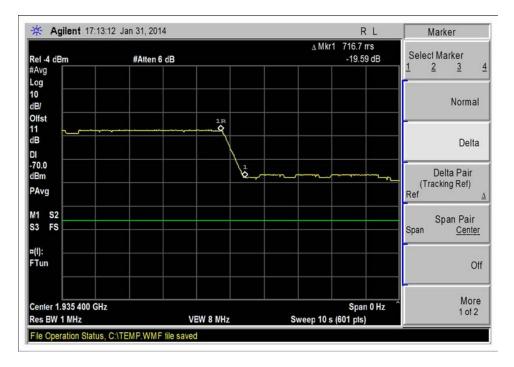
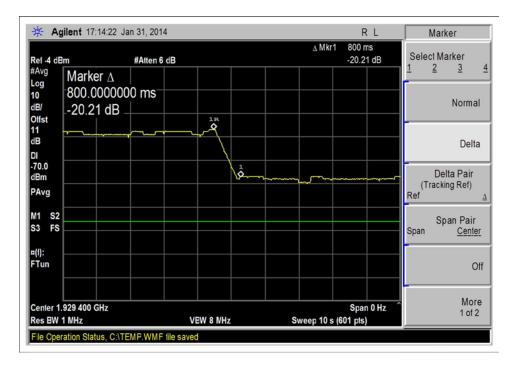


7.7(n) - (t), DL_869-894MHz_Test CF-3MHz

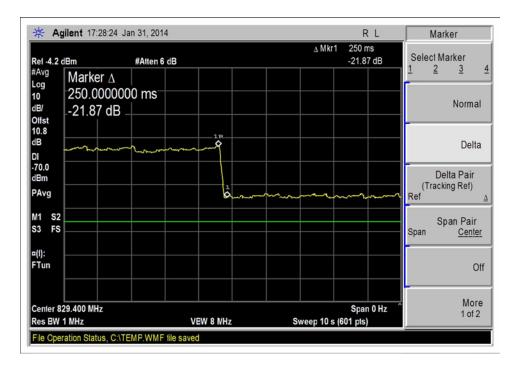






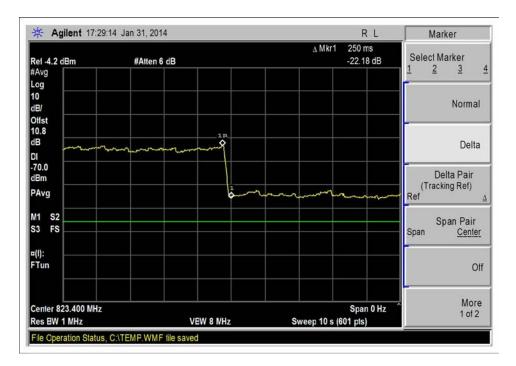


7.7(n) - (t),DL_1930-1990MHz_Test CF-3MHz

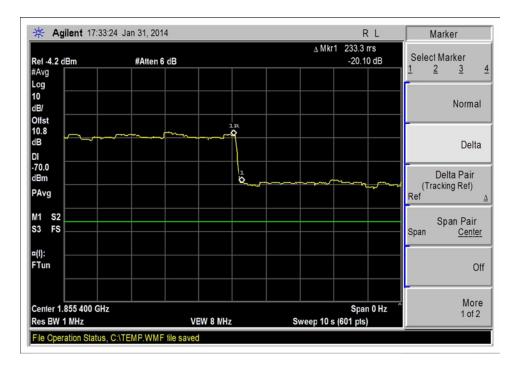


7.7(n) - (t),UL_824-849MHz_Test CF+3MHz



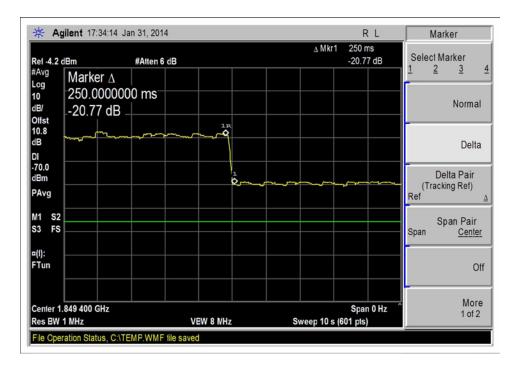


7.7(n) - (t),UL_824-849MHz_Test CF-3MHz



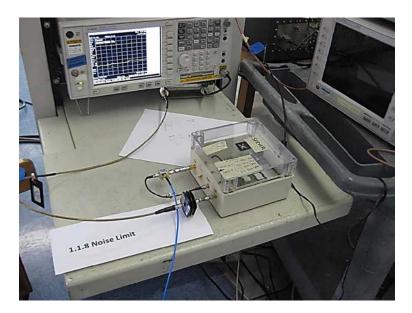
7.7(n) - (t),UL_1850-1910MHz_Test CF+3MHz





7.7(n) - (t),UL_1850-1910MHz_Test CF-3MHz

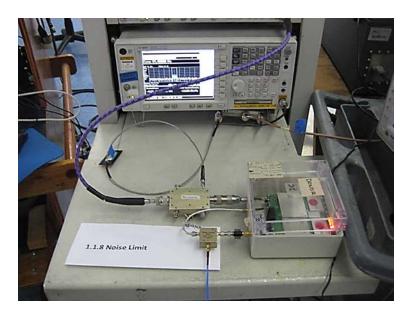
Test Setup Photo(s)



Test Setup, Noise Limit 1

Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.7.





Test Setup, Noise Limit 2

Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.7.



7.8 Uplink Inactivity

Test Conditions / Setup

Test Location: CKC Laboratories • 110 Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: Specification:	Nextivity, Inc. 7.8 Uplink Inactivity		
Work Order #:	95295	Date:	1/8/2014
Test Type:	Conducted Emissions		
Equipment:	Provider Specific Consumer Signal	Sequence#:	1
	Booster		
Manufacturer:	Nextivity, Inc.	Tested By:	E. Wong
Model:	CELFI-RS225CU, CELFI-RS225WU,		110V 60Hz
S/N:	157216000246, 157216000246		

Test Equipment:

 1	F				-
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02869	Spectrum Analyzer	E4440A	2/6/2013	2/6/2015
	AN02946	Cable	32022-2-2909K-	7/31/2013	7/31/2015
			36TC		
	AN03430	Attenuator	75A-10-12	9/5/2013	9/5/2015

Equipment Under Test (* = EUT):

Equipment Chuer Lest (=	201).		
Function	Manufacturer	Model #	S/N
Provider Specific Consumer	Nextivity, Inc.	CELFI-RS225CU	157216000246
Signal Booster*			
Provider Specific Consumer	Nextivity, Inc.	CELFI-RS225WU	157216000246
Signal Booster			

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Nextivity	WRG15F-120AB	20120111
Power Supply	Nextivity	WRG15F-120AB	20120815
Signal Generator	Agilent	E4438C	MY42082260

Test Conditions / Notes:

The EUT is provider specific signal booster pair consisted of a Window unit (WU) and a Coverage unit (CU) using proprietary 5.8 GHz Wireless interface.

For testing purposes, the EUT are placed on the test bench, connected via coax cable and 50 dB attenuators. Tx of WU is connected to RX of CU, RX of WU is connected to UNII TX port of CU.

Intended band of operation

UL= 824-849 MHz, 1850-1910 MHz, DL= 869-894 MHz 1930-1990 MHz,

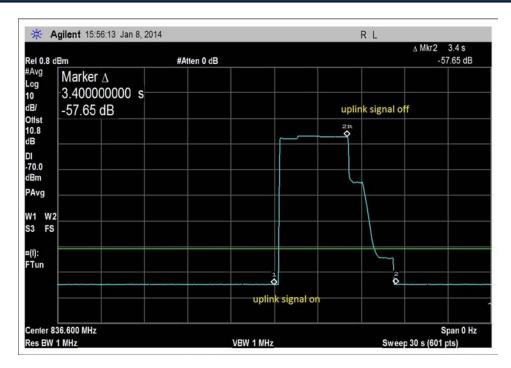
Delta Marker 2R- marker 2 is the measured Uplink inactivity time. Test environment conditions: 23°C, 15% Relative Humidity, 100kPa



7.8 Summary of Results

Pass: As demonstrated in the test data section, the time between Cursor R2 where the uplink signal was turned off and cursor #2 where the noise level returned to the TX off level is less than 5 second.

Test Data



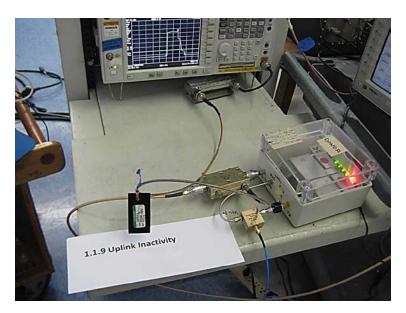
824-849MHz



* Agilent 16:04:18 J			RL	∆ Mkr2 3.4 s
Rel 0.8 dBm	#Atten 0 dB			-67.51 dB
Avg				
Log			uplink signal off	
10 dB/			2R	
Olfst			Y	
10.8				
dB				
DI				
70.0				
dBm		1		
PAvg				
W1 W2				
S3 FS				
¤(1): FTun				
Tun			2-	
		¢	Č.	
		uplink signal o	n	
Center 1.880 000 GHz				Span 0 Hz
Res BW 1 MHz	VB	W 1 MHz	Swee	p 30 s (601 pts)

1850-1915MHz





Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.8.



7.9 Variable Booster Gain

Test Conditions / Setup

Test Location:	CKC Laboratories • 110 Olinda Place • Brea, CA 92823 • 714-993-6112			
Customer:	Nextivity, Inc.			
Specification:	7.9 Variable Booster Gain			
Work Order #:	95295	Date:	1/10,16/2014	
Test Type:	Conducted Emissions			
Equipment:	Provider Specific Consumer Signal	Sequence#:	1	
	Booster			
Manufacturer:	Nextivity, Inc.	Tested By:	E. Wong	
Model:	CELFI-RS225CU, CELFI-RS225WU,		110V 60Hz	
S/N:	157216000246, 157216000246			
Tost Fauinmont	·•			

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02869	Spectrum Analyzer	E4440A	2/6/2013	2/6/2015
	AN02946	Cable	32022-2-2909К-	7/31/2013	7/31/2015
			36TC		
	AN03430	Attenuator	75A-10-12	9/5/2013	9/5/2015

Equipment Under Test (* = EUT):						
Function	Manufacturer	Model #	S/N			
Provider Specific Co	onsumer Nextivity, Inc.	CELFI-RS225CU	157216000246			
Signal Booster*	Signal Booster*					
Provider Specific Co	onsumer Nextivity, Inc.	CELFI-RS225WU	157216000246			
Signal Booster						

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Nextivity	WRG15F-120AB	20120111
Power Supply	Nextivity	WRG15F-120AB	20120815
Signal Generator	Agilent	E4438C	MY42082260
Base Station Simulator	Agilent	8960	GB47320116



Test Conditions / Notes:

The EUT is provider specific signal booster pair consisted of a Window unit (WU) and a Coverage unit (CU) using proprietary 5.8 GHz Wireless interface.

For testing purposes, the EUT are placed on the test bench, connected via coax cable and 50 dB attenuators. Tx of WU is connected to RX of CU, RX of WU is connected to UNII TX port of CU.

Intended band of operation

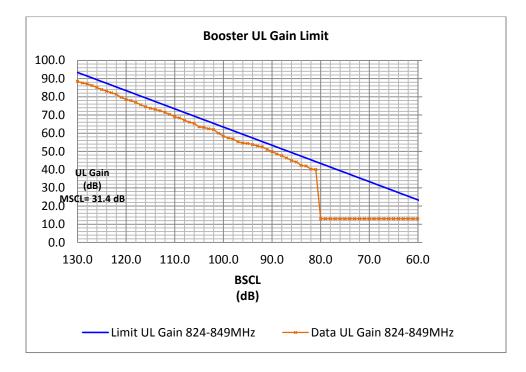
UL= 824-849 MHz, 1850-1910 MHz, DL= 869-894 MHz 1930-1990 MHz,

MSCL of 38.2 dB (1850-1910, 1930-1990MHz) and 41.4 (824-869MHz, , 869-894MHz) calculation provided in FCC submittal package.

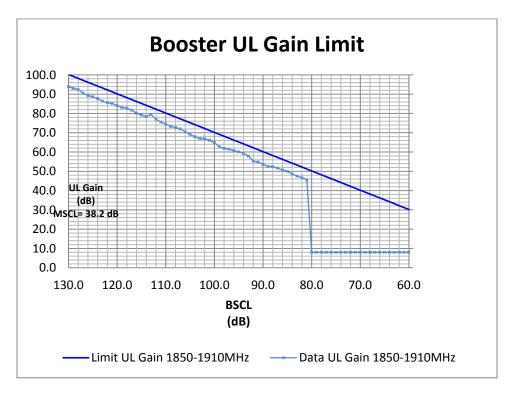
The test was performed with the booster operating in Test mode bypassing the RF input limit function. In operation, the UL path cease transmit operation at RSSI exceeding -40dBm. The system gain presented in the UL plot, at BSCL of RSSI equivalent of -40dBm (BSCL of 80dB), the system is designed to enter transmit off and the plot represents system gain of Transmit power off.

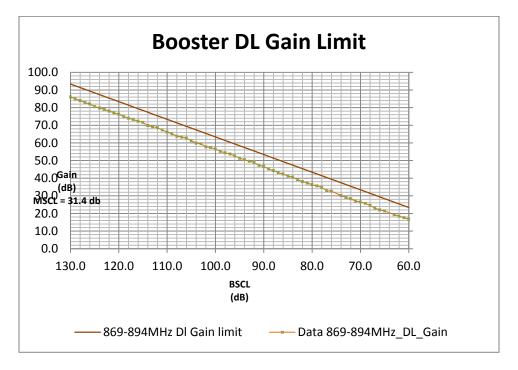
Variable gain UL timing plot: time between market 1 and 1R is the reaction time when the BSCL dropped 20dB.

Test environment conditions: 23°C, 15% Relative Humidity, 100kPa

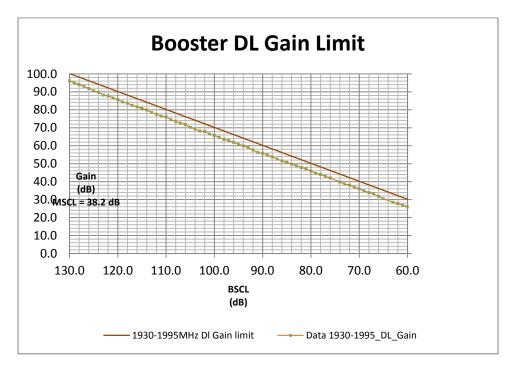












7.9 Summary of Results

Pass: As demonstrated in the test data section, the time between Cursor R1 and cursor 1 where the BSCL was reduced by 20 dB is less than 3 seconds. Computed gain is within the gain limit.

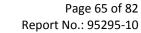
Input power	
	dBm
UL AWGN power at server port 836.5MHz	-90.0
UL AWGN Power at server port 1880MHz	-85.0

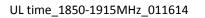


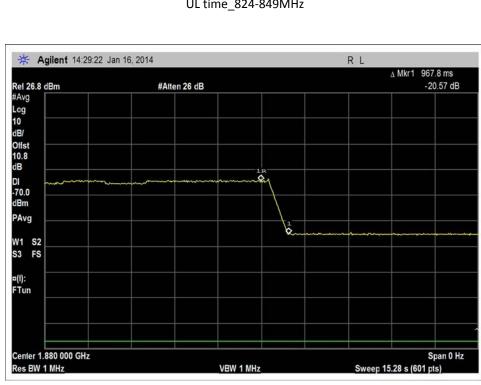
RPCH (dBm) power at Ant port	BSCL	1882.5MHz	836.5MHz	1882.5MHz	836.5MHz
RF Off		Measure	ed Power	Computed	UL Gain
-90.0	130.0	8.9	-1.5	93.9	88.5
-89.0	129.0	8.0	-2.4	93.0	87.6
-88.0	128.0	7.4	-2.9	92.4	87.1
-87.0	127.0	5.5	-3.8	90.5	86.2
-86.0	126.0	4.3	-4.9	89.3	85.1
-85.0	125.0	3.7	-6.0	88.7	84.0
-84.0	124.0	2.7	-6.9	87.7	83.1
-83.0	123.0	1.4	-7.8	86.4	82.3
-82.0	122.0	0.6	-8.6	85.6	81.4
-81.0	121.0	0.2	-10.3	85.2	79.7
-80.0	120.0	-1.0	-11.5	84.0	78.5
-79.0	119.0	-1.9	-12.1	83.1	77.9
-78.0	118.0	-2.3	-13.1	82.7	76.9
-77.0	117.0	-3.3	-14.4	81.7	75.6
-76.0	116.0	-4.9	-15.5	80.1	74.5
-75.0	115.0	-5.8	-16.3	79.2	73.7
-74.0	114.0	-6.6	-16.9	78.4	73.1
-73.0	113.0	-5.6	-17.7	79.4	72.3
-72.0	112.0	-8.0	-18.5	77.0	71.5
-71.0	111.0	-9.5	-19.7	75.5	70.3
-70.0	110.0	-10.5	-20.9	74.5	69.1
-69.0	109.0	-11.8	-21.6	73.2	68.4
-68.0	108.0	-12.3	-22.9	72.7	67.1
-67.0	107.0	-13.1	-23.9	72.0	66.1
-66.0	106.0	-14.5	-24.6	70.5	65.4
-65.0	105.0	-15.9	-26.5	69.1	63.5
-64.0	104.0	-17.1	-26.8	67.9	63.2
-63.0	103.0	-18.0	-27.6	67.0	62.4
-62.0	102.0	-18.2	-28.0	66.8	62.0
-61.0	101.0	-18.9	-30.0	66.1	60.0
-60.0	100.0	-20.1	-31.6	64.9	58.4
-59.0	99.0	-22.2	-32.6	62.8	57.4
-58.0	98.0	-23.1	-33.2	61.9	56.8
-57.0	97.0	-23.5	-34.7	61.5	55.3
-56.0	96.0	-24.3	-35.4	60.7	54.6
-55.0	95.0	-24.9	-35.6	60.1	54.4



-54.0	94.0	-25.7	-36.2	59.3	53.8
-53.0	93.0	-27.1	-37.0	57.9	53.0
-52.0	92.0	-29.7	-37.5	55.3	52.5
-51.0	91.0	-30.2	-38.9	54.8	51.1
-50.0	90.0	-31.4	-40.1	53.6	49.9
-49.0	89.0	-32.5	-41.4	52.5	48.6
-48.0	88.0	-32.6	-42.3	52.4	47.7
-47.0	87.0	-33.3	-43.6	51.7	46.4
-46.0	86.0	-34.4	-45.0	50.6	45.0
-45.0	85.0	-35.0	-45.8	50.0	44.2
-44.0	84.0	-36.4	-47.7	48.6	42.3
-43.0	83.0	-37.5	-48.0	47.5	42.0
-42.0	82.0	-38.4	-49.7	46.6	40.3
-41.0	81.0	-39.4	-49.9	45.6	40.1
-40.0	80.0	-77.0	-77.0	8.0	13.0
-39.0	79.0	-77.0	-77.0	8.0	13.0
-38.0	78.0	-77.0	-77.0	8.0	13.0
-37.0	77.0	-77.0	-77.0	8.0	13.0
-36.0	76.0	-77.0	-77.0	8.0	13.0
-35.0	75.0	-77.0	-77.0	8.0	13.0
-34.0	74.0	-77.0	-77.0	8.0	13.0
-33.0	73.0	-77.0	-77.0	8.0	13.0
-32.0	72.0	-77.0	-77.0	8.0	13.0
-31.0	71.0	-77.0	-77.0	8.0	13.0
-30.0	70.0	-77.0	-77.0	8.0	13.0
-29.0	69.0	-77.0	-77.0	8.0	13.0
-28.0	68.0	-77.0	-77.0	8.0	13.0
-27.0	67.0	-77.0	-77.0	8.0	13.0
-26.0	66.0	-77.0	-77.0	8.0	13.0
-25.0	65.0	-77.0	-77.0	8.0	13.0
-24.0	64.0	-77.0	-77.0	8.0	13.0
-23.0	63.0	-77.0	-77.0	8.0	13.0
-22.0	62.0	-77.0	-77.0	8.0	13.0
-21.0	61.0	-77.0	-77.0	8.0	13.0
-20.0	60.0	-77.0	-77.0	8.0	13.0









UL time_824-849MHz

<u>ekc</u> **Testing the Future** LABORATORIES, INC.

🔆 Agilent 14:34:04 Jan 10, 2014

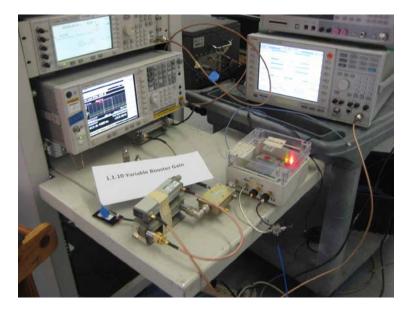
Test Data

R L

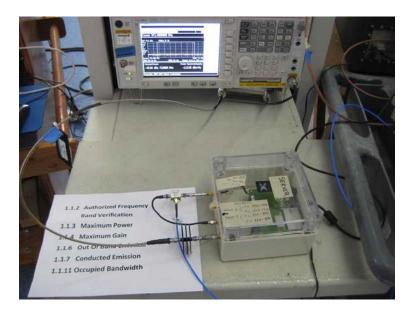
∆ Mkr1 466.7 ms



Test Setup Photo(s)



Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.9.



Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.9.



7.11 Anti-oscillation

Test Conditions / Setup

Test Location: CKC Laboratories • 110 Olinda Place • Brea, CA 92823 • 714-993-6112

Customer:	Nextivity, Inc.		
Specification:	7.11 Oscillation Detection		
Work Order #:	95295	Date:	1/9/2014
Test Type:	Conducted Emissions		
Equipment:	Provider Specific Consumer Signal	Sequence#:	1
	Booster	-	
Manufacturer:	Nextivity, Inc.	Tested By:	E. Wong
Model:	CELFI-RS225CU, CELFI-RS225WU,		110V 60Hz
S/N:	157216000246, 157216000246		

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02869	Spectrum Analyzer	E4440A	2/6/2013	2/6/2015
	AN02946	Cable	32022-2-2909К-	7/31/2013	7/31/2015
			36TC		
	C00082	RF Coupler	722-10-1.500V	8/21/2013	8/21/2015
	AN02475	1 dB step Attenuator	8494B	6/17/2013	6/17/2015
	AN03429	10dB step Attenuator	8496B	9/5/2013	9/5/2015
	AN03430	Attenuator	75A-10-12	9/5/2013	9/5/2015

Equipment Under	<i>Test</i> (* = EUT):			
Function	Manufacturer	Model #	S/N	
Provider Specific Co	onsumer Nextivity, Inc.	CELFI-RS225CU	157216000246	
Signal Booster*				
Provider Specific Co	onsumer Nextivity, Inc.	CELFI-RS225WU	157216000246	
Signal Booster				

Support Devices:

Function	Manufacturer	Model #	S/N	
Power Supply	Nextivity	WRG15F-120AB	20120111	
Power Supply	Nextivity	WRG15F-120AB	20120815	

Test Conditions / Notes:

The EUT is provider specific signal booster pair consisted of a Window unit (WU) and a Coverage unit (CU) using proprietary 5.8 GHz Wireless interface.

For testing purposes, the EUT are placed on the test bench, connected via coax cable and 50 dB attenuators.

Tx of WU is connected to RX of CU, RX of WU is connected to UNII TX port of CU.

Intended band of operation

UL= 824-849 MHz, 1850-1910 MHz,

DL= 869-894 MHz 1930-1990 MHz,

A fixed 40 dB attenuation to simulate with required isolation is included in the test setup for the specific booster design to operate in this mode. No bandpass filter is required.

Peak detector was employed for Timing measurement to enable video trigger . Additional measurement with RMS detector to show compliance with -70dBm/MHz limit after successful mitigation.

Plots with 120 second sweep demonstrate the booster does not re-start upon the first mitigation.

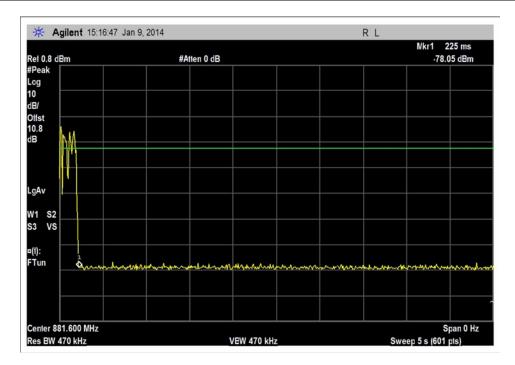
Test environment conditions: 23°C, 15% Relative Humidity, 100kPa



7.11 Summary of Results

Pass: All detectable oscillation was mitigated within 3 seconds and the device remains inactive without restarting. The captured level after mitigation is below -70dBm/MHz.

Test Data

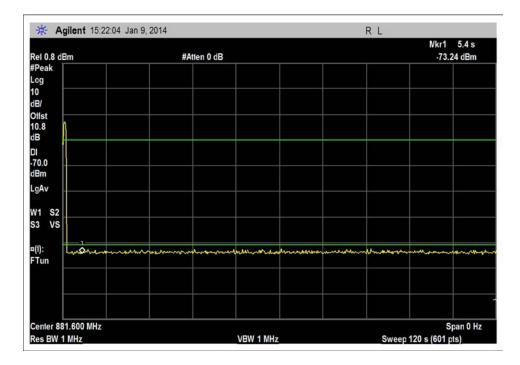


DL_869-894MHz_single



Ref 0.8 dBm	#^*	len 0 dB		Vkr1 225 ms →83.67 dBm
Avg	##I			-83.67 GBIII
.og				
0				
iB/				
Difst			 	
I0.8 IB				
70.0 iBm				
PAvg				
V1 S2				
53 FS				
:(1):				
(í): Tun				

DL_869-894MHz_single_-70dBm



DL_869-894MHz_single_120sec

DL_1930)-1995MHz_	single	-70dBm

* Agilent 15:35:05 J	an 9, 2014		RL	
el 0.8 dBm	#Atten 0 d	B		Wkr1 233.3 ms -83.35 dBm
vg				
g				
// fst				
.8				
0.0				
lvg				
1 \$2				
FS				
):				
1un				
◇			~~~~	

DL_1930-1995MHz_single

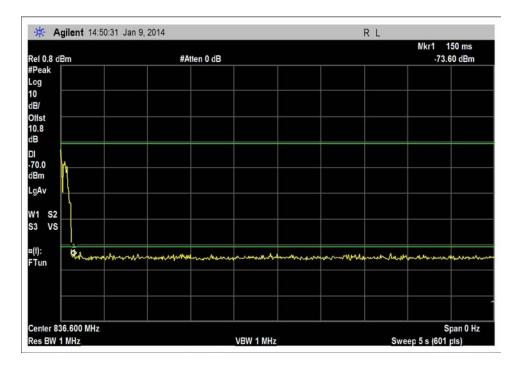
el 0.8 dBm		tten 0 dB					Nkr1 23	3.3 ms 44 dBm
Peak	#A	tien v dB					-73.4	
og								
) – – – – – – – – – – – – – – – – – – –								
3/								
lfst								
).8 3								
° (M)								
0.0								
3m								
Av								
1 S2								
3 VS								
1): & Tun	mana	and when	mmunder	- Multim	mm	······································	marchan	, margan





* Agilent 15:38:20	0 Jan 9, 2014		RI	L	
Rel 0.8 dBm	#Atten 0 dB			Nkr1 -72	5.6 s .77 dBm
Peak					
og					
0					
B/					
lfst					
0.8 B					
l '0.0					
Bm					
gAv					
yAv					
1 S2					
3 VS					
(I):	man man and many many	man man	markondena	multiment	man
lun					
enter 1.960 000 GHz					Span 0 Hz
es BW 1 MHz		VBW 1 MHz		Sweep 120 s (601	

DL_1930-1995MHz_single_120sec

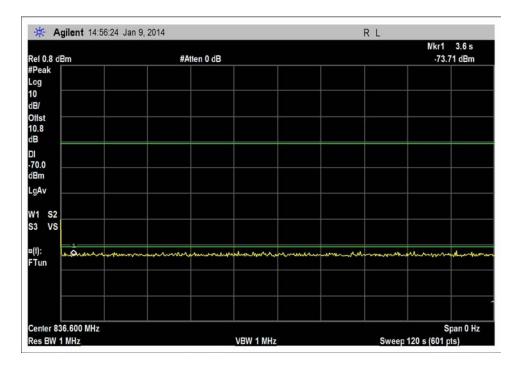


UL_824-849MHz_single

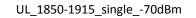


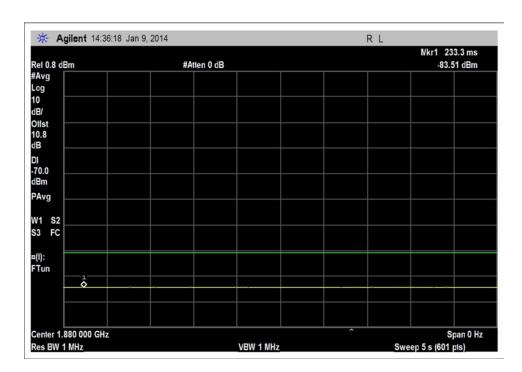
Avg	el 0.8 dBm	#Atten 0 di	5	Wkr1 150 ms -83.99 dBm
og 0 B/ D/list 0.8 B H r0.0 Bm Avg /1 S2 3 FS		#Atten o di	-	-65.55 0011
0 B/ Hfst 0.8 B H H H H H H H H H H H H H H H H H H				
B/ Image: Constraint of the second of the				
0.8 B D TO.0 Em PAvg V1 S2 3 FS (I): Tun	B/			
B	Mst			
M M <td>0.8</td> <td></td> <td></td> <td></td>	0.8			
70.0 IBm PAvg V1 S2 S3 FS V(1): Tun	iB			
iBm iBm PAvg iBm S3 FS iBm i(l): iBm	וכ			
PAvg N1 S2 S3 FS IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII				
N1 S2 S3 FS s((): Tun				
33 FS	PAvg			
33 FS				
און): ידעה	N1 S2			
	53 FS			
	4(I): Tup			
	<u>ہ</u>			

UL_824-849MHz_single_-70dBm



UL_824-849MHz_single_120sec





UL_1850-1915_single

					Nkr1 23	
el 0.8 dBm	#Att	en 0 dB			-74.2	2 dBm
Peak						
g						
3/						
list 0.8						
3						
0.0						
3m						
Av						
1 S2						
vs						
1): Homen						
Tun	mound	and the server and	mans when we	man man	man	www.

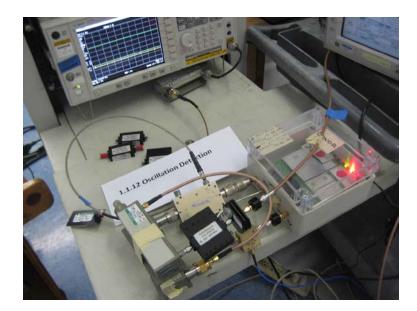




* Agilent 14:40:3	4 Jan 9, 2014		RL	
ef 0.8 dBm	#Atten 0 d	B		₩kr1 5.6 s -72.47 dBm
Peak				
og				
0				
3/				
lfst).8				
3				
0.0				
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1				
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enter 1.880 000 GHz				Span 0 Hz
es BW 1 MHz		VBW 1 MHz	9	weep 120 s (601 pts)

UL_1850-1915_single_120sec

Test Setup Photo(s)



Note: The sign in the photo has the incorrect numbering reference. The proper reference is 7.11.



7.13 Spectrum Block Filtering

Not applicable to this device because it does not contain block filtering.



7.14 Out of Band Gain Limits

Test Conditions / Setup

CKC Laboratories • 110 Olinda Place • Brea, CA 92823 • 714-993-6112				
Nextivity, Inc.				
7.14 Out of Band gain.				
95295	Date:	1/30/2014		
Conducted Emissions				
Provider Specific Consumer Signal	Sequence#:	1		
Booster				
Nextivity, Inc.	Tested By:	S. Yamamoto		
CELFI-RS225CU, CELFI-RS225WU,		110V 60Hz		
157216000246, 157216000246				
	Nextivity, Inc. 7.14 Out of Band gain. 95295 Conducted Emissions Provider Specific Consumer Signal Booster Nextivity, Inc. CELFI-RS225CU, CELFI-RS225WU,	Nextivity, Inc.7.14 Out of Band gain.95295Date:Conducted EmissionsProvider Specific Consumer SignalBoosterNextivity, Inc.CELFI-RS225CU, CELFI-RS225WU,		

Test Equipment:

Asset #	Description	Model	Calibration Date	Cal Due Date
02869	Spectrum Analyzer	E4440A	2/6/2013	2/6/2015
02946	Cable	32022-2-2909К- 36TC	7/31/2013	7/31/2015
01705	Attenuator	8496B	6/17/2013	6/17/2015
03430	Attenuator	75A-10-12	9/5/2013	9/5/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Provider Specific Consumer	Nextivity, Inc.	CELFI-RS225CU	157216000246
Signal Booster*			
Provider Specific Consumer	Nextivity, Inc.	CELFI-RS225WU	157216000246
Signal Booster			

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Nextivity	WRG15F-120AB	20120111
Power Supply	Nextivity	WRG15F-120AB	20120815
Signal Generator	Agilent	E4438C	MY42082260

Test Conditions / Notes:

The EUT is provider specific signal booster pair consisted of a Window unit (WU) and a Coverage unit (CU) using proprietary 5.8 GHz Wireless interface.

For testing purposes, the EUT are placed on the test bench, connected via coax cable and 50 dB attenuators. Tx of WU is connected to RX of CU, RX of WU is connected to UNII TX port of CU. Intended band of operation

UL= 824-849 MHz, 1850-1910 MHz,

DL= 869-894 MHz 1930-1990 MHz,

Signal generator RF output power set at -60dBm, 10 MHz AWGN , Booster DL Gain = 70dB, Booster UL Gain = 70dB Test environment conditions: 26° C, 31%, 100kPa



7.14 Summary of Results

Pass: As shown by the data below.

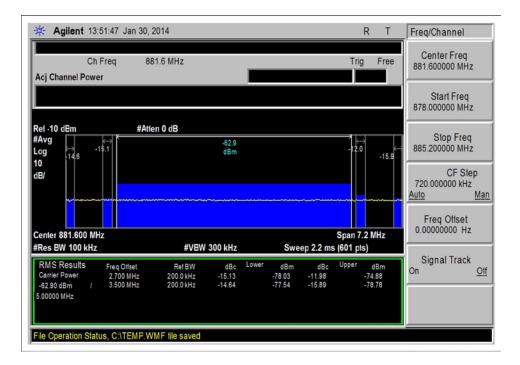
Results				
Input				
	-1 MHz	-0.2 MHz	0.2MHz	1MHz
UL: 1850-1910MHz	-77.6	-79.8	-76.8	-81.1
UL: 824-849MHz	-76.6	-75.1	-75.5	-78.7
DL: 1930-1990MHz	-77.5	-78.0	-74.9	-78.8
DL: 869-894MHz	-78.9	-76.5	-77.1	-77.1

Output				
	-1 MHz	-0.2 MHz	0.2MHz	1MHz
UL: 1850-1910MHz	-51.86	-51.17	-44.57	-48.7
UL: 824-849MHz	-46.38	-44.52	-44.6	-47.1
DL: 1930-1990MHz	-51.9	-49.1	-47.8	-50.5
DL: 869-894MHz	-54.7	-51.5	-52.7	-55.8

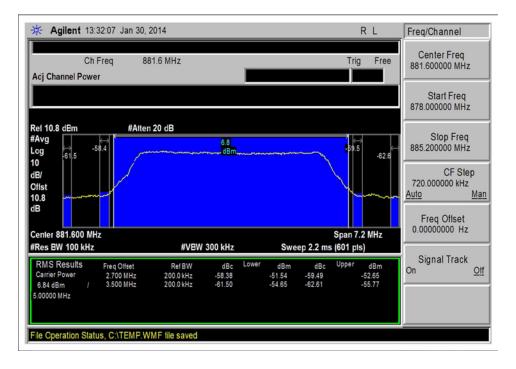
Gain				
	-1 MHz	-0.2 MHz	0.2MHz	1MHz
UL: 1850-1910MHz	25.7	28.6	32.2	32.4
UL: 824-849MHz	30.2	30.6	30.9	31.6
DL: 1930-1990MHz	25.7	28.9	27.1	28.3
DL: 869-894MHz	24.2	24.9	24.4	21.3
Limit	45.0	60.0	60.0	45.0

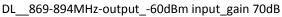


Test Data

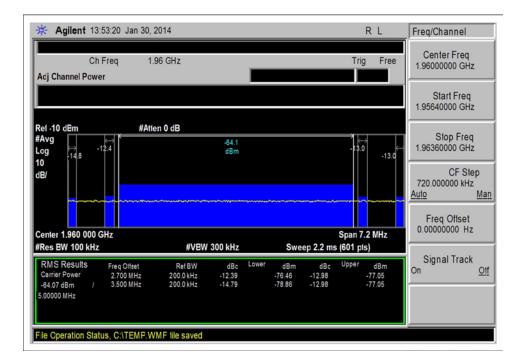


DL__869-894MHz-input_-60dBm input_gain 70dB

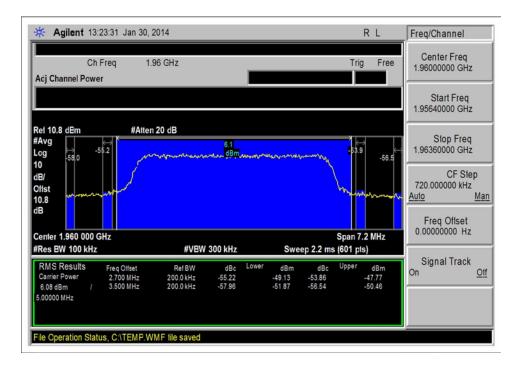






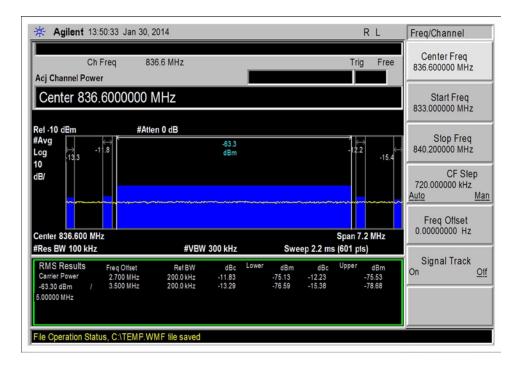


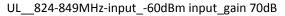
DL__1930-1990MHz-input_-60dBm input_gain 70dB

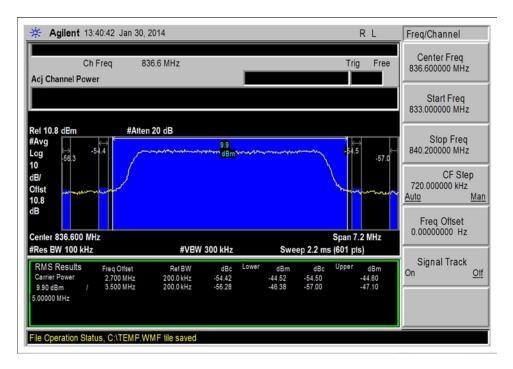


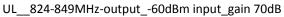
DL__1930-1990MHz-output_-60dBm input_gain 70dB



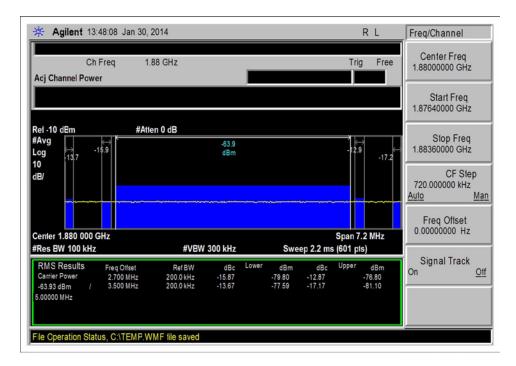


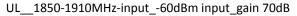


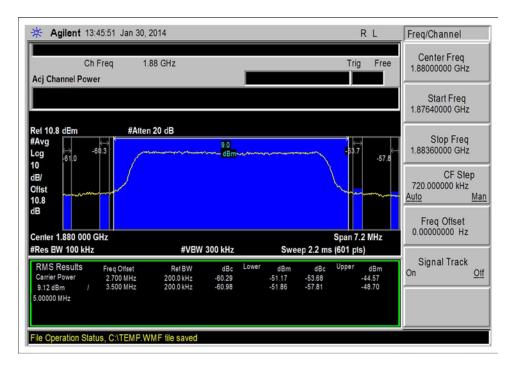


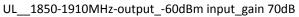














Test Setup Photo(s)

