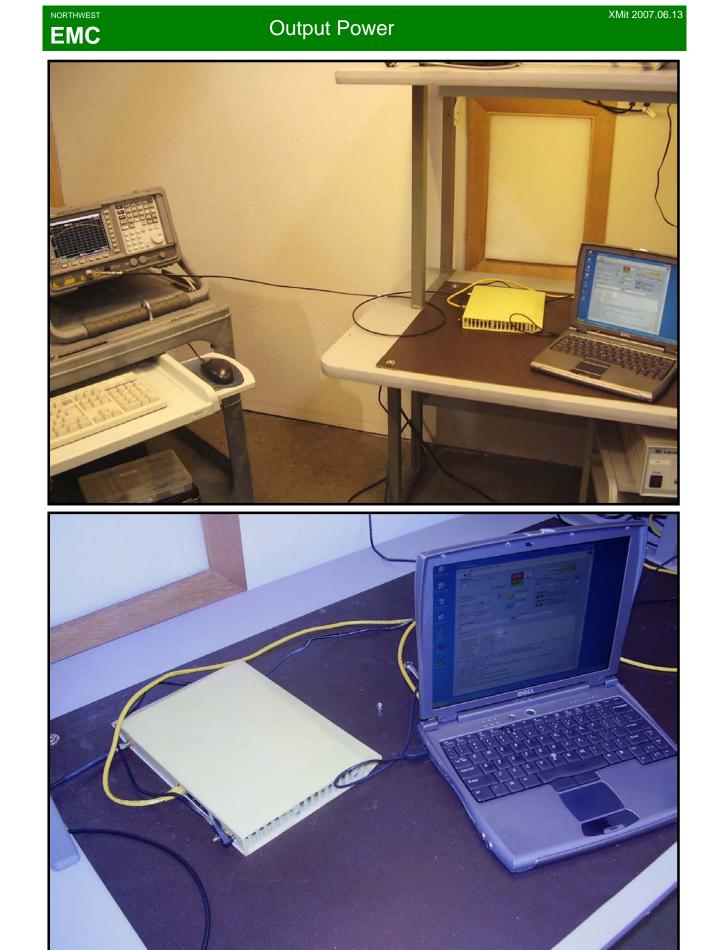
🔆 👫 Ag	jilent 14	1:08:52 1	L4 May 20	908			 RT		
Ref 5	mW		#At	ten 20 di			 MI		2005 MHz 4.414 mW
Peak Lin						>			
Offst 21.4 dB									
dΒ									
M1 S2 S3 FC									
	Marke 869.2	r 00500	MHz						
	4.41	4 mW							
	869.2 MI W 1 MHz	Hz			#VBW 3 M	Hz	Sweep <u>9</u> .	Spa 99 ms (10	an 1 MHz 000 pts)
C:\SC	REN001.	GIF file	saved						

	GPRS modulation, Low power, Atten = 6, Mid channel, 881.4MHz									
Result: Pass	Value:	4.436 mW	Limit:	7 W						



GPRS modulation, Low power, Atten = 6, High channel, 893.8MHz								
Result: Pass	<b>Value:</b> 4.363 mW	Limit: 7 W						

🔆 👫 Ag	jilent 14	4:10:15 1	L4 May 20	908			RT		
Ref 5	mW		#Ati	ten 20 dl	В		M		8055 MHz 4.363 mW
Peak Lin						1 \$			
							****	and the second	
Offst 21.4 dB									
aD									
M1 S2 S3 FC									
	Marke								
	893.8	05505	MHz						
Company	4.36								
#Res B	893.8 MH W 1 MHz				₩VBW 3 M	Hz	Sweep 9.	5pa 99 ms (10	an 1 MHz 000 pts)
C:\SC	REN001.	GIF file	saved						



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				
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13				
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	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 peak output power was measured with the EUT set to the parameters called out in the data sheets. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Prior to making the measurements the setup including cables and attenuator was calibrated with a signal generator and a power meter.

NORTHWEST EMC	C	Output Power		XMit 2007.0
EUT:	OmniCell@Home		Work Order: RAFN0	085
Serial Number:	None		Date: 07/23/0	8
	Radioframe Networks, Inc.		Temperature: 23.39	
Attendees:	None		Humidity: 34%	
Project:			Barometric Pres.: 1023.5r	nb
	Holly Ashkannejhad	Power: 120VAC/60Hz	Job Site: EV06	
EST SPECIFICATIO	DNS	Test Method		
CC 24E:2007		ANSI/TIA/EIA-603-B-2002		
OMMENTS				
CS band				
EVIATIONS FROM lo deviations				
Configuration #	2	Holy Arlingh		
	Signature 1	Holy Jon 1		
		Value	Limit	Resul
SM modulation				
1	High power, Atten = 0			
	Low channel, 1930.2MHz	187.5 mW	2 W	Pass
	Mid channel, 1960MHz	175.9 mW	2 W	Pass
	High channel, 1989.8MHz	181.6 mW	2 W	Pass
	Mid power, Atten = 3		- 11/	
	Low channel, 1930.2MHz	28.75 mW	2 W	Pass
	Mid channel, 1960MHz	30.76 mW	2 W	Pass
	High channel, 1989.8MHz	30.76 mW 28.16 mW	2 W 2 W	Pass Pass
1	High channel, 1989.8MHz Low power, Atten = 6	28.16 mW	2 W	Pass
	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz	28.16 mW 6.691 mW	2 W 2 W	Pass
1	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz	28.16 mW 6.691 mW 7.823 mW	2 W 2 W 2 W	Pass Pass Pass
	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz	28.16 mW 6.691 mW	2 W 2 W	Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz	28.16 mW 6.691 mW 7.823 mW	2 W 2 W 2 W	Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz	28.16 mW 6.691 mW 7.823 mW	2 W 2 W 2 W	Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0	28.16 mW 6.691 mW 7.823 mW 7.315 mW	2 W 2 W 2 W 2 W	Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW	2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW	2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW	2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz Mid power, Atten = 3	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW 171.1 mW	2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1960MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz Mid power, Atten = 3 Low channel, 1930.2MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW 174.1 mW 27.94 mW	2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz Mid power, Atten = 3 Low channel, 1930.2MHz Mid channel, 1960MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW 174.1 mW 27.94 mW 31.77 mW	2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz Mid power, Atten = 3 Low channel, 1960MHz Mid channel, 1960MHz High channel, 1989.8MHz	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW 174.1 mW 27.94 mW 31.77 mW	2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass Pass Pass
PRS modulation	High channel, 1989.8MHz Low power, Atten = 6 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1989.8MHz High power, Atten = 0 Low channel, 1960MHz High channel, 1960MHz High channel, 1980.2MHz Mid power, Atten = 3 Low channel, 1930.2MHz Mid channel, 1960MHz High channel, 1960MHz High channel, 1989.8MHz Low power, Atten = 6	28.16 mW 6.691 mW 7.823 mW 7.315 mW 176.3 mW 171.2 mW 174.1 mW 27.94 mW 31.77 mW 28.29 mW	2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W 2 W	Pass Pass Pass Pass Pass Pass Pass Pass

	GSM modulation, High power, Atten = 0, Low channel, 1930.2MHz								
Result:	Pass	Value	e: 187.5 mW	Limit:	2 W				

ef_22 <u>0_mW</u>	#Atter	n 20 dB		Mk	r1 1.9302205 G 187.5 m
eak in					
ffst 1.9					
B Marker					
1.93022	0520 GHz				
187.5 n	nW				
1 S2					
enter 1.93 GHz Res BW 1 MHz		#VBW :	3 MHz	Sweep 9	Span 1 Mi .99 ms (1000 pt

GSM modulation, High power, Atten = 0, Mid channel, 1960MHz									
Result: Pass	Value: 175.9 mW	Limit: 2 W							

🔆 🔆 Ag	j <b>ilent</b> 20	):17:36 2	23 Jul 20	08				RT		
Ref 22	0 mW		#At	ten 20 di	В			Mk		0425 GHz .75.9 mW
Peak Lin										
							Carrow and Carrow			
Offst 21.9 dB										
aБ	Marke	r								
	1.960	04254	2 GHz							
	175.9	₿m₩								
M1 S2 S3 FC										
00 10										
	1.96 GH: W 1 MHz	Z			#VBW 3 M	Hz		Sweep 9	Spa 99 ms (10	an 1 MHz 000 pts)
C:\SC	REN001.	GIF file	saved							

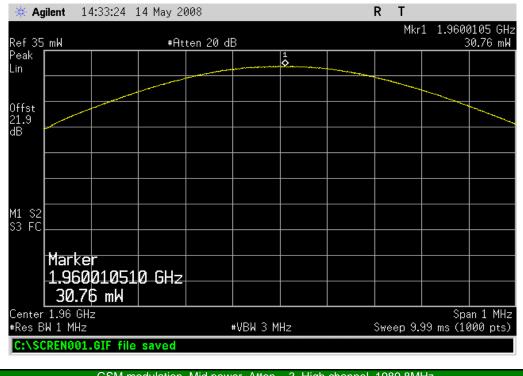
	GSM mc	dulation, High powe	er, Atten = 0,	High channel, 1989.8M⊦	lz
Result: P	Pass	Value:	181.6 mW	Limit:	2 W

ef 22 <u>0 mW</u>	#Atte	n 20 dB			11311 1.0	9898115 G 181.6 m
in						
					man and a second	
Iffst 1.9 B						
B Marker						
	1511 GHz					
181.6 r	nW 🛛					
11 S2						
			3 MHz	Swe	eep 9.99 ms	Span 1 MH (1000 pts
Center 1.99 GHz Res BW 1 MHz		#VBW	3 MHz	Swe	eep 9.99 ms	

	GSM modulation, Mid powe	er, Atten = 3, Low	v channel, 1930.2MHz	
Result: Pass	Value:	28.75 mW	Limit: 2 W	

🔆 Agilent 14:34:08 14	May 2008		R	Т	
Ref 35_mW	#Atten 20 dB				2135 GHz 8.75 mW
Peak Lin					
			and the second sec	None and the second sec	
Offst 21.9					~
dB					
M1 S2 S3 FC					
Marker 1.930213513	GH <sub>7</sub>				
28.75 mW					
Center 1.93 GHz #Res BW 1 MHz	#V	BW 3 MHz	Swee	Spa 20 9.99 ms 9	n 1 MHz 100 pts)
C:\SCREN001.GIF file s					

	GSM modulation, Mid power, Atten = 3, Mi	d channel, 1960MHz
Result: Pass	Value: 30.76 mW	Limit: 2 W



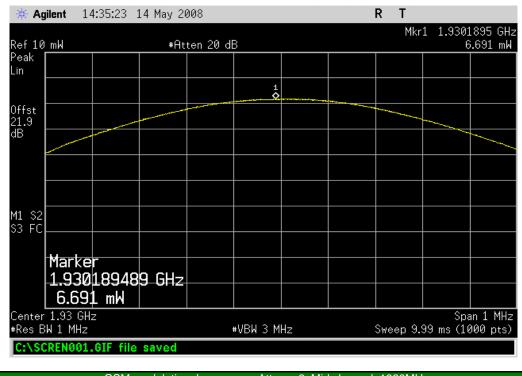
	GSM modulation, Mid power, Atten = 3, High cha	nnel, 1989.8MHz	
Result: Pass	Value: 28.16 mW	Limit: 2 W	

🔆 Agilent 14:32:39 14 May 2	008	RT
	ten 20 dB	Mkr1 1.9898265 GHz 28.16 mW
Peak Lin	<b>O</b> 1	
0((-)		
0ffst 21.9 dB		
M1 S2		
\$3 FC		
Marker 1.989826526 GHz		
28.16 mW		
Center 1.99 GHz #Res BW 1 MHz	#VBW 3 MHz	Span 1 MHz Sweep 9.99 ms (1000 pts)
C:\SCREN001.GIF file saved		

XMit 2007.06.13

NOR		VE31
Ε	Μ	C

	GSM modulation, Low power, Atten = 6, Low	channel, 1930.2MHz	
Result: Pass	Value: 6.691 mW	Limit: 2 W	



	GSM modulation, Low po	ower, Atten = 6, Mid channel, 1	960MHz	
Result: Pa	ass Value:	7.823 mW	Limit:	2 W

🔆 Agilent 14:36:00 14 M	1ay 2008	RT	
Ref 10 mW	#Atten 20 dB	Mkr1 1.9600125 7.823	
Peak Lin	1		
Offst 21.9 dB			
an a			
M1 S2 S3 FC			
Marker 1.960012512 (	GHz		
7.823 mW			
Center 1.96 GHz #Res BW 1 MHz	₩VBW 3 MHz	50 Span Sweep 9.99 ms (1000	
C:\SCREN001.GIF file sav	ved		

		GSM modulation, Low pow	/er, Atten = 6, Hi	gh channel, 1989.8MHz	Z
Result: P	Pass	Value:	7.315 mW	Limit:	2 W



GPRS modulation, High power, Atten = 0, Low channel, 1930.2MHz					
Result: Pass	Value: 176.3 mW	Limit: 2 W			

🔆 🔆 Ag	j <b>ilent</b> 20	0:21:57 2	23 Jul 20	98			RΤ		
Ref 22	0 mW		#Ati	ten 20 dl	В		Mk		2085 GHz 76.3 mW
Peak Lin						1			
Offst 21.9									
dB	Marke	r							
	1.930	20850	8 GHz						
	176.	B mW							
M1 S2 S3 FC									
	1.93 GH W 1 MHz	Z			#VBW 3 M	Hz	Sweep <u>9</u>	Spa 99 ms (10	an 1 MHz 000 pts)
C:\\$0	REN001	GIF file	saved						

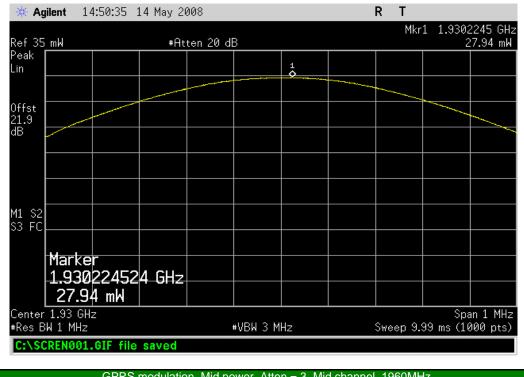
GPRS modulation, High power, Atten = 0, Mid channel, 1960MHz					
Result: Pass	Value: 171.2 mW	Limit: 2 W			

Ref 22 <u>0 mW</u>		#At	ten 20 d	В		Mk		0195 G 171.2 m
Peak _in					1			
					\$	 		
)ffst 21.9								
<sup>iB</sup> Mar	ker							
	5001951	9 GHz						
17	1.2 mW							
41 S2								
Center 1.96 Res BW 1 M				#VBW 3 №	1Hz	Sweep 9	Sp .99 ms (1	an 1 MH 000 pt:

GPRS modulation, High power, Atten = 0, High channel, 1989.8MHz					
Result: Pass	Value: 174.1 mW	Limit: 2 W			

🔆 🔆 Ag	j <b>ilent</b> 20	0:20:37 2	23 Jul 200	98			R T		
Ref 22	0 mW		#Ati	ten 20 dl	В		М	lkr1 1.98	398045 GHz 174.1 mW
Peak Lin									
Offst 21.9									
dB	Marke	r							
	1.989	80450	4 GHz						
	174.:	1 mW							
M1 S2 S3 FC									
00 10									
	1.99 GH: W 1 MHz	z			₩VBW 3 M	Hz	Sween		òpan 1 MHz (1000 pts)
_		GIF file	saved				p		

GPRS modulation, Mid power, Atten = 3, Low channel, 1930.2MHz					
Result: Pas	Value:	27.94 mW	Limit:	2 W	



GPRS modulation, Mid power, Atten = 3, Mid channel, 1960MHz					
Result:	Pass	Value:	31.77 mW	Limit:	2 W

🔆 Agilent 14:48:36 14 May	2008	RT
	Atten 20 dB	Mkr1 1.9599825 GHz 31.77 mW
Peak Lin		
255 J		
0ffst 21.9 dB		
M1 S2		
\$3 FC		
Marker		
1.959982482 GH 31.77 mW	z	
Center 1.96 GHz		Span 1 MHz
<pre>#Res BW 1 MHz C:\SCREN001.GIF file saved</pre>	#VBW 3 MHz	Sweep 9.99 ms (1000 pts)

	GPRS modulation, Mid power, Atten = 3, High of	channel, 1989.8MHz
Result: Pass	Value: 28.29 mW	Limit: 2 W



	GPRS modulation, Low power, Atten = 6, Low channel, 1930.2MHz					
Result: Pass	Value: 6.62	4 mW Limit:	2 W			

🔆 Agilent 🛛 14:51:23 14 Ma	ay 2008	RT
Ref 10 mW	#Atten 20 dB	Mkr1 1.9302075 GHz 6.624 mW
Peak Lin		
	1	
Offst 21.9		
dB		
M1 S2 S3 FC		
Marker 1.930207507 G	H-7	
6.624 mW		
Center 1.93 GHz #Res BW 1 MHz	#VBW 3 MHz	Span 1 MHz Sweep 9.99 ms (1000 pts)
C:\SCREN001.GIF file save		

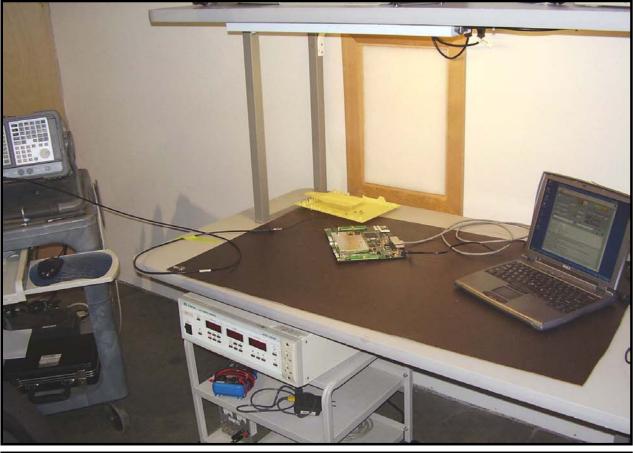
GPRS modulation, Low power, Atten = 6, Mid channel, 1960MHz				
Result: Pass	Value: 7.741 mW	Limit: 2 W		

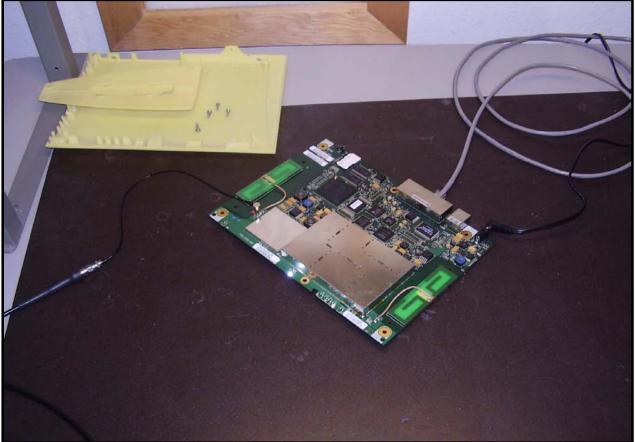


Result: Pass	Value: 7.076 mW	Limit: 2 W	

🔆 Agilent 14:52:51 14 May 20	108	RT
	en 20 dB	Mkr1 1.9898055 GHz 7.076 mW
Peak Lin		
	4 0	
Offst 21.9		
dB		
M1 S2 S3 FC		
Marker		
1.989805505_GHz		
7.076 mW		
Center 1.99 GHz #Res BW 1 MHz	#VBW 3 MHz	Span 1 MHz Sweep 9.99 ms (1000 pts)
C:\SCREN001.GIF file saved		







EMC

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, GSM, Cell band, high power, low channel
Transmitting, GSM, Cell band, high power, mid channel
Transmitting, GSM, Cell band, high power, high channel
Transmitting, GPRS, Cell band, high power, low channel
Transmitting, GPRS, Cell band, high power, mid channel
Transmitting, GPRS, Cell band, high power, high channel

### POWER SETTINGS INVESTIGATED 120VAC/60Hz

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
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	19
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	10/23/2007	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	1/3/2008	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	24
EV01 Cables		Double Ridge Horn Cables	EVB	1/3/2008	13
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HFV	12/29/2006	18
Antenna, Horn	EMCO	3115	AHJ	5/24/2007	24
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Agilent	E8257D	TGX	12/7/2007	13

IEASUREMENT BANDWIDTHS				
Frequency Range	Peak Data	Quasi-Peak Data	Average Data	
(MHz)	(kHz)	(kHz)	(kHz)	
0.01 - 0.15	1.0	0.2	0.2	
0.15 - 30.0	10.0	9.0	9.0	
30.0 - 1000	100.0	120.0	120.0	
Above 1000	1000.0	N/A	1000.0	
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

### MEASUREMENT UNCERTAINTY

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

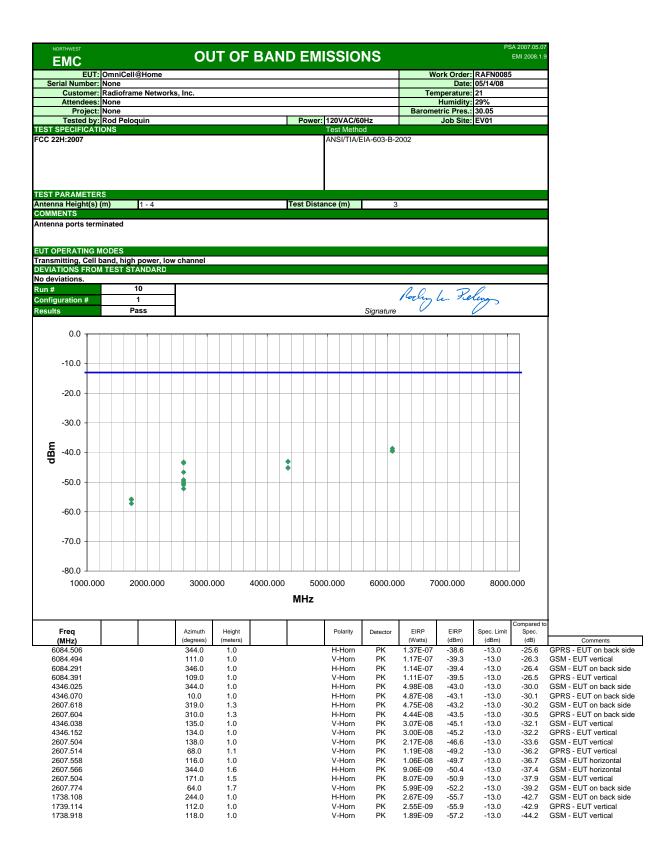
### TEST DESCRIPTION

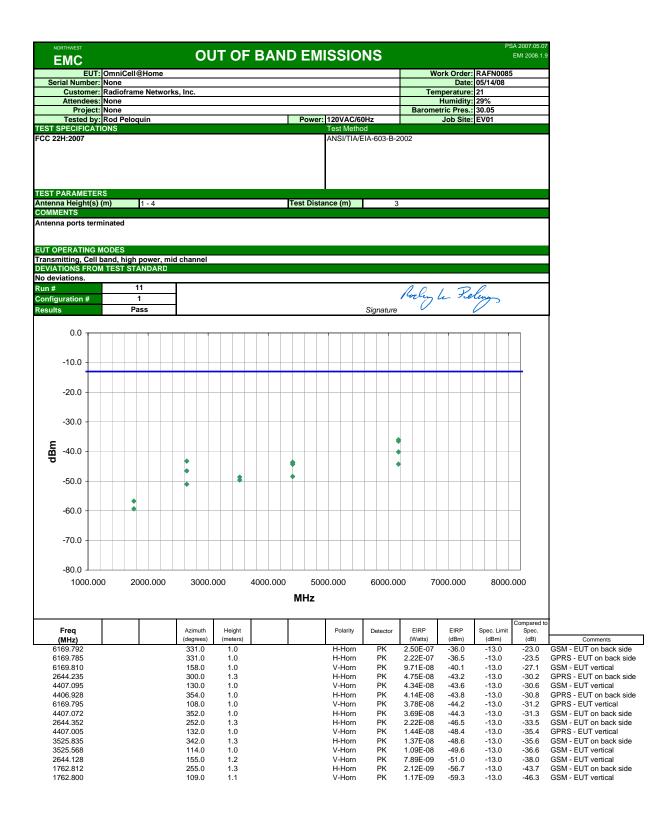
The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.4:2003). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

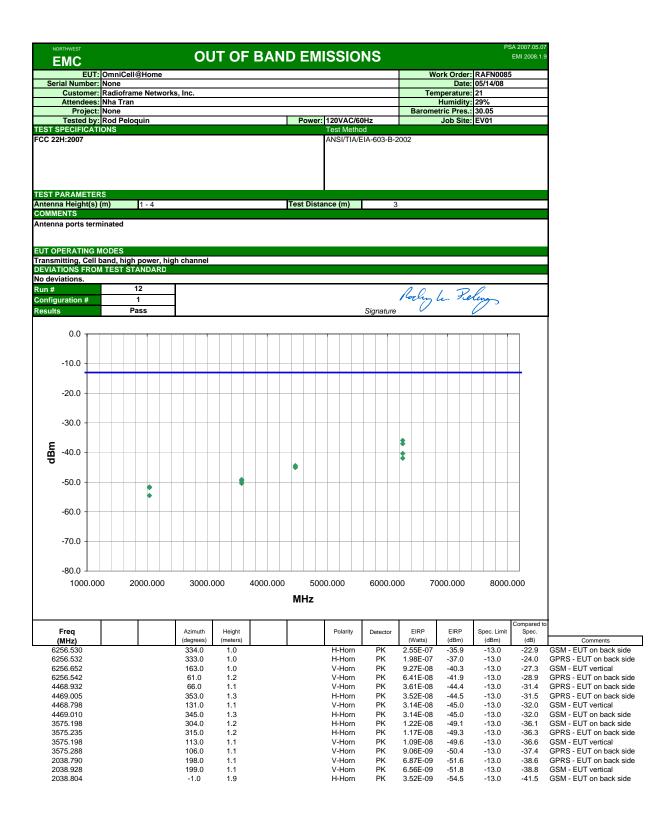
For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

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 for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. 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 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



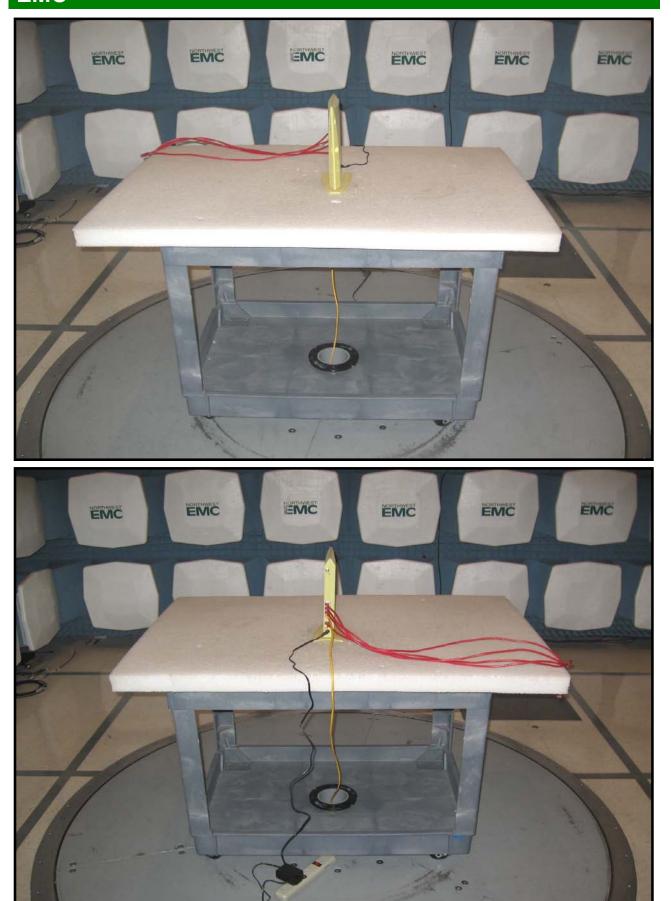




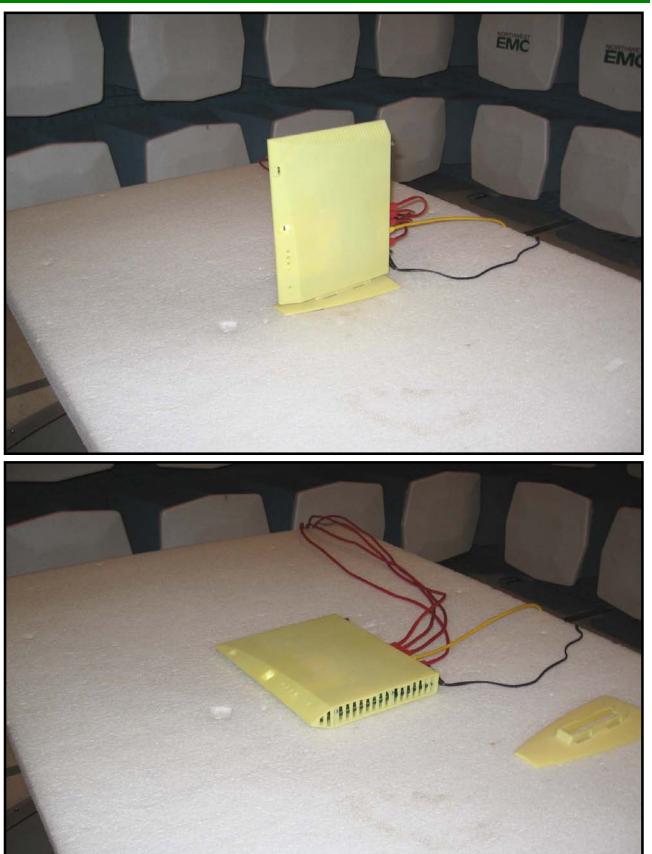
NORTHWEST

## OUT OF BAND EMISSIONS

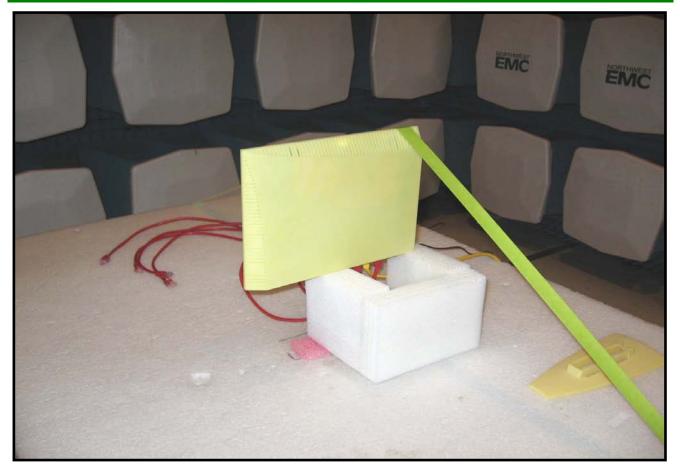
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EMC

### **OUT OF BAND 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
Transmitting GSM, PCS band, high power, low channel
Transmitting GSM, PCS band, high power, mid channel
Transmitting GSM, PCS band, high power, high channel
Transmitting GPRS, PCS band, high power, low channel
Transmitting GPRS, PCS band, high power, mid channel
Transmitting GPRS, PCS band, high power, high channel

#### POWER SETTINGS INVESTIGATED 120VAC/60Hz

## FREQUENCY RANGE INVESTIGATED Start Frequency 30 MHz Stop Frequency

#### 20 GHz

#### SAMPLE CALCULATIONS

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

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	19
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	10/23/2007	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	1/3/2008	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	24
EV01 Cables		Double Ridge Horn Cables	EVB	1/3/2008	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	6/22/2007	13
Antenna, Horn	ETS	3160-07	AHU	NCR	0
EV01 Cables		Standard Gain Horns Cables	EVF	10/23/2007	13
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	6/22/2007	13
Antenna, Horn	ETS	3160-08	AHV	NCR	0
EV01 Cables		Standard Gain Horns Cables	EVF	10/23/2007	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	7/25/2007	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
EV01 Cables		18-26GHz Standard Gain		7/05/0007	13
Evol Cables		Horn Cable	EVD	EVD 7/25/2007	
High Pass Filter	Micro-Tronics	HPM50111	HFO	1/16/2008	13
Antenna, Horn	EMCO	3115	AHJ	5/24/2007	24
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Agilent	E8257D	TGX	12/7/2007	13

#### MEASUREMENT BANDWIDTHS

Frequency Range	Peak Data	Quasi-Peak Data	Average Data	
(MHz)	(kHz)	(kHz)	(kHz)	
0.01 - 0.15	1.0	0.2	0.2	
0.15 - 30.0	10.0	9.0	9.0	
30.0 - 1000	100.0	120.0	120.0	
Above 1000	1000.0	N/A	1000.0	
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

#### MEASUREMENT UNCERTAINTY

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

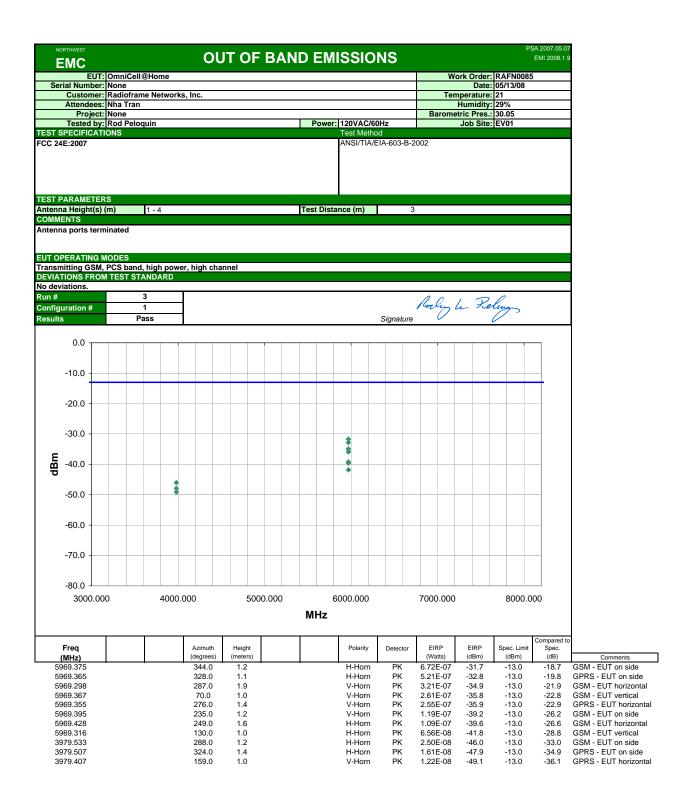
### TEST DESCRIPTION

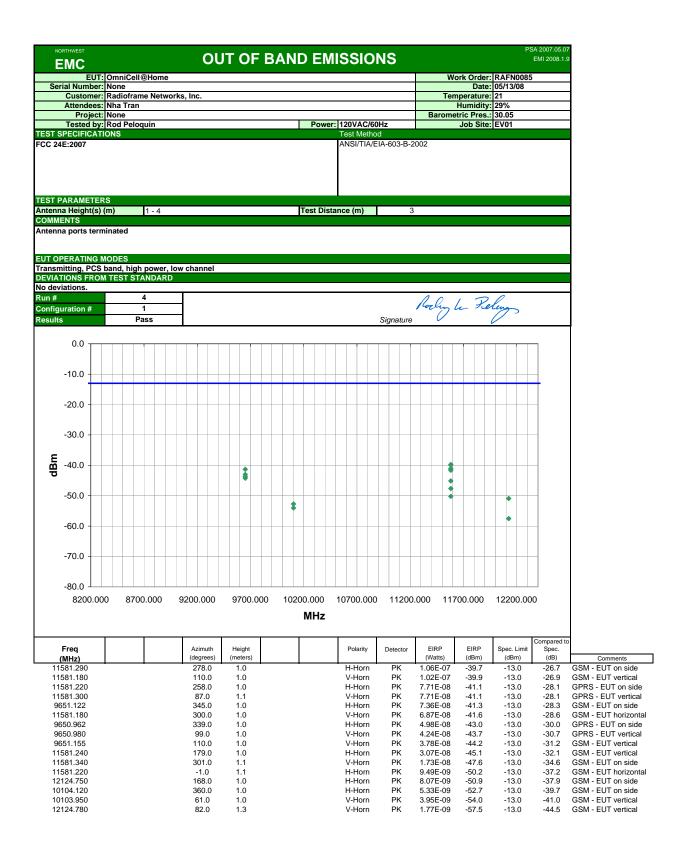
The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.4:2003). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

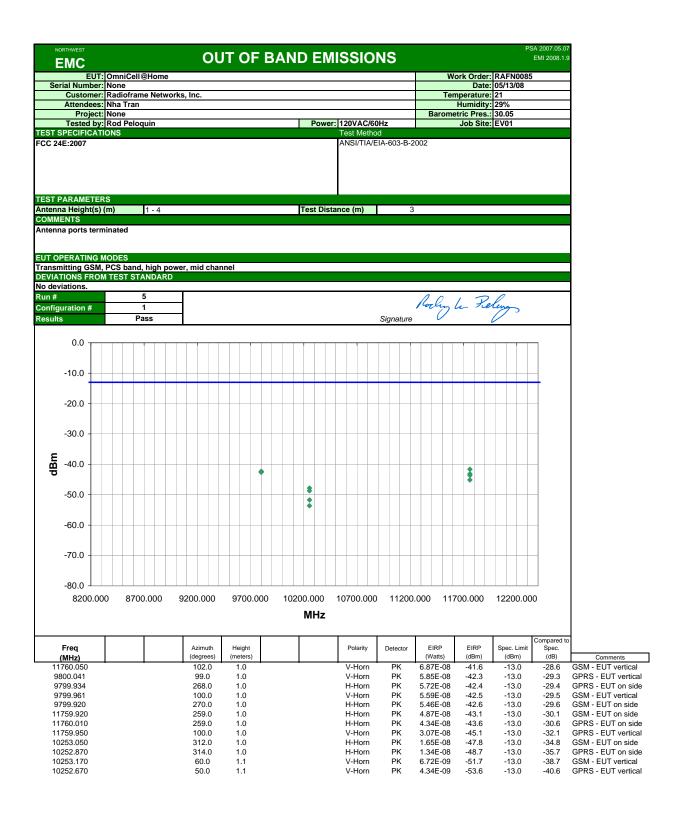
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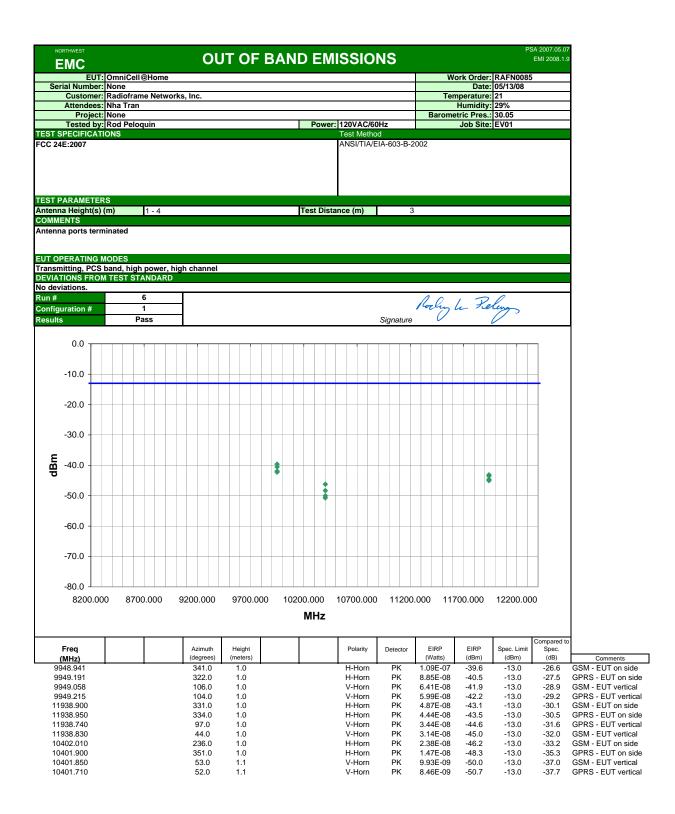
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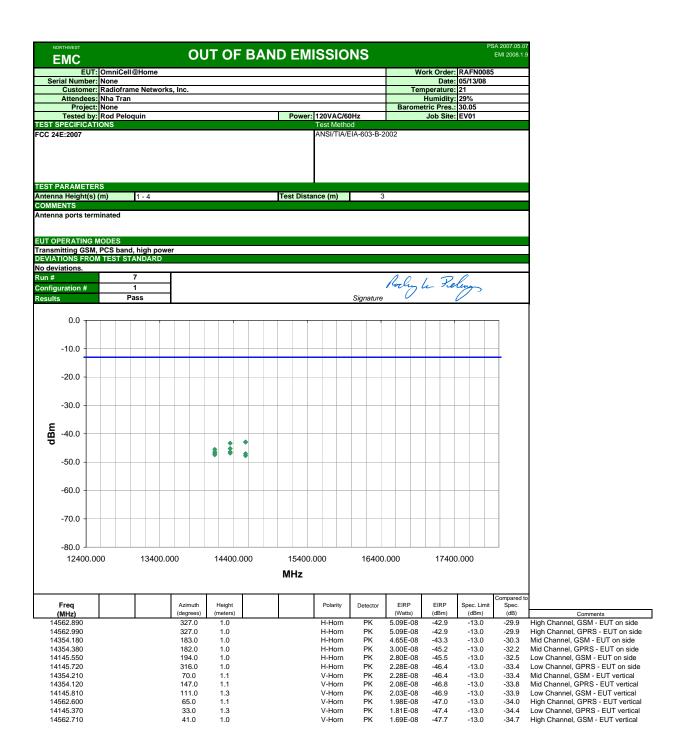
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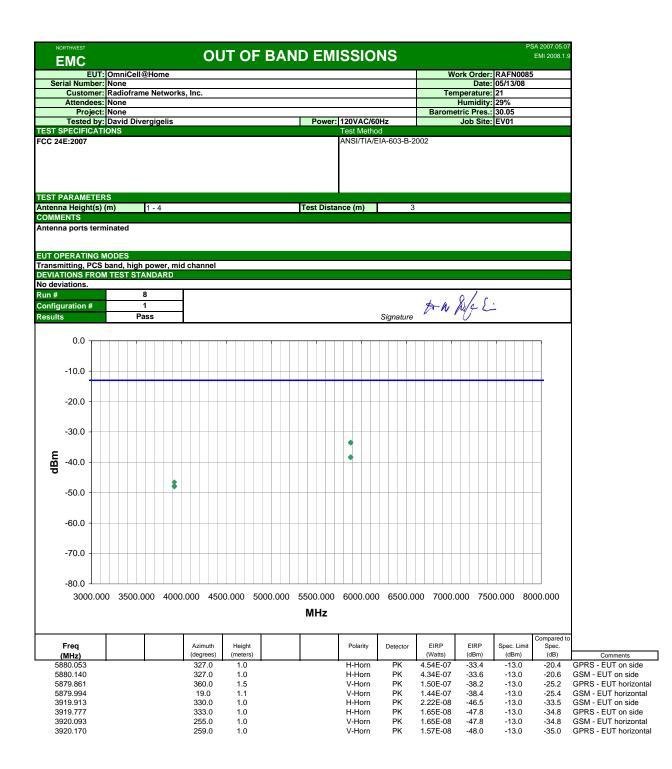


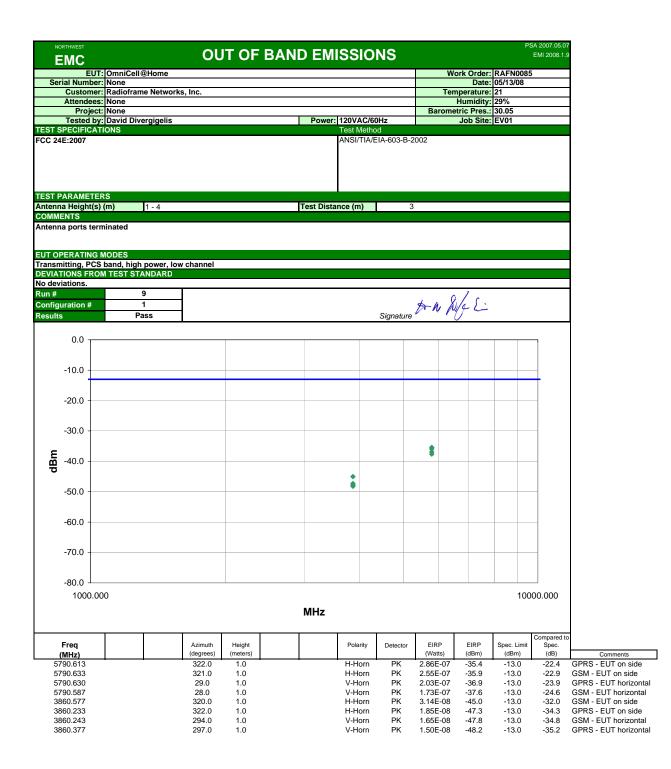












NORTHWEST

## OUT OF BAND EMISSIONS

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