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REPORT OF MEASUREMENTS

FOR CELLULAR SPECIALTIES, INC.

CELLULAR REPEATER SYSTEM

MODEL: CS12-555-400

FCC ID: NVR-DR-PROD8

Company Name:	Cellular Specialties, Inc.
Date of Report:	February 16, 2010
Test Report No:	R-5240N-1, Rev. A
Test Start Date:	November 5, 2009
Test Finish Date:	February 9, 2010
Test Technician:	Matt Seamans
Laboratory Supervisor:	Todd Hannemann
Report Prepared By:	Jamie Ramsey

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Certification and Signatures

We certify that this report is a true report of the results obtained from the tests of the equipment stated and relates only to the equipment tested. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Scott Wentworth Branch Manager NVLAP Approved Signatory

Todd Hannemann Laboratory Supervisor

Non-Warranty Provision

The testing services have been performed, findings obtained, and reports prepared in accordance with generally accepted testing laboratory principles and practices. This warranty is in lieu of all other warranties, either express or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement, or certification of the product or material tested. This report must not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the U.S. Government.

CERTIFICATION APPLICATION SUMMARY

Applicant/Manufacturer:	Cellular Specialties 670 North Commercial Street Manchester, NH 03101
Equipment under Test (EUT):	The EUT is a Cellular Repeater System (Cellular Amplifier)
Model:	CS12-555-400
FCC ID Number:	FCC ID: NVR-DR-PROD8
Applicable Test Standard:	FCC Parts 2 & 22
Measurement Procedure:	ANSI/TIA-603-C-2004
Device Classification:	Mobile
EUT Frequency Range Band:	Uplink: 824MHz to 849MHz Downlink: 869MHz to 894MHz
Power Output Rating for Certification Grant based on Intermodulation Data Composite Power	Uplink: +33.3dBm = 2.14W Downlink: +27.40dBm = 0.550W
Modulation Type:	CDMA (F9W)
RF Exposure + Antenna Installation:	See Attached Installation/Users Manual and MPE Evaluation
Measurements Required by FCC:	See Report Section 1 (Summary of Test Program) and the following Test Report Data Attachments:
	-RF Power Output -Intermodulation Characteristics (Two-Tone) -Occupied Bandwidth -Spurious Emissions at Antenna Terminals -Effective Radiated Power of Spurious Radiation

-Frequency Stability

SECTION 1 SUMMARY OF TEST PROGRAM

INTERMODULATION CHARACTERISTICS (TWO TONE)

Measurement Procedure:

Two signals were injected, in turn, to each uplink and downlink frequency band via a two way power combiner. Testing was performed at both the low band edge and high band edge of each pass band. The output of each signal generator was adjusted so that the two output fundamental frequencies were equal in magnitude. Testing was performed for CDMA Modulation type. At the maximum specified input power levels all intermodulation products were at -13dBm or below. See attached test data.

OCCUPIED BANDWIDTH

Measurement Procedure:

For Occupied Bandwidth, measurements were made to compare the input signal to the output signal. The signal generator output was connected to the spectrum analyzer. A CDMA modulation signal was then applied to the carrier. Waveforms were then noted on an X-Y plot. Next, the signal generator was connected to the EUT and the output of the EUT was connected to the spectrum analyzer. The output waveform after amplification was then compared to the original input signal to ensure that no significant differences occurred between the input signal and the amplified signal. Testing was performed at one frequency within each passband (uplink and downlink). See Occupied Bandwidth Data.

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Measurement Procedure:

The signal generator output was connected in turn to the uplink and downlink input ports of the EUT. The input power level was at the maximum level which was ascertained during the Power Output test. A spectrum analyzer was connected to the output of the EUT. The input test frequencies used were three frequencies (low, mid & high) within each passband (uplink and downlink). The level of any spurious emission was recorded. Testing was performed in the frequency range of 30MHz to 9GHz. Testing was performed for CDMA modulation type. The spurious emissions limit is -13dBm as specified in FCC Part 22. All emissions were below the specified -13dBm limit. See attached test data.

EFFECTIVE RADIATED POWER OF SPURIOUS RADIATION

Measurement Procedure:

The test sample was placed on an 80cm high wooden test stand which was located 3 meters from the test antenna on an FCC listed test site. A signal generator was connected to the input of the amplifier. The signal generator output was set to provide the input power level necessary to achieve maximum output power of the amplifier at 3 frequencies (low, mid & high) within each passband (uplink and downlink). The effective radiated power of each out of band spurious emission was measured using the substitution method specified in ANSI/TIA-603-C-2004. The frequency range of the test was 30MHz - 9GHz. The limit for out of band spurious emissions is -13dBm as specified in Part 22. All emissions were below the specified -13dBm limit. See attached test data.

RF POWER OUTPUT (Composite Power)

The RF Power Output test was performed in conjunction with the intermodulation test using RMS channel power measurements of two CDMA channels with a one channel separation in between. The measurements were taken with the AGC turned off at maximum output power with all intermodulation products below the -13dBm limit. The measured output power matched the manufacturer's rated output power. See attached test data.

FREQUENCY STABILITY MEASUREMENTS

The test sample was placed into a temperature chamber with the DC input power supplied through a variable power source. A signal generator was used to provide the input signal and the output was measured with a frequency counter. With the test sample operating at maximum output power the test sample's output frequency was measured and recorded at the extremes of the temperature range and at 10 degree increments from -30 degrees C to +50 degrees C while the DC input voltage was varied from 85 to 115% of nominal. The output frequency for both the uplink and downlink stayed within the assigned frequency band. See attached test data.

SECTION 2

EQUIPMENT LISTS

Spurious Radiated Emissions

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	1/21/2009	1/21/2010
3117	Power Supply	B&K Precision	0-30 Vdc, 3.0 A	1630	1/31/2009	1/31/2010
3258	Double Ridge Guide	EMCO	1 - 18 GHz	3115	8/20/2009	8/20/2010
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	6/25/2009	6/25/2010
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	1/27/2009	1/27/2010
5070	EMI Test Receiver	Rohde & Schwarz	20 Hz - 40 GHz	ESIB40	1/14/2009	3/14/2010

Frequency Stability

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
4997	Digital Thermometer	Omega	N/A		8/5/2009	8/5/2010
5049B	Digital Multimeter	Fluke	N/A	111	8/19/2009	8/19/2010
5052	Power Supply	EPSCO INC.	125vdc - 8A	PS-1000-125	7/24/2008	7/24/2010
5077	Temperature Chamber	Associated Env. System	ns-50 to 150 Deg C	ZFD-531	8/5/2009	8/5/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2009	5/11/2010

Intermodulation Characteristics

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
1345	Attenuator	Narda East	DC - 18GHz	776B-30	6/8/2009	6/8/2010
5133	10 dB Atten.	Narda	DC - 12.4 GHz / 2 W	757C=10	8/18/2009	8/18/2010
5134	10 dB Atten.	Narda	DC - 12.4 GHz / 2 W	757C-10	8/18/2009	8/18/2010
5138	10 dB Atten.	Narda	DC - 11 GHz / 20 W	768-10	8/18/2009	8/18/2010
5070	EMI Test Receiver	Rohde & Schwarz	20 Hz - 40 GHz	ESIB40	1/14/2009	3/14/2010

Occupied Bandwidth

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
5026A	20 dB Attenuator	Narda	DC - 11 GHz	768-20	1/20/2009	1/20/2010
5134	10 dB Atten.	Narda	DC - 12.4 GHz / 2 W	757C-10	8/18/2009	8/18/2010
5138	10 dB Atten.	Narda	DC - 11 GHz / 20 W	768-10	8/18/2009	8/18/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2009	5/11/2010

Spurious Emissions Antenna Ports

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
1345	Attenuator	Narda East	DC - 18GHz	776B-30	6/8/2009	6/8/2010
5133	10 dB Atten.	Narda	DC - 12.4 GHz / 2 W	757C=10	8/18/2009	8/18/2010
5134	10 dB Atten.	Narda	DC - 12.4 GHz / 2 W	757C-10	8/18/2009	8/18/2010
5138	10 dB Atten.	Narda	DC - 11 GHz / 20 W	768-10	8/18/2009	8/18/2010
5070	EMI Test Receiver	Rohde & Schwarz	20 Hz - 40 GHz	ESIB40	1/14/2009	3/14/2010

SETUP PHOTOGRAPH

SPURIOUS RADIATED EMISSIONS



Test Setup

SETUP PHOTOGRAPHS

SPURIOUS RADIATED EMISSIONS



Horizontal Antenna Polarization, 30 to 1000 MHz



Vertical Antenna Polarization, 30 to 1000 MHz

SETUP PHOTOGRAPHS

SPURIOUS RADIATED EMISSIONS



Horizontal Antenna Polarization, 1 to 9 GHz



Vertical Antenna Polarization, 1 to 9 GHz

SETUP PHOTOGRAPH OCCUPIED BANDWIDTH



Test Setup

SETUP PHOTOGRAPH SPURIOUS EMISSIONS AT ANTENNA TERMINALS, INTERMODULATION (TWO TONE) & RF POWER OUTPUT



SETUP PHOTOGRAPH FREQUENCY STABILITY



Test Setup



Test Setup

			RE	TLIF	TESTI	NG LA	BOR	ATOR	IES =		
					EMISSIO	NS DATA	SHEET	Γ			
Test M	lethod	:	Spurious Radi	ated Emissior	ns (ERP) 30 MH	Hz to 9GHz					
Custor	mer:		Cellular Speci	alties, Inc.			Job No:	R-5240N-1			
Test S	ample	:	Cellular Repe	ater System							
Model	No:		CS12-555-400)			Serial No:	See Test Rep	oort		
Test S	pecific	ation:	FCC Part 2.10 TIA/EIA-603)53			Paragraph:	2.1053			
Operat	ting M	ode:	Amplifying inp	ut signal							
Techni	ician:		M. Hippert				Date:	11/25/2009			
Notes:			Uplink Freque Peak Detector			Tested at 3 I	nput frequer	ncies:824, 836.5	, 849 MHz		
Τe	est	Antenna	Reference	Signal Gen	Reference Ant					Corrected	Spurious
Frequ	uency	Position	Reading	Level	Gain					Reading	Limit
M	Hz	(H/V) - Height	dBuV	dBm	dBl					dBm	dBm
30.	.00	-	-	-	-					-	-13.00
		-	-	-	-					-	I
		-	-	-	-					-	1
		-	-	-	-		-			-	
		-	-	-	-					-	1
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		-	-	-	-					_	-
		-	-	-	-					-	
900	0.00	-	-	-	-					-	-13.00
								-			
		No emissions	observed abov	ve the noise flo	por of the test e	equipment whic	n was a mir	nimum of 10dB b	elow the limit.		
Data	Shee	t 1 of 2									R-5240N-1

		RF	TLIF	TESTI	NG LA	BOR	ATOR	IES		
				EMISSIO	NS DATA	SHEE	Т			
Test Method	l:	Spurious Rad	iated Emissior	ns (ERP) 30 MH	Hz to 9GHz					
Customer:		Cellular Speci	alties, Inc.		,	Job No:	R-5240N-1			
Test Sample	:	Cellular Repe	ater System							
Model No:		CS12-555-400	0			Serial No:	See Test Rep	oort		
Test Specifi	cation:	FCC Part 2.10)53							
		TIA/EIA-603				Paragraph:	2.1053			
Operating N	ode:	Amplifying inp	ut signal							
Technician:		M. Hippert				Date:	11/25/2009			
Notes:		Downlink Fred Peak Detecto		: 869-894 MHz n: CW	Tested at	3 Input free	quencies:869, 88	31.5, 894 MHz		
Test	Antenna	Reference	Signal Gen	Reference Ant					Corrected	Spurious
Frequency	Position	Reading	Level	Gain					Reading	Limit
MHz	(H/V) - Height	dBuV	dBm	dBl					dBm	dBm
30.00	-	-	-	-					-	-13.00
	-	-	-	-					-	
	-	-	-	-					-	
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	No. emiliaria							alaurah - Parti		
	INO EMISSIONS	observed abov	ve the hoise fl	oor of the test e	equipment which	n was a mi	nimum of 10dB b	elow the limit.		
Data Shee	et 2 of 2									R-5240N-1

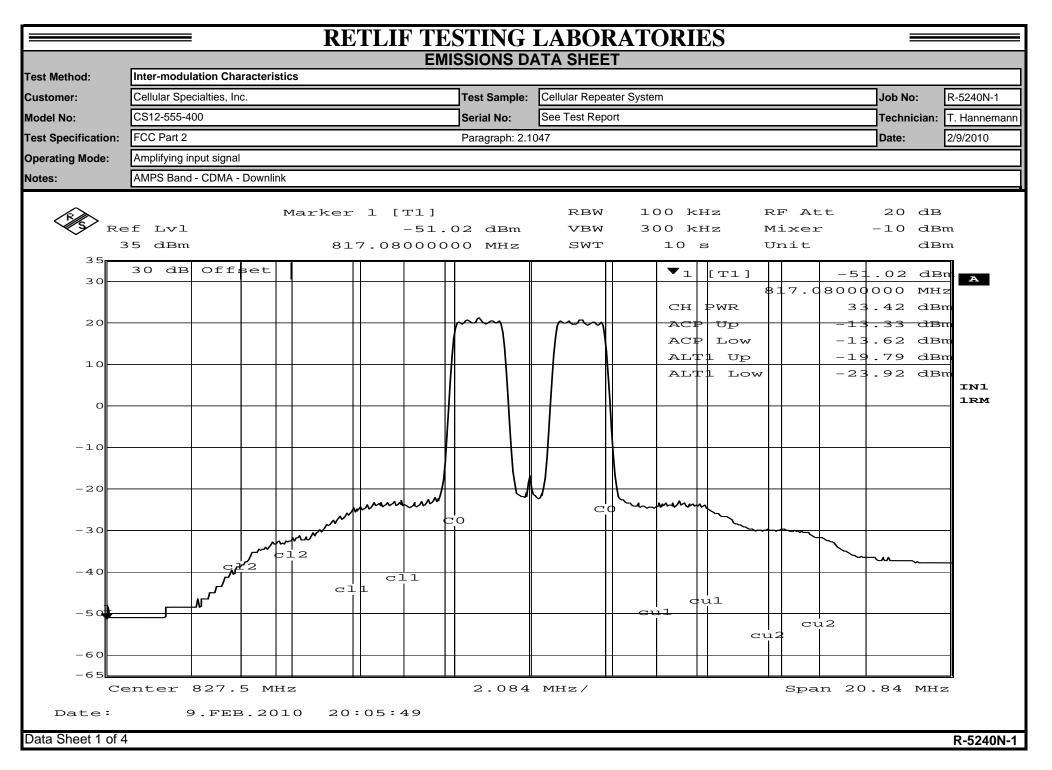
thod:												D
er:	CS12-555-400 Serial No: Seria		-	em								
o:				4	IS DATA SHEET mple: Cellular Repeater System Job No: R-5240N-1 io: See Test Report Technician: M.Seamans							
ecification:				Paragraph	1: 2.104	9					Date:	11/23/2
ng Mode:		-										
	CDMA - Uplink	- Output at 836.5 MH	Z									
Ref	A gilent 35 dBm :	10:13:57			-					Mkr1		
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dB/	-											
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30.5 dB							-					
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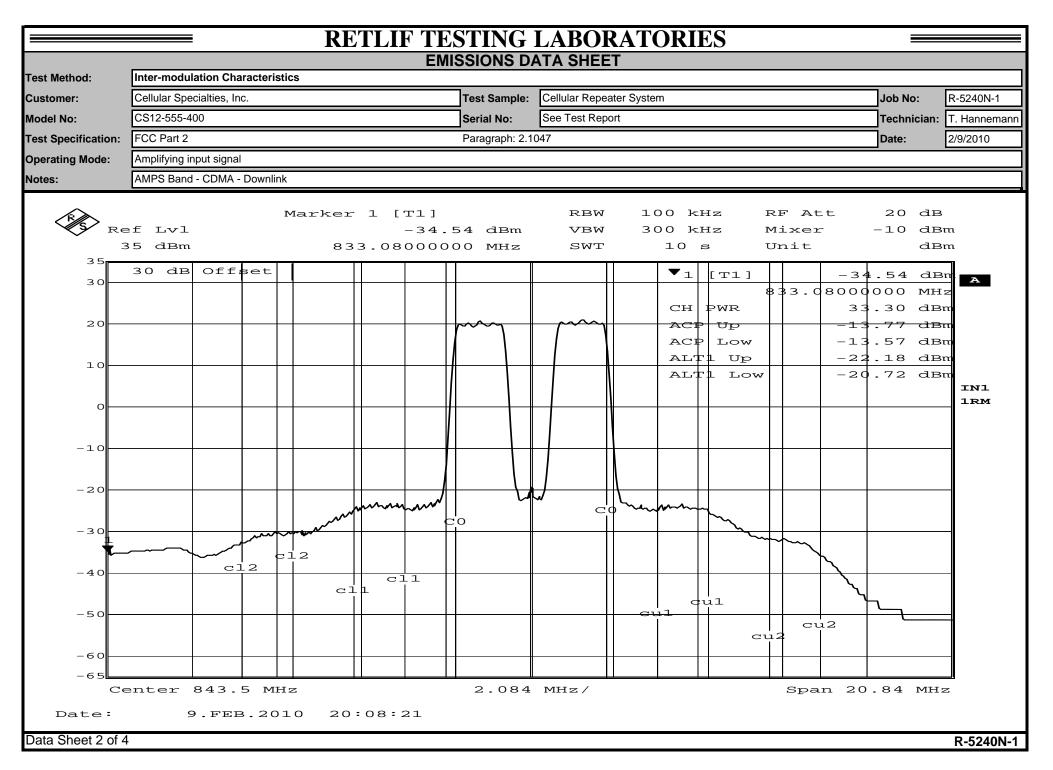
thod:					1							
er:	2 At				Test Sample:	Cellular Repeater Sy	/stem			Job No: R-5240N-		
o:	<u></u>	ed Bandwidth Specialties, Inc. 55-400 art 2 ing input signal Uplink - Input at 836.5 MHz t 10:23:21 Nov 23, 2 d B m Att		Serial No:	See Test Report				Technician:			
ecification:		· .			Paragraph: 2.1	049				Date:	11/23/2	
ng Mode:												
	CDIMA - Uplink -	Input at 836.5 MHz										
	Agilent	10:23:21		2009 tten 15	d B			λ		36.500 55.04		
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S3 F					-+-					<u> </u>		
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	BW 30 k				# VBW 1	00 kHz		Sweep 1				
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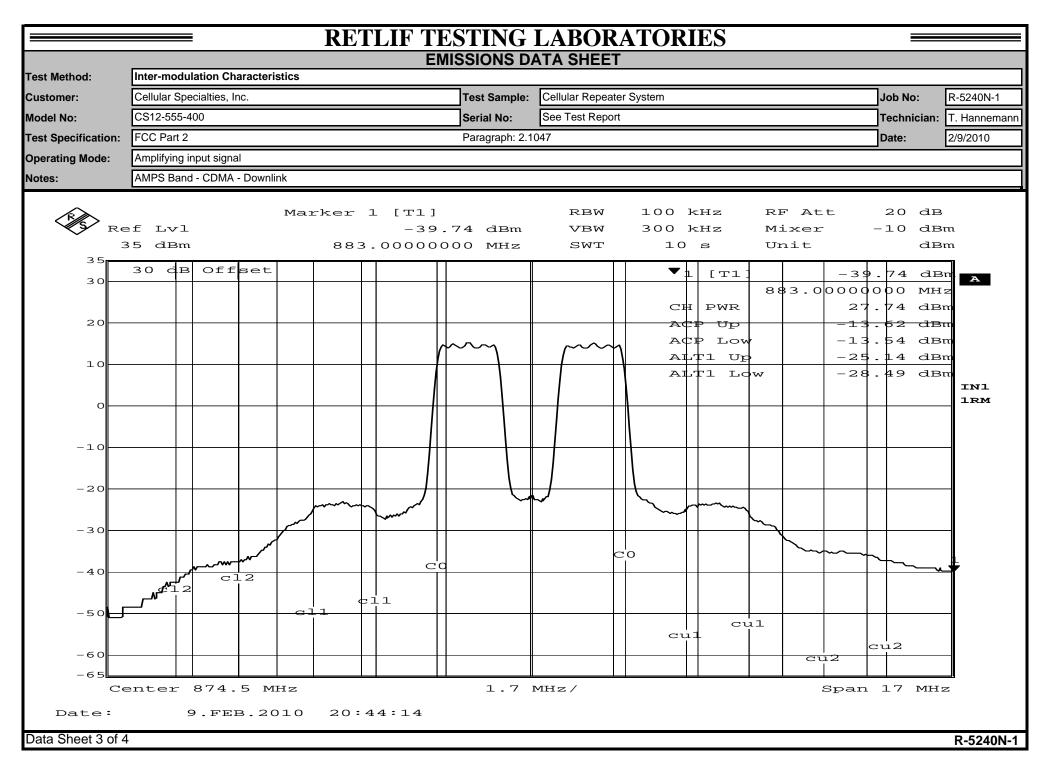
	Occupied Bandwidth Cellular Specialties, Inc. CS12-555-400				7	E a a a	_				_
er:	· ·		Test Sample:	Cellular Repeate				Job No: R-52			
D:	<u></u>			Serial No:	See Test Report				Technician: M.Sea		
	Cellular Specialties, Inc. CS12-555-400 FCC Part 2 Amplifying input signal CDMA - Uplink - Output at 881.5 MHz Agilent 10:04:23 Nov 23, 35 d B m				Paragraph: 2.1	049				Date: 11/2	23/
g Mode:											_
	CDMA - Uplink - O		Z								_
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Log 10											
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					18 - L	-			-		
	er 881.5 M BW 30 kH		· · · · · · · · · · · · · · · · · · ·		# V BW 1	00.kHz		Sweep	Sp 11.44 m	an 10 MF s (401 pt	

thod:	Occupied Bandw	vidth				ATA SHEET						
ier:	Cellular Specialtie				Test Sample:	Cellular Repeater Sys	stem			Job No:	R-5240	
lo:	CS12-555-400	-, -			-	See Test Report						
ecification:	FCC Part 2				Paragraph: 2.1					Date:	11/23/20	
ng Mode:	Amplifying input signal											
5	CDMA - Uplink - II											
Ref	A gilent 1 4. <u>54 dBm</u>	0:07:37		009 ten 15	i d B				Mik,r1 8	81.500 -61.7		
Peak Log												
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	-										-	
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	BW 30 kH				#VBW 1	00.kHz		Sweep				

		-			DNS DAT	-							
Test Method	:	Spurious Emissions at the Antenna Terminals 30 MHz to 9 GHz											
Customer:		Cellular Spec	ialties, Inc.			Job No:	R-5240N-1						
Test Sample:		Cellular Repe	Cellular Repeater System										
Model No:		CS12-555-40	0			Serial No:	See Test Rep	ort					
Test Specifi	ation:		-										
rest specifi	auon.	FCC Part 2 Paragraph: 2.1051											
Operating M	ode:	Amplifying input signal											
Technician:		T. Hanneman	n			Date:	2/9/2010						
Notes:		Uplink Freque	encv: 824-84	9 MHz	Downlink Fr	equency: 86	9-894 MHz						
		· ·	•		MHz Channel I								
Uplink	Test		Reading	Limit	Downlink	Test		Reading	Limit	T			
Input Signal	Frequency	Frequencies			Input Signal	Frequency	Frequencies	g					
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm	<u> </u>			
-49.20	824.00		-		-54.40	869.00		-					
1		1648.00	-24.00	-13.0	1		1738.00	-24.00	-13.0	1			
I	I	2472.00	-24.00	1	I	I	2607.00	-24.00	1	-			
I	I	3296.00	-24.00	1	I	I	3476.00	-24.00	I	-			
I	I	4120.00	-24.00	I	I	I	4345.00	-24.00	I	-			
I	I	4944.00	-24.00	I	I	I	5214.00	-24.00	I	-			
I	I	5768.00	-24.00	I	I	I	6083.00	-24.00	I	-			
I	I	6592.00	-24.00		I	I	6952.00	-24.00	I	1			
Ι	Ι	7416.00	-24.00	I	I	I	7821.00	-24.00	I	1			
-49.20	824.00	8240.00	-24.00	-13.0	-54.40	869.00	8690.00	-24.00	-13.0				
-49.20	836.50				-54.40	881.50							
Ι	Ι	1673.00	-24.00	-13.0	Ι	I	1763.00	-24.00	-13.0				
I	Ι	2509.50	-24.00		I	Ι	2644.50	-24.00					
I	I	3346.00	-24.00		I		3526.00	-24.00	I				
I	I	4182.50	-24.00	I	I	I	4407.50	-24.00	I				
I	I	5019.00	-24.00	I	I	I	5289.00	-24.00	I	<u> </u>			
	I	5855.50	-24.00		I		5170.50	-24.00		╉─────			
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-49.20	836.50	8365.00	-24.00	-13.0	-54.40	881.50	8815.00	-24.00	-13.0				
-49.20	849.00				-54.40	894.00				+			
43.20	1	1698.00	-24.00	-13.0	1	1	1788.00	-24.00	-13.0				
	1	2547.00	-24.00	-13.0		1	2682.00	-24.00	10.0	+			
	I	3396.00	-24.00				3576.00	-24.00	I	+			
Ι	I	4245.00	-24.00	1		I	4470.00	-24.00	1	1			
I	1	5094.00	-24.00	1		1	5364.00	-24.00	1	1			
I	I	5943.00	-24.00	l	I	I	6258.00	-24.00	I	1			
Ι	I	6792.00	-24.00	I	I	I	7152.00	-24.00	I	1			
Ι	Ι	7641.00	-24.00	I	I	I	8046.00	-24.00	I	1			
-49.20	849.00	8490.00	-24.00	-13.0	-54.40	894.00	8940.00	-24.00	-13.0				







				RET	LIF TF	ESTING	LABOR	ATOR	IES			
							ATA SHEET					
Test Method:	Inter-modul	ation Charact	eristics									
Customer:	Cellular Spe	cialties, Inc.				Test Sample:	Cellular Repeater System				Job No:	R-5240N-1
Model No:	CS12-555-400					Serial No:	See Test Report				Techniciar	: T. Hannemann
Test Specification:	FCC Part 2	FCC Part 2					047				Date:	2/9/2010
Operating Mode:	Amplifying ir	nput signal										
Notes:	AMPS Band	- CDMA - Dow	nlink									
~	f Lvl 5 dBm					98 dBm 000 MHz	RBW VBW SWT	100 1 300 1 10	kHz s	RF Att Unit		3 3m
30— 20—	30 dB	Offse				~~~~		AC	[T1] PWR PUP PLOW	897.00	000000 MI 27.40 di -13.04 di -13.39 di	3m 3m 3m
10 0 -10									Tl Up,		-24.86 di	
-20												
-40	cl2			-1			C	:O				
-60						1 7		cu		cu2		
Date =	ç	888.5 .FEB.2		20:5	6:11	1.7	mhz/			Sr	pan 17 MF	¹ ∞ R-5240N-1

		= RI	ETLIF	TEST	ING L	ABOR	ATOR	IES :				
				TABUL	AR DATA	SHEET						
Test Method	:	RF Power O	utput									
Customer:		Cellular Spec	ialties, Inc.			Job No:	R-5240N-1					
Test Sample	:	Cellular Repe	eater System			_						
Model No:		CS12-555-40	00			Serial No:	See Test F	Report				
Test Specific	ation:	FCC Part 2						·				
Operating Mode:		Paragraph: 2.1046 Amplifying input signal										
Technician:		T. Hannemar				Date:	2/9/2010					
Notes:			ency Range: 8 utput measurer				ge: 869-894 MH urement during		ation test.			
Test	Measured											
Frequency	Level	Level										
MHz	dBm	mW										
(Uplink) Low												
827.50	33.42	2197.86										
021.00	00.12	2101.00										
(Uplink) High												
843.50	33.30	2137.96										
(Downlink) Low												
(Dominin) Low												
874.50	27.74	594.3										
(Downlink) High												
888.50	27.40	549.5										
000.00	21.40	040.0										
	3.75 MHz Ch	nannel power Meas	surement taken w	ith the intermodul	ation spurs at the	ir maximum wit	hin the -13 dBm sp	ecification using	a RMS detector.			
Data Shee	t 1 of 1									R-5240N-1		

			FMISSIC	ONS DAT	A SHEET	Г							
Test Metho	d٠	Frequency Stability	Linicold										
			-		lak Nar								
Customer:		Cellular Specialties, In			Job No:	R-5240N-1							
Test Sample: Model No:		Cellular Repeater System											
		CS12-555-400			Serial No:	See Test Re	oort						
Test Specif	ication:	FCC Part 2											
		Paragraph: 2.1055											
Operating N	/lode:	Amplifying input signal											
Technician		M.Seamans			Date:	11/25/2009							
Notes:				minal Valtag									
NOLES.		Uplink Frequency 836.5 MHz Nominal Voltage = 72 VDC Downlink Frequency 881.5 MHz											
	. . .			- 0				- 0					
Temp	Test		Frequency @ 61.2 VDC	Frequency @ 64.8 VDC	Frequency @ 68.4 VDC	Frequency @ 72 VDC	Frequency @ 75.6 VDC	Frequency @ 79.2 VDC	Frequency @ 82.8 VDC				
C	Frequency MHz							79.2 VDC MHz	MHz				
U			MHz	MHz	MHz	MHz	MHz	IVIFIZ	IVIFIZ				
	(Downlink)												
-30	881.5000		881.49750	881.49750	881.49750	881.49750	881.49750	881.49750	881.49750				
-20	001.0000		881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
-10	I		881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
0	i i		881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
10	l l		881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
20	i i		881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
30			881.49750	881.49750	881.49750	881.49750	881.49750	881.49750	881.49750				
40			881.50000	881.50000	881.50000	881.50000	881.50000	881.50000	881.50000				
50	881.5000		881.50500	881.50500	881.50500	881.50500	881.50500	881.50500	881.50500				
	(Uplink)												
-30	836.5000		836.49750	836.49750	836.49750	836.49750	836.49750	836.49750	836.49750				
-20			836.50000	836.50000	836.50000	836.50000	836.50000	836.50000	836.50000				
-10			836.49750	836.49750	836.49750	836.50000	836.49750	836.49750	836.49750				
0			836.49750	836.49750	836.49750	836.49750	836.49750	836.49750	836.49750				
10			836.50000	836.50000	836.50000	836.49750	836.50000	836.50000	836.50000				
20			836.50000	836.50000	836.50000	836.50000	836.50000	836.50000	836.50000 836.50000				
30 40			836.50000 836.50000	836.50000 836.50000	836.50000 836.50000	836.50000 836.50000	836.50000 836.50000	836.50000 836.50000	836.50000				
40 50	836.5000		836.49750	836.49750	836.49750	836.49750	836.49750	836.49750	836.49750				
50	030.3000		830.49730	030.49730	030.49730	030.49730	030.49730	030.49730	000.40700				
	1			1	1		h						