


Advanced
Compliance

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**Electromagnetic
Emission
Compliance
Test Report**



Equipment Under Test (EUT) Applicant	BTS Link-208 Repeater Shyam Telecom Inc.	
In Accordance With	FCC Part 22, Subpart H FCC Part 24, Subpart E	
Test by	Advanced Compliance Laboratory, Inc. 6 Randolph Way Hillsborough, New Jersey 08844	
Authorized by	Wei Li Lab Manager	Signature 
Date	April 30, 2008	
AC Lab Report Number	0048-080415-01	



Lab Code:200101-0

**The test result in this report is supported and
covered by the NVLAP accreditation.**

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Section 1. Summary of Test Results

Manufacturer: Shyam Telecom Inc.
Model No.: BTS Link-208 Repeater
Sample No.: MORCDH002+RORCDH002

General: **All measurements are traceable to national standards**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 22, Subpart H& Part 24, Subpart E.

New Submission Production Unit
 Class II Permissive Change Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

“See Summary of Test Data”



NVLAP LAB CODE: 200101-0

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Summary of Test Data

RF Power Output	22.913(a) 24.232(a)	500W ERP 100W EIRP	Complies
Occupied Bandwidth (Voice & SAT)	2.1049(i)	Mask	N/A*
Occupies Bandwidth (Wideband Data)	2.1049(i)	Mask	N/A*
Occupied Bandwidth (Digital)	2.1049(i)	Mask	Complies
Spurious Emissions at Antenna Terminals	22.917 24.238	-13 dBm	Complies
Field Strength of Spurious Emissions	22.917 24.238	-13 dBm E.I.R.P.	Complies
Frequency Stability	22.355 24.235	1.5 ppm	N/A*

* These items are NOT applied to the EUT.

The estimated uncertainty of the test result is given as following. The method of uncertainty calculation is provided in Advanced Compliance Lab. Doc. No. 0048-01-01.

	Prob. Dist.	Uncertainty(dB) 30-1000MHz	Uncertainty(dB) 1-6.5GHz	Uncertainty(dB) Conducted
Combined Std. Uncertainty u_c	norm.	± 2.36	± 2.99	± 1.83



Wei Li
Lab Manager
Advanced Compliance Lab

Date: April 30, 2008

Section 2. General Equipment Specification

Supply Voltage		100-240VAC 47/63Hz & -48VDC				
Frequency Range	Cellular	UL/824-849MHz; DL/869-894MHz				
	PCS	UL/1850-1910MHz; DL/1930-1990MHz				
	Modulation	CDMA (F9W) <input checked="" type="checkbox"/>	GSM (GXW) <input checked="" type="checkbox"/>	EDGE (G7W) <input checked="" type="checkbox"/>	CDPD (F9W) <input type="checkbox"/>	AMPS (F8W, F1D) <input type="checkbox"/>
Output Impedance		50ohm				
Frequency Translation		F1-F1 <input checked="" type="checkbox"/>	F1-F2 <input type="checkbox"/>	N/A <input type="checkbox"/>		
		Software <input type="checkbox"/>	Duplexer Change <input type="checkbox"/>	Full Band Coverage <input checked="" type="checkbox"/>		

DC voltages and DC currents per 2.1033(c)(8)

The input supply to the transmitter was set at 27Volts DC. The RF power output was measured with the indicated voltage and current applied into the final RF amplifying device(s).

800 MHz Cellular / 1900MHz PCS

RF Output, DC Current and RF Input Power are all average values.

Measured Maximum RF DL output : 33.0 dBm (rated); 36.4dBm (Over drive)

Measured Minimum RF DL output: 1.21dBm

Measured Maximum RF UL output : -25.0dBm (rated)

Measured Minimum RF UL output: -50.3dBm

Tune-up procedure per 2.1033(c) (9)

There are no user accessible adjustments or tuning in this portable cellular transceiver. All necessary adjustments and tuning are performed during manufacture of the product. Any adjustments or tuning after service or repair are done as part of that process as special equipment is required to perform such adjustments.

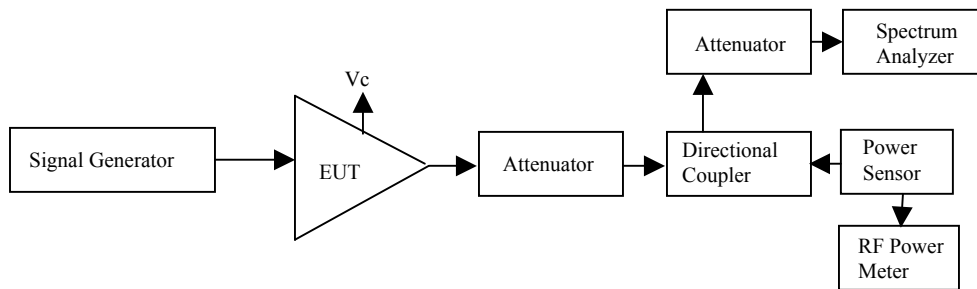
Description of Operation

This device is a dual band repeater operating in both downlink and uplink spectrums of Cellular and PCS bands.

System Diagram

See Attachment.

General EUT Setup



Testing Frequency/Channel/Port Selection:

Band I& II: L(owest), M(iddle), H(ighest) of UL & DL bands

Section 3. RF Output Power

Name of Test:	<i>RF Output Power</i>	Test Standard:	22.913(a) 24.232(a)
Tested By:	WEI LI	Test Date:	04/15/2008-04/30/2008

Minimum Standard: Para. No. 22.913(a). The maximum effective radiated power (ERP) of base station transmitters and cellular repeaters must not exceed 500 Watts (57dBm).

Para. No. 24.232(a). The maximum peak output power of base transmitters should not exceed 100 Watts EIRP (50dBm).

Method of Measurement: Detachable Antenna:
The average/peak power at antenna terminals is measured using power meter.

Integral Antenna:

If the antenna is not detachable from the circuit then the Peak Power Output is derived from the peak radiated field strength of the fundamental emission by using the plane wave relation

$$\frac{GP}{4\pi R^2} = \frac{E^2}{120\pi}$$

and proceeding as follows:

$$P = \frac{E^2 R^2}{30G} = \frac{E^2 3^2}{30G}$$

where,

P = the equivalent isotropic radiated power in watts

E = the maximum measured field strength in V/m

R = the measurement range (3 meters)

G = the numeric gain of the transmit antenna in relation to an isotropic radiator

Test Result:

Complies

Test Data:

Cellular Bands	Channel	Modulation	Power Output (dBm)	Limit (dBm)	Margin
Uplink	Hi	CDMA	-25	57	-82
	Mid	CDMA	-25	57	-82
	Low	CDMA	-25	57	-82
	Hi	GSM	-25	57	-82
	Mid	GSM	-25	57	-82
	Low	GSM	-25	57	-82
	Hi	EDGE	-25	57	-82
	Mid	EDGE	-25	57	-82
	Low	EDGE	-25	57	-82
Downlink	Hi	CDMA	32.46	57	
	Mid	CDMA	33.0/36.3*	57	
	Low	CDMA	29.9	57	
	Hi	GSM	32.15	57	
	Mid	GSM	33.0/34.45*	57	
	Low	GSM	29.04	57	
	Hi	EDGE	32.21	57	
	Mid	EDGE	33.0/36.4*	57	
	Low	EDGE	29.20	57	
Input Power (dBm)	-11~-5dBm				
Ref Offset	Ref offset=Cable Factor +Attenuation=30.1dB				

* Over-drive condition with output power limited by internal AGC.

PCS Bands	Channel	Modulation	Power Output (dBm)	Limit (dBm)	Margin
Uplink	Hi	CDMA	-25	50	-75
	Mid	CDMA	-25	50	-75
	Low	CDMA	-25	50	-75
	Hi	GSM	-25	50	-75
	Mid	GSM	-25	50	-75
	Low	GSM	-25	50	-75
	Hi	EDGE	-25	50	-75
	Mid	EDGE	-25	50	-75
	Low	EDGE	-25	50	-75
Downlink	Hi	CDMA	30.0	50	
	Mid	CDMA	33.0/35.0*	50	
	Low	CDMA	32.36	50	
	Hi	GSM	28.80	50	
	Mid	GSM	32.70/33.1*	50	
	Low	GSM	31.32	50	
	Hi	EDGE	29.09	50	
	Mid	EDGE	33.0/34.3*	50	
	Low	EDGE	31.62	50	
Input Power (dBm)	-11~-5dBm				
Ref Offset	Ref offset=Cable Factor +Attenuation=30.2dB				

* Over-drive condition with output power limited by internal AGC.

Section 4. Occupied Bandwidth

Name of Test:	<i>Occupied Bandwidth</i>	Test Standard:	<i>2.1049(i)</i>
Tested By:	WEI LI	Test Date:	04/15/2008-04/30/2008

Minimum Standard: Not defined by FCC. Input vs. Output.

Method of Measurement: Spectrum Analyzer Settings:
 RBW: CDMA (30 kHz), GSM (3kHz), EDGE (3KHz),NADC (1 kHz)
 and CDPD (1 kHz)
 VBW: \geq RBW
 Span: As required
 Sweep: Auto
 Input Signal Characteristics:
 RF level: Maximum Gain recommended by manufacturer

Test Result:

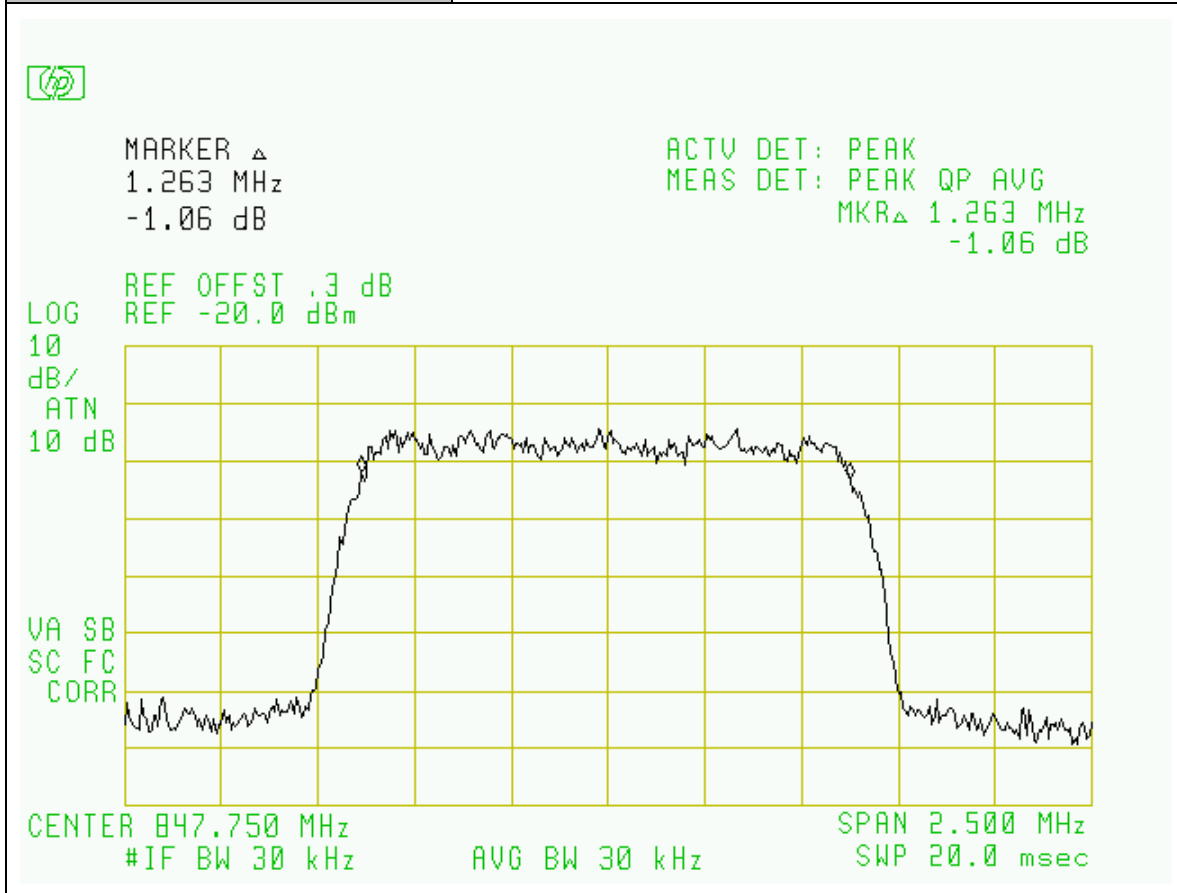
Complies

Test Data:

Attached Plots

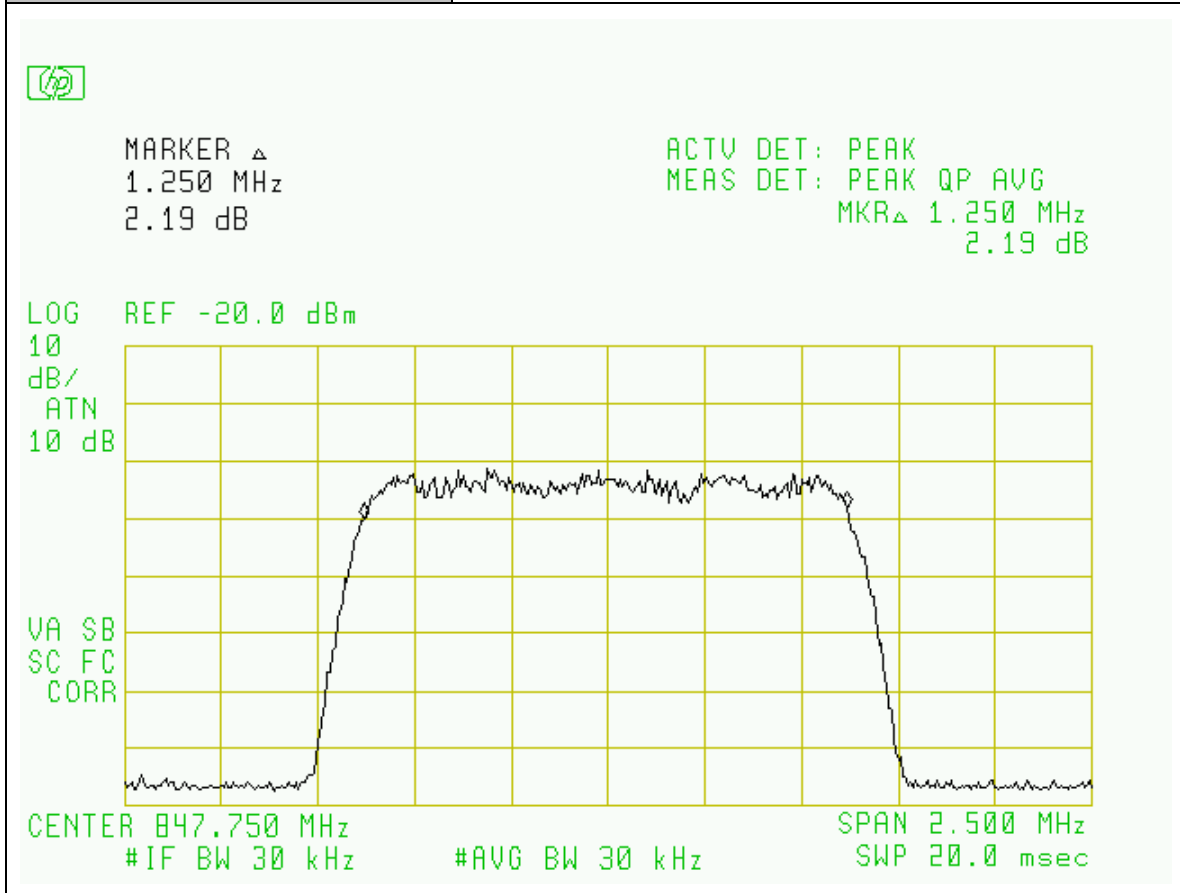
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



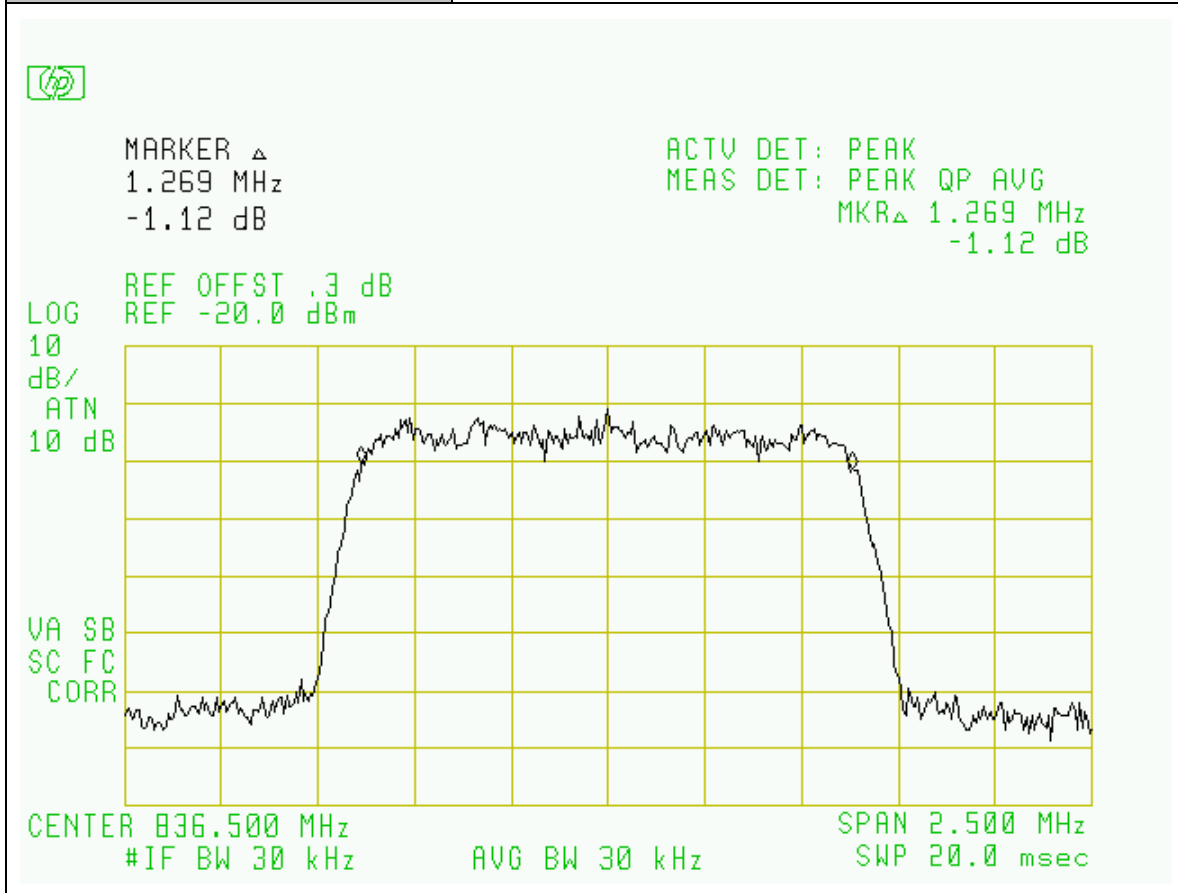
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



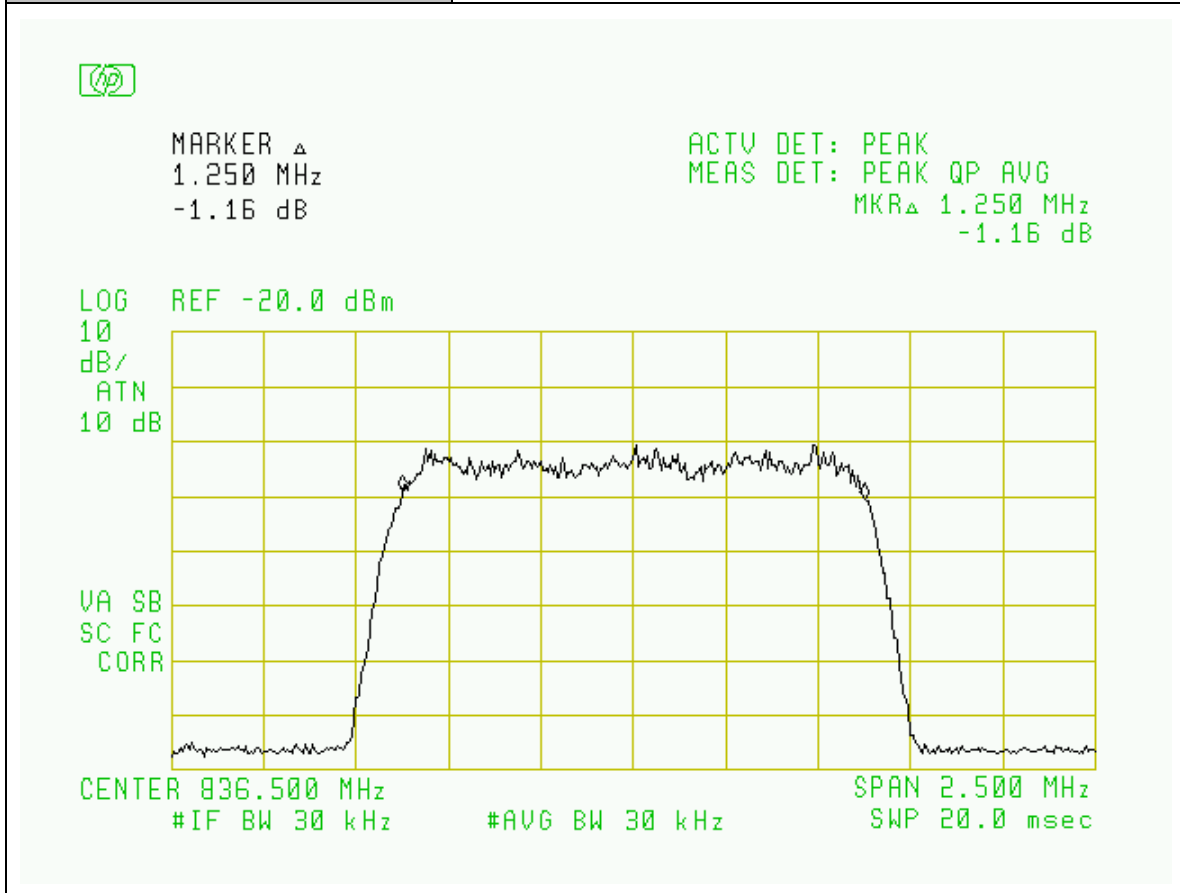
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



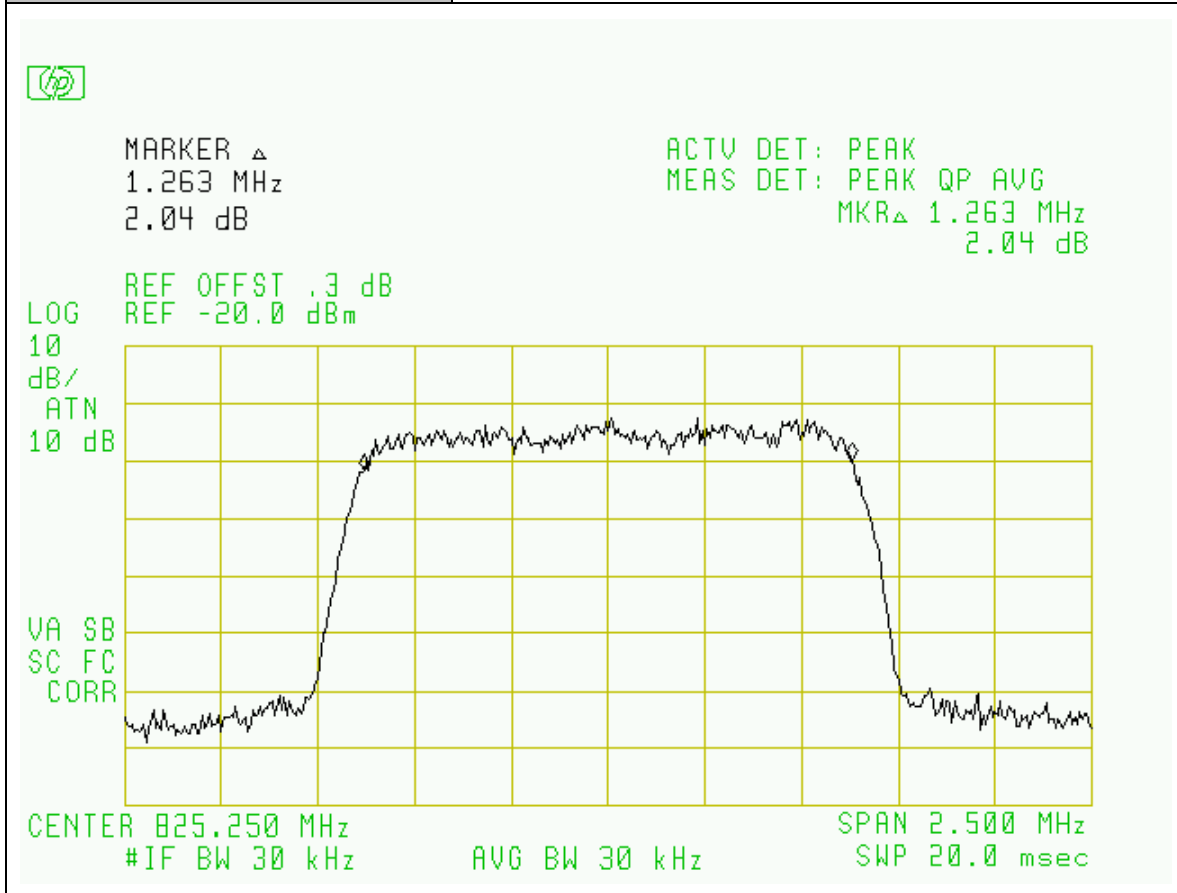
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



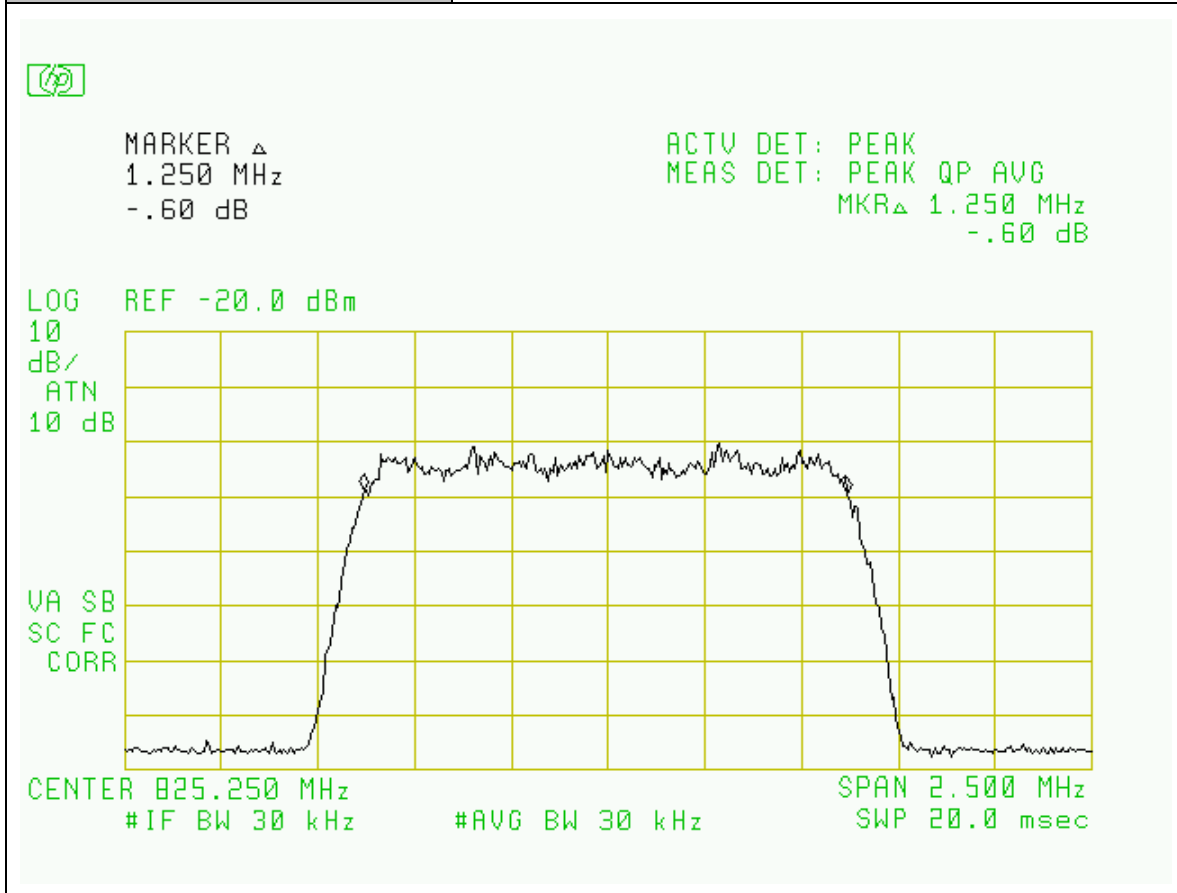
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



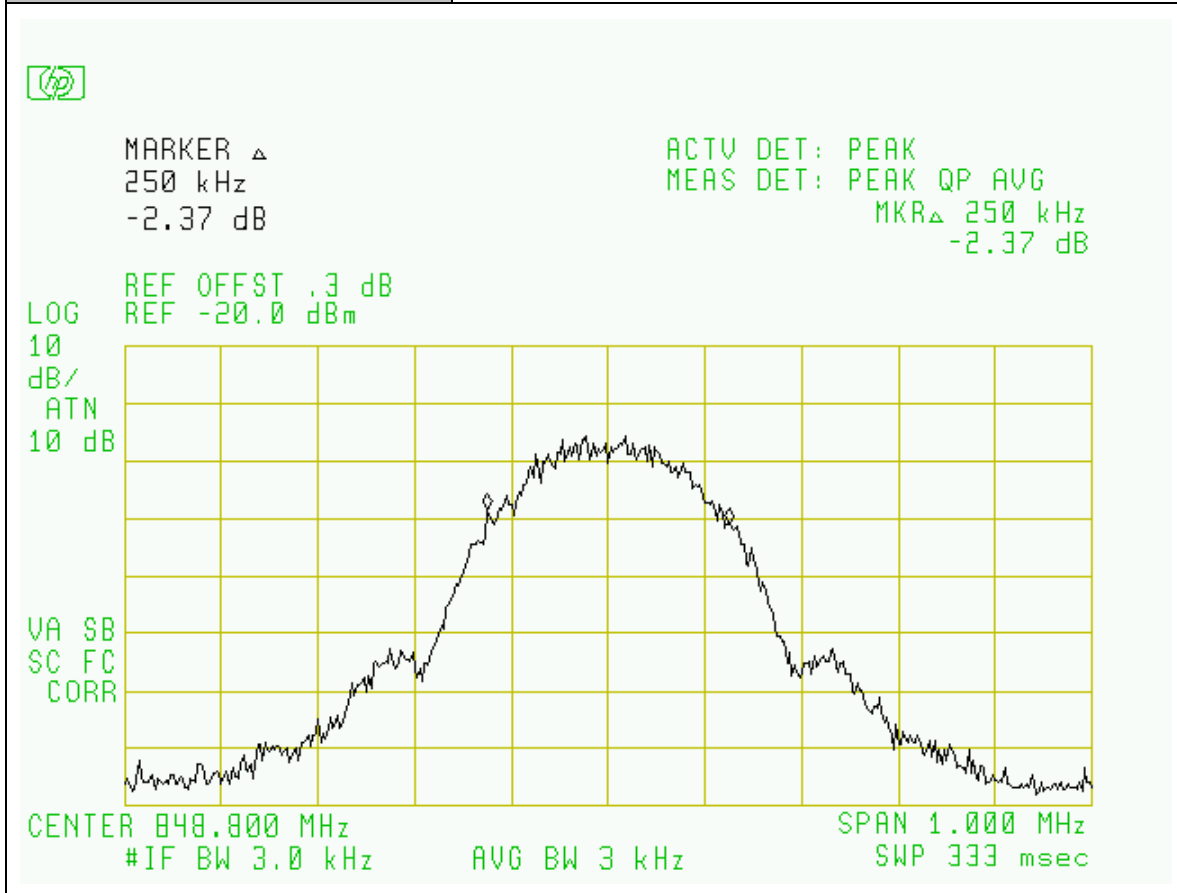
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



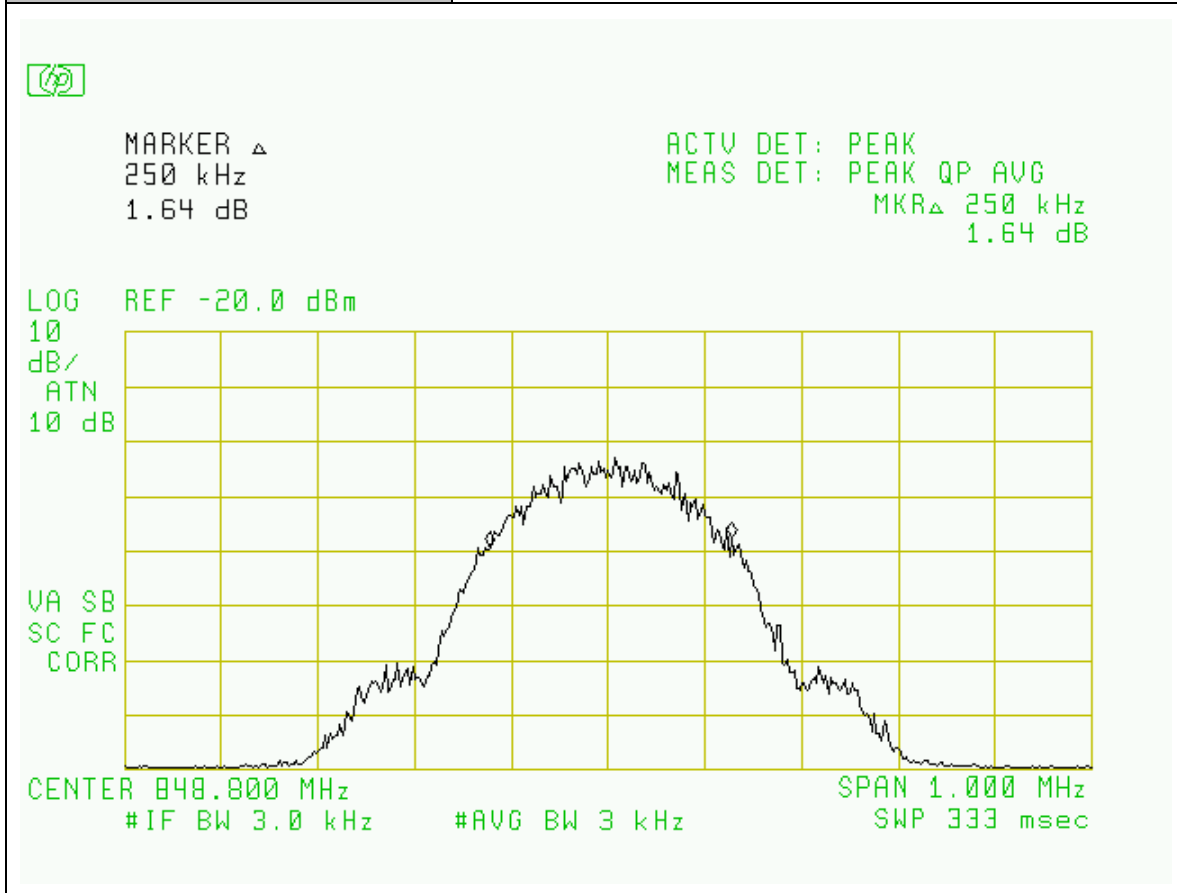
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Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



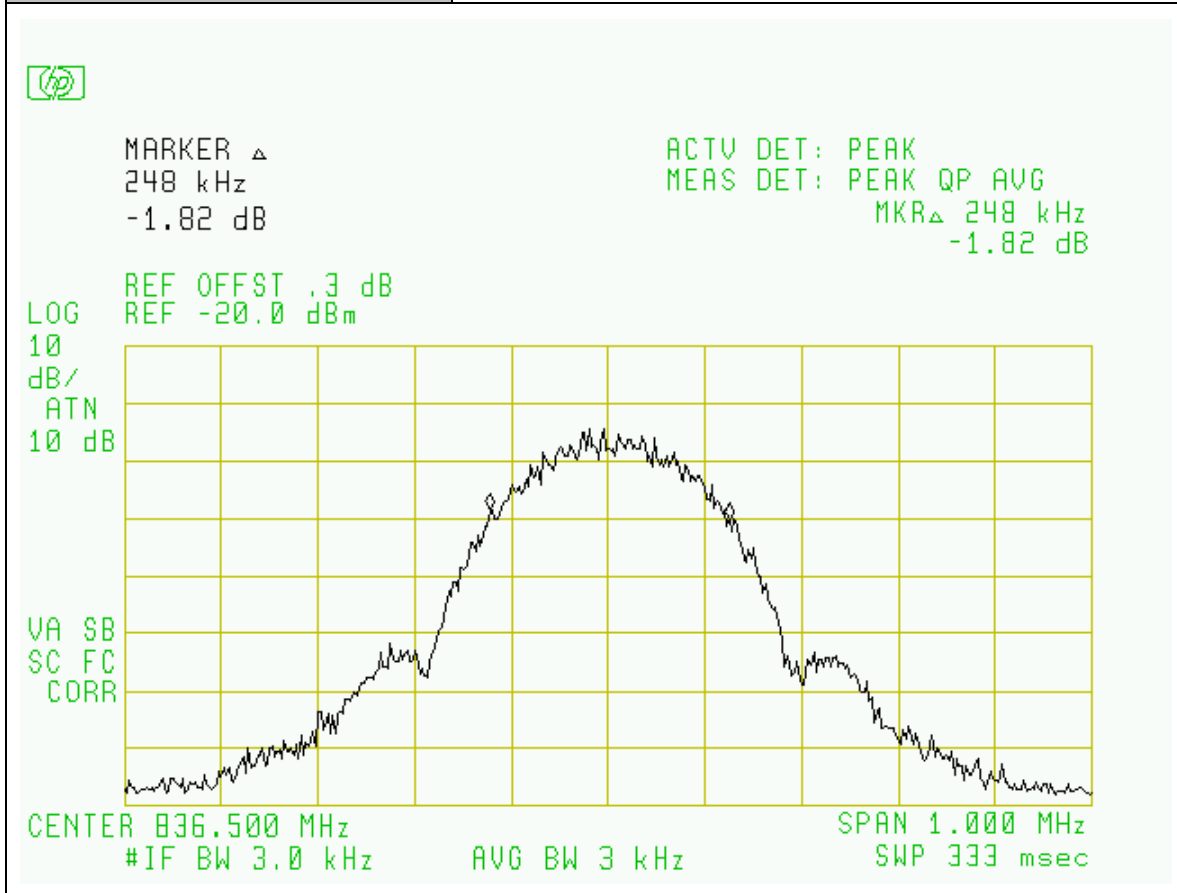
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Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



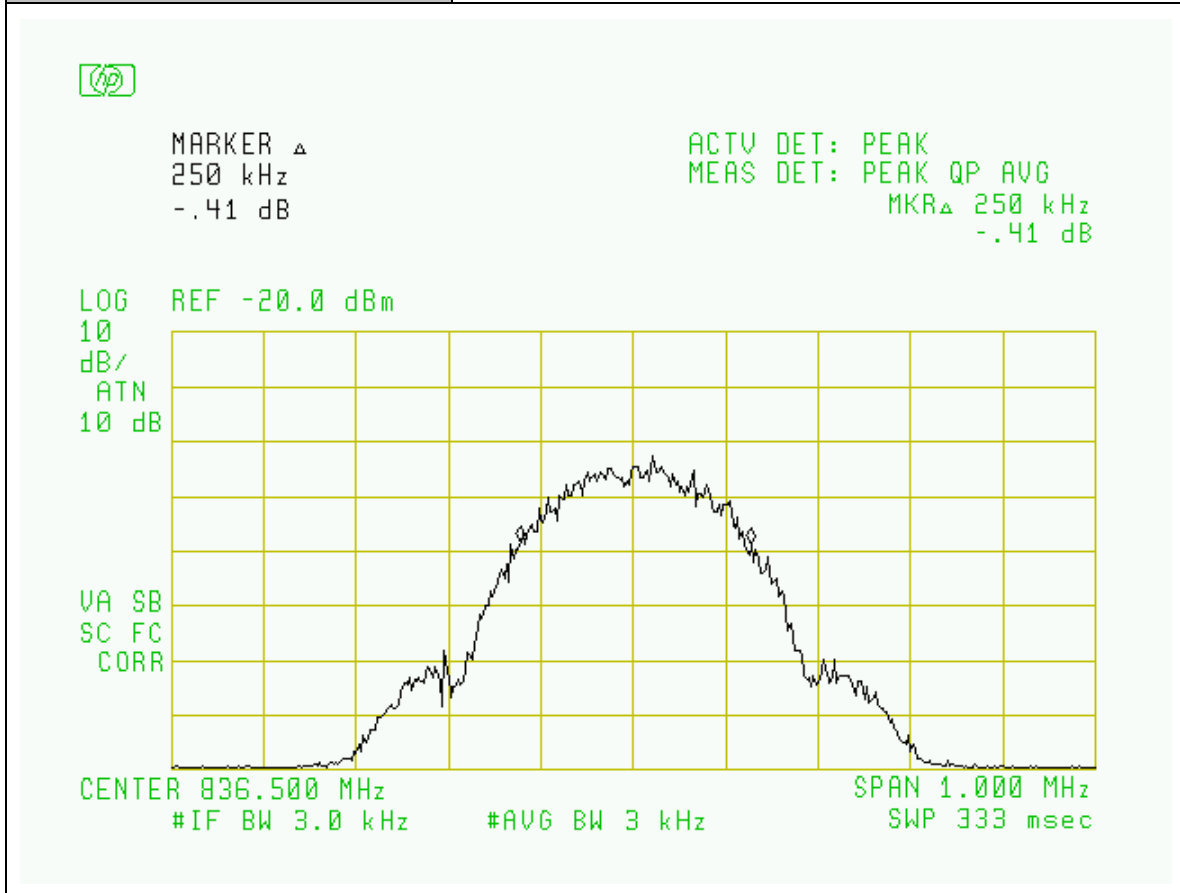
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



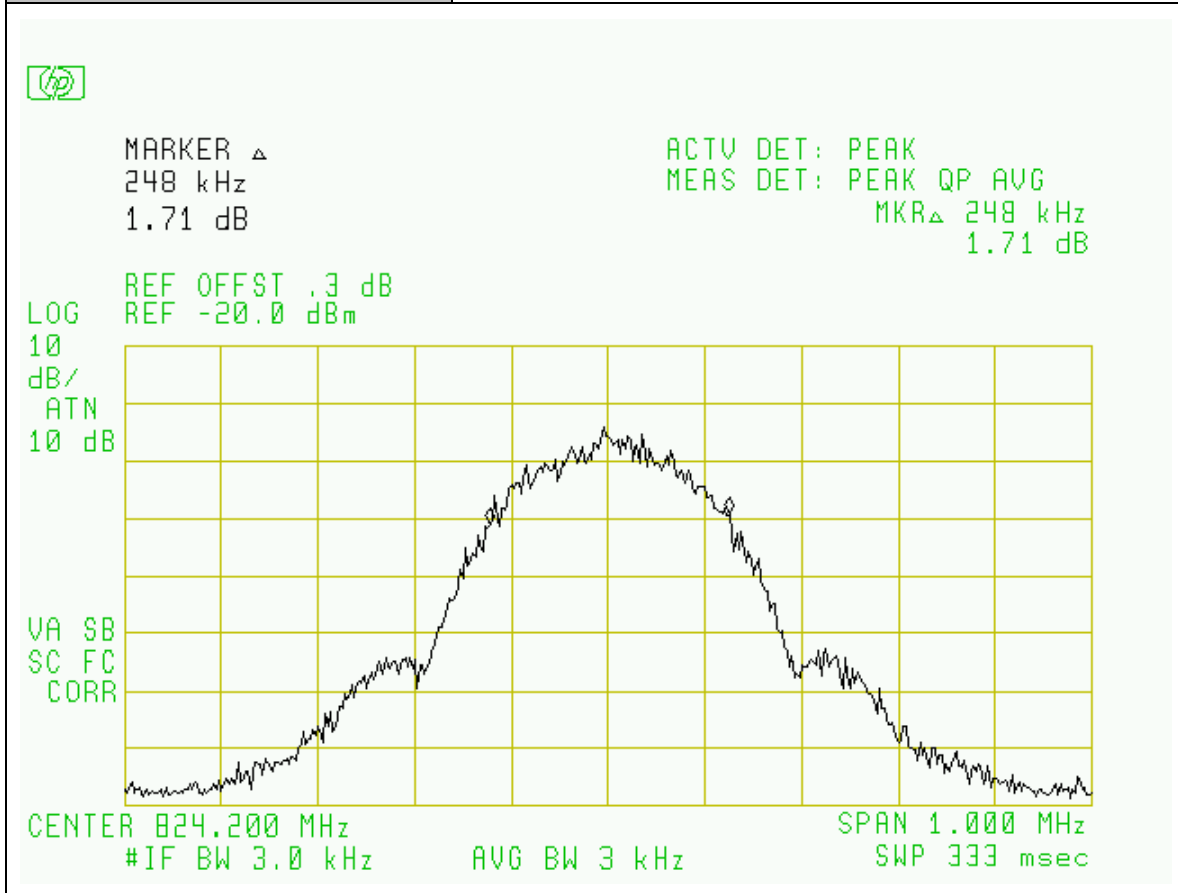
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



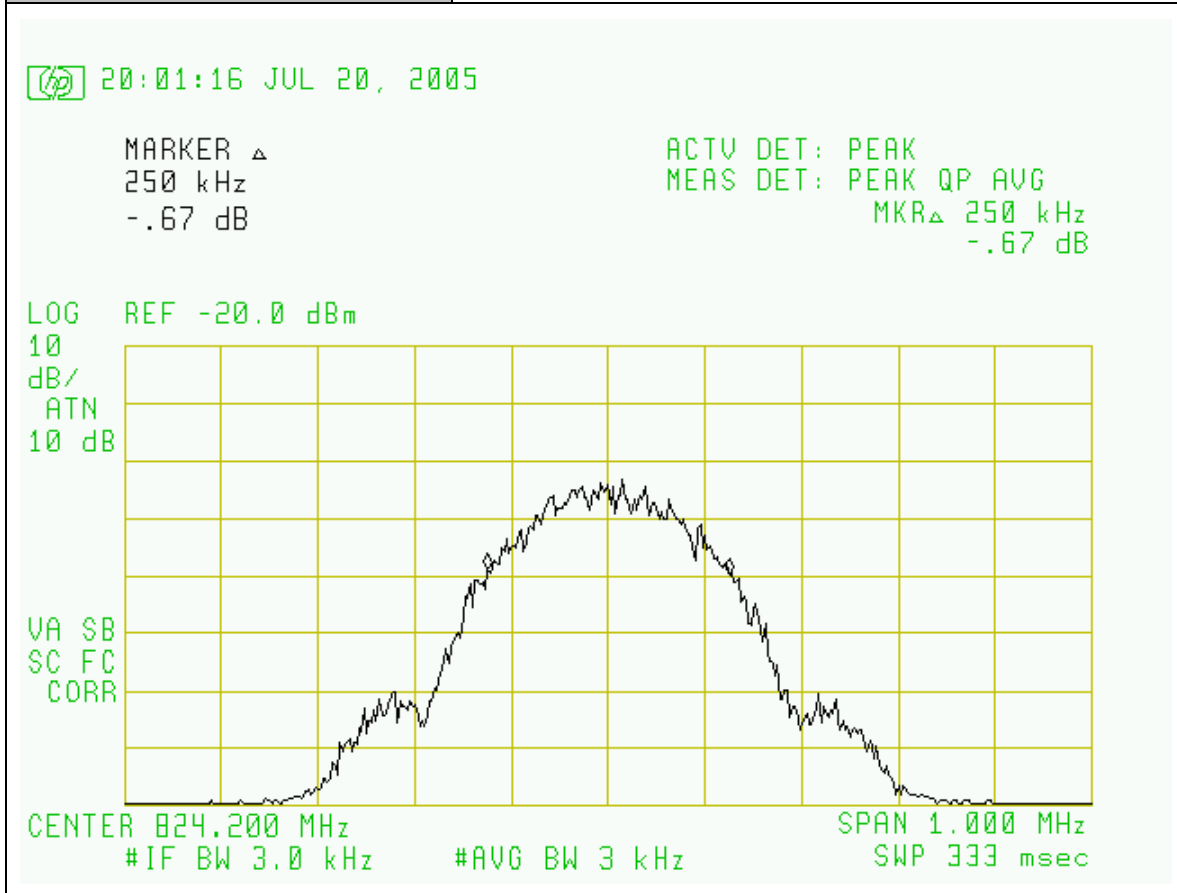
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



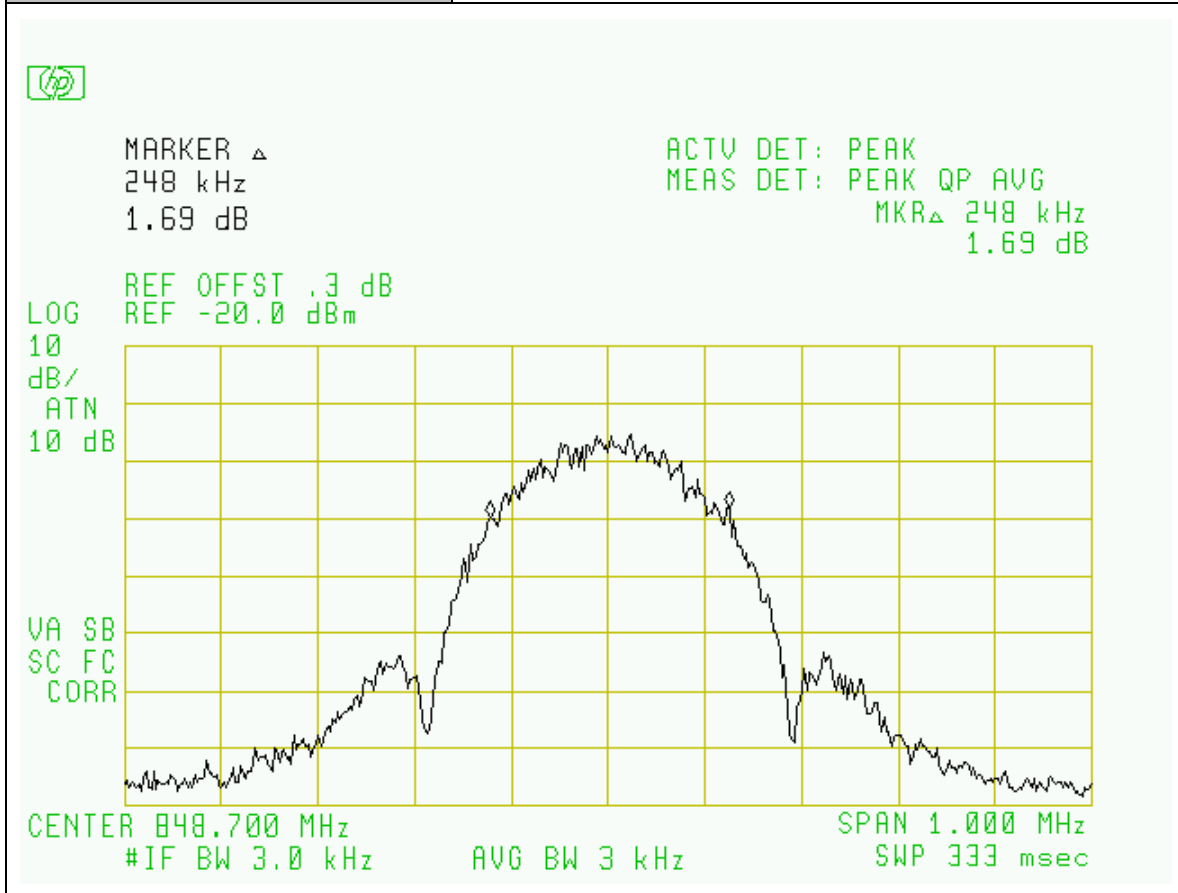
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



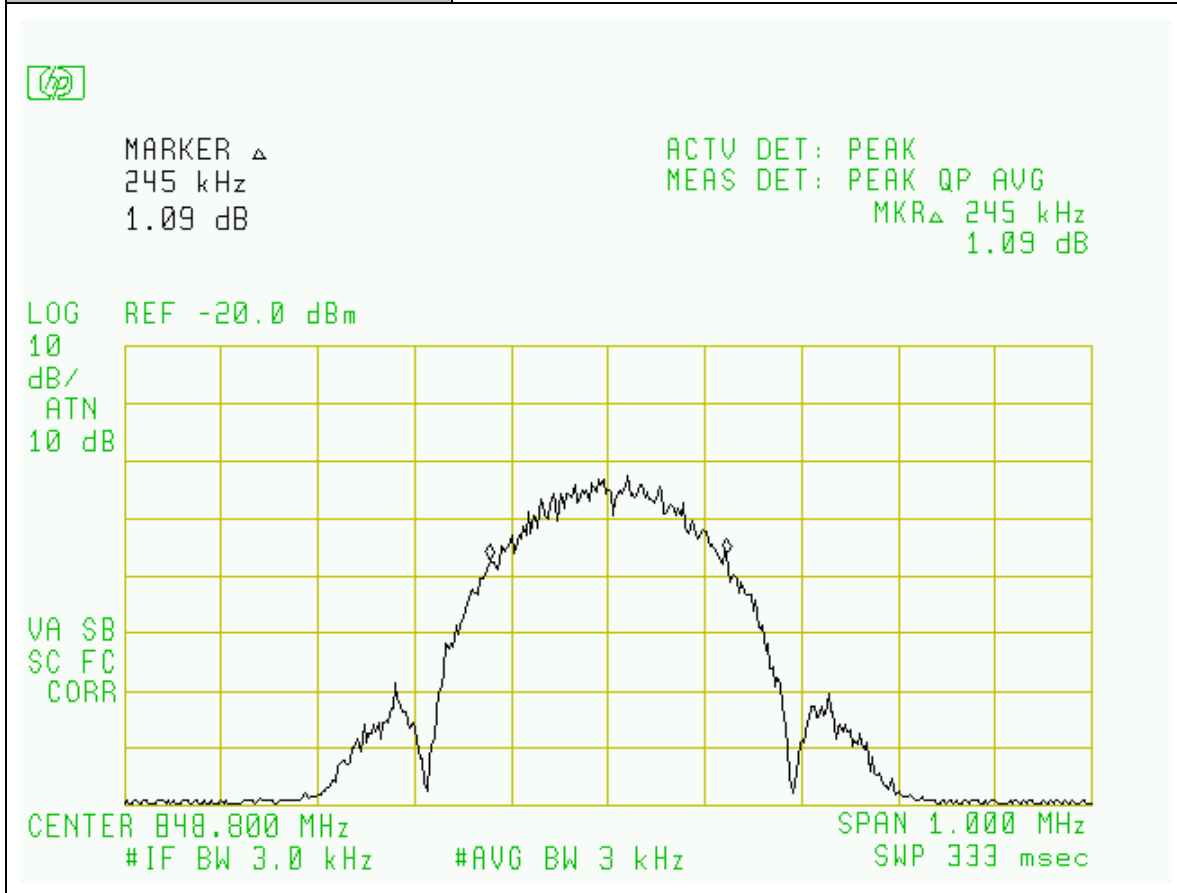
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



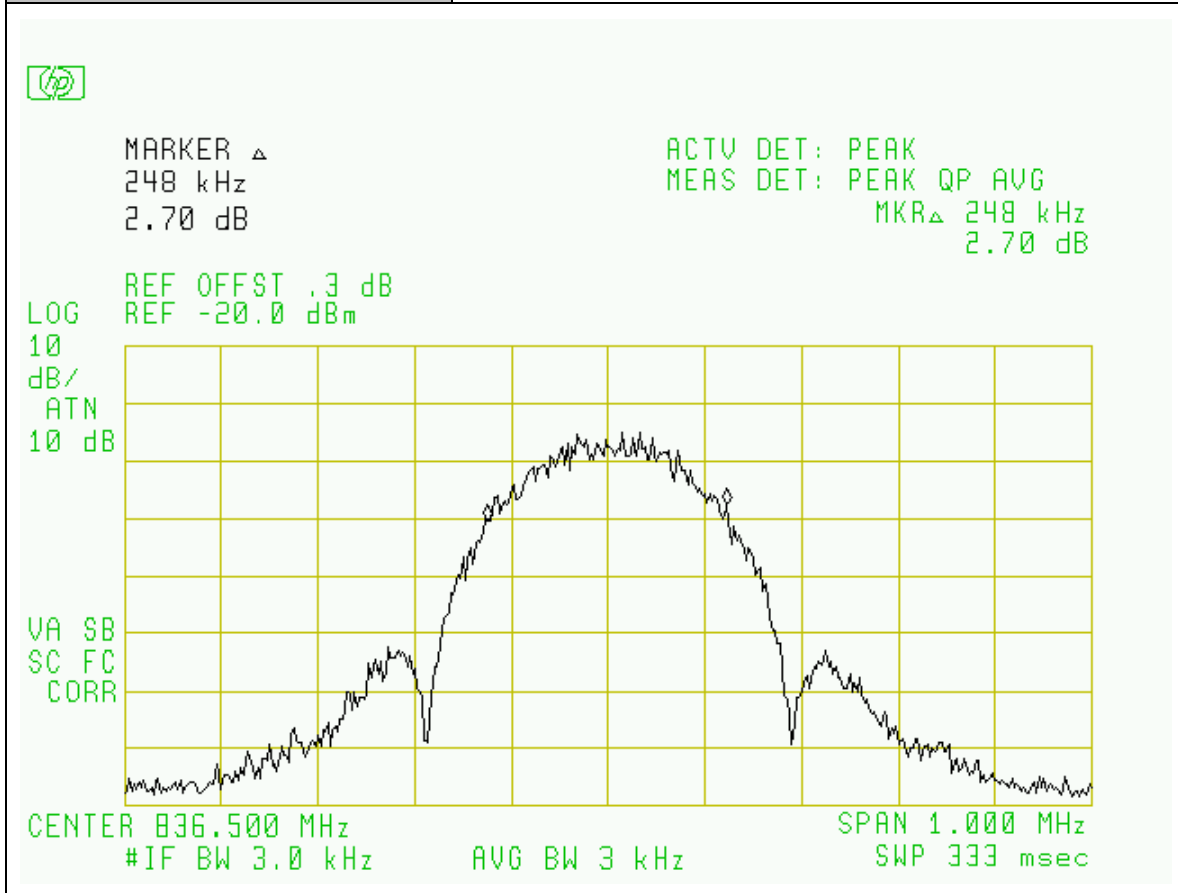
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



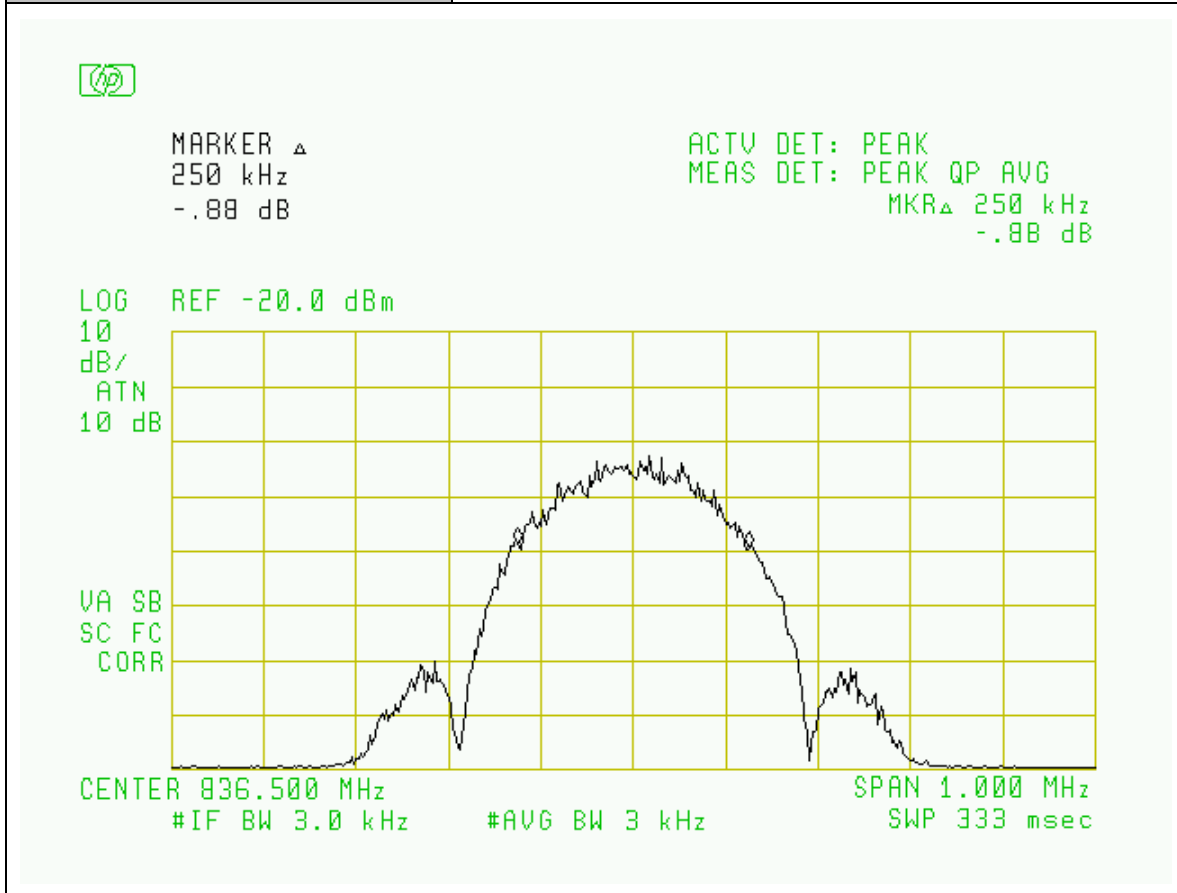
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



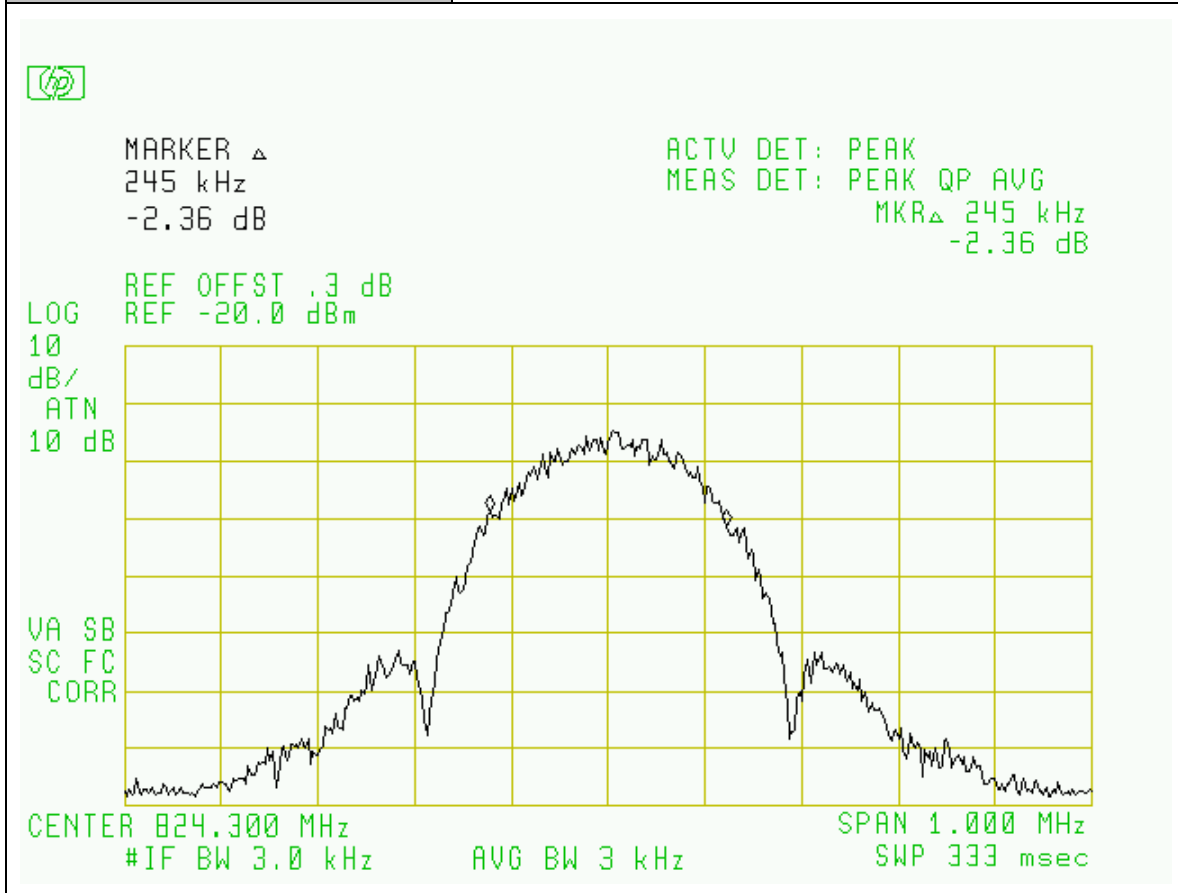
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



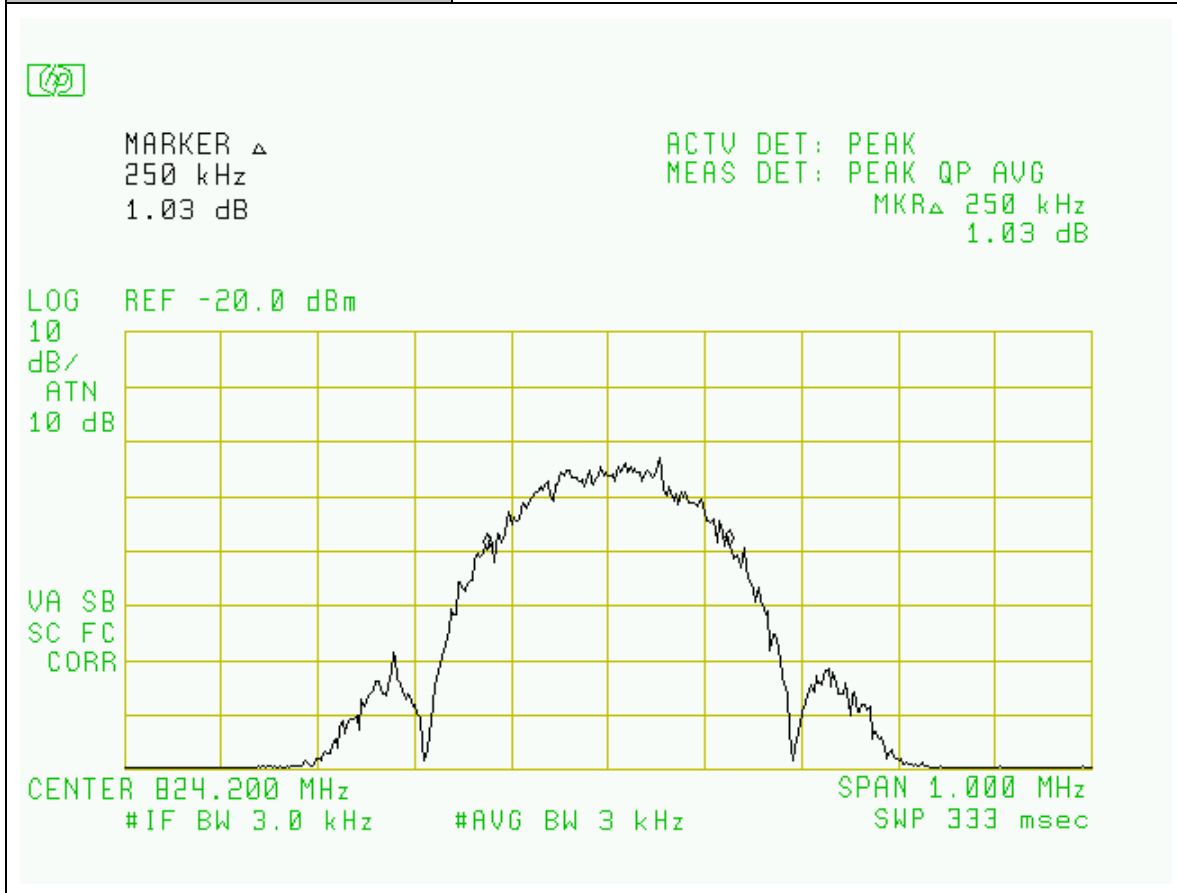
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



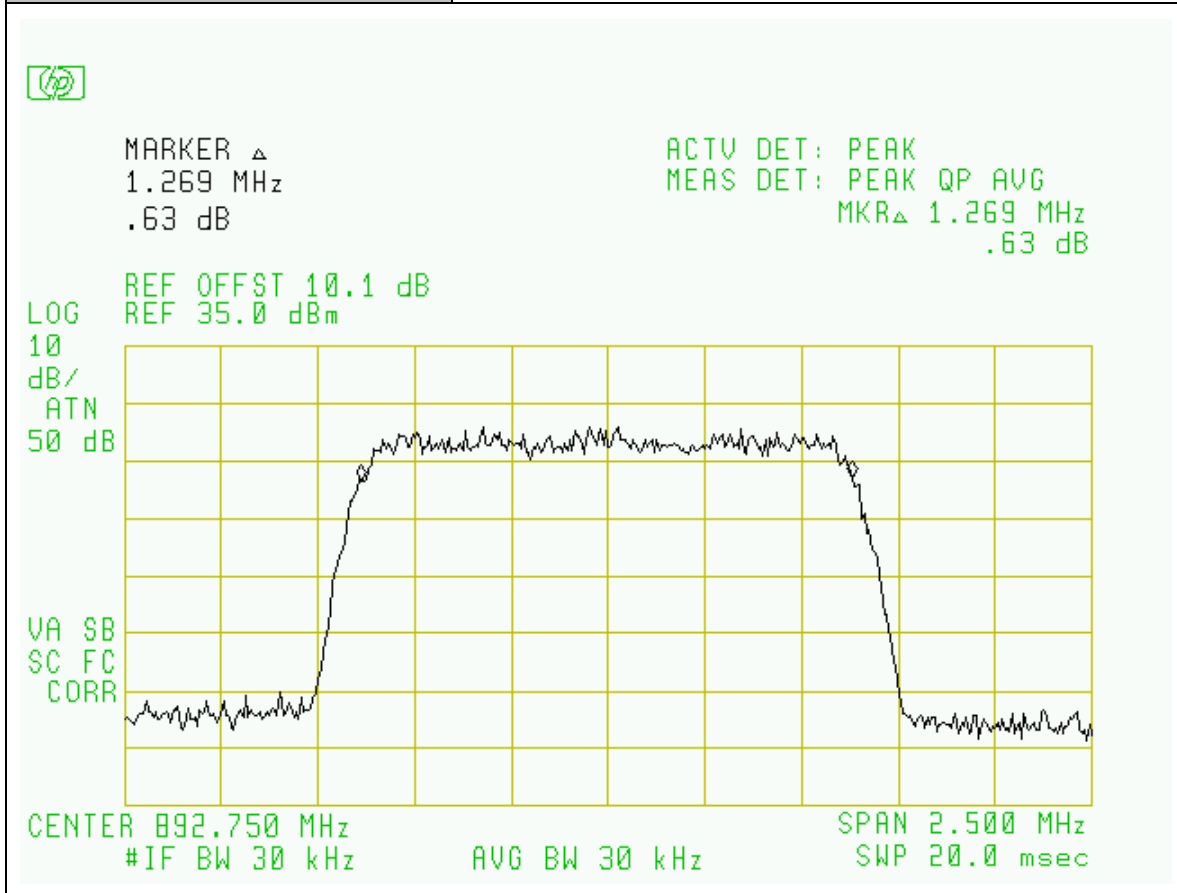
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



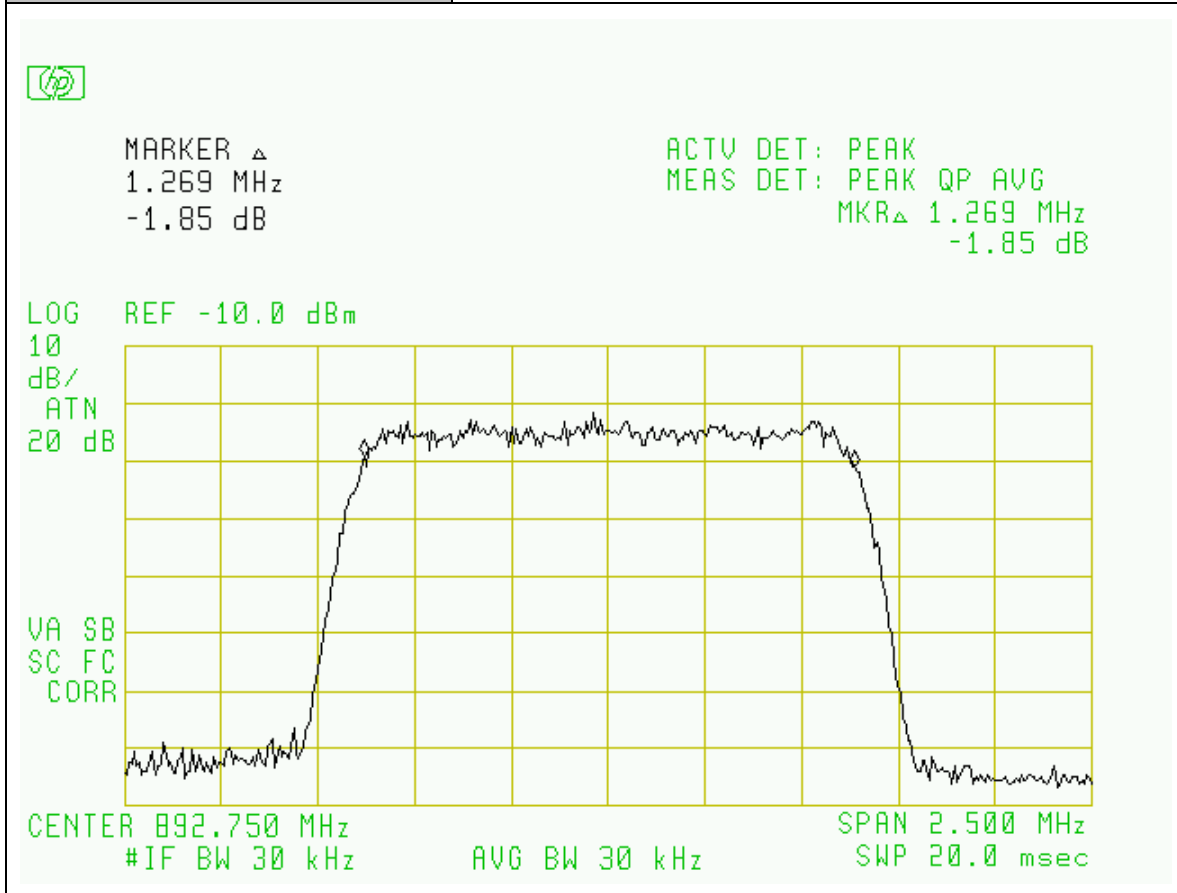
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



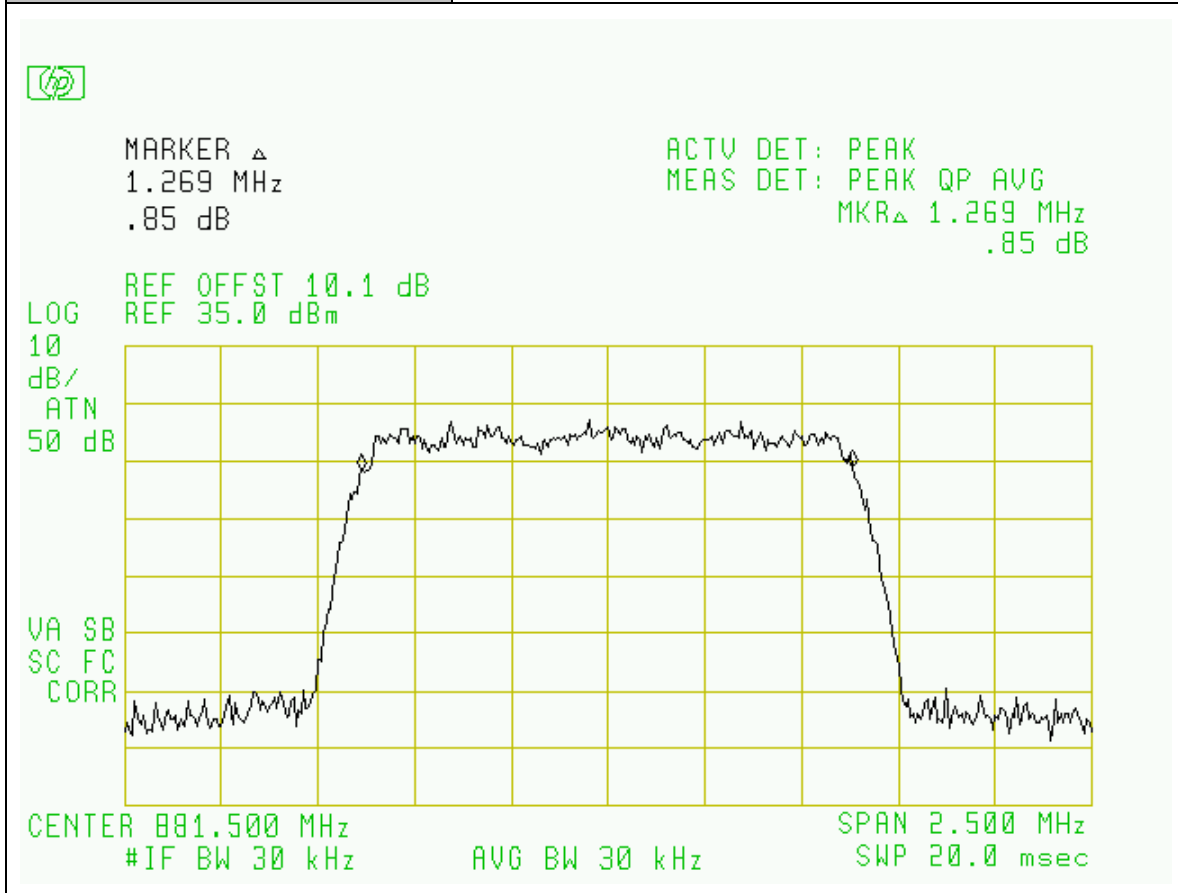
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SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



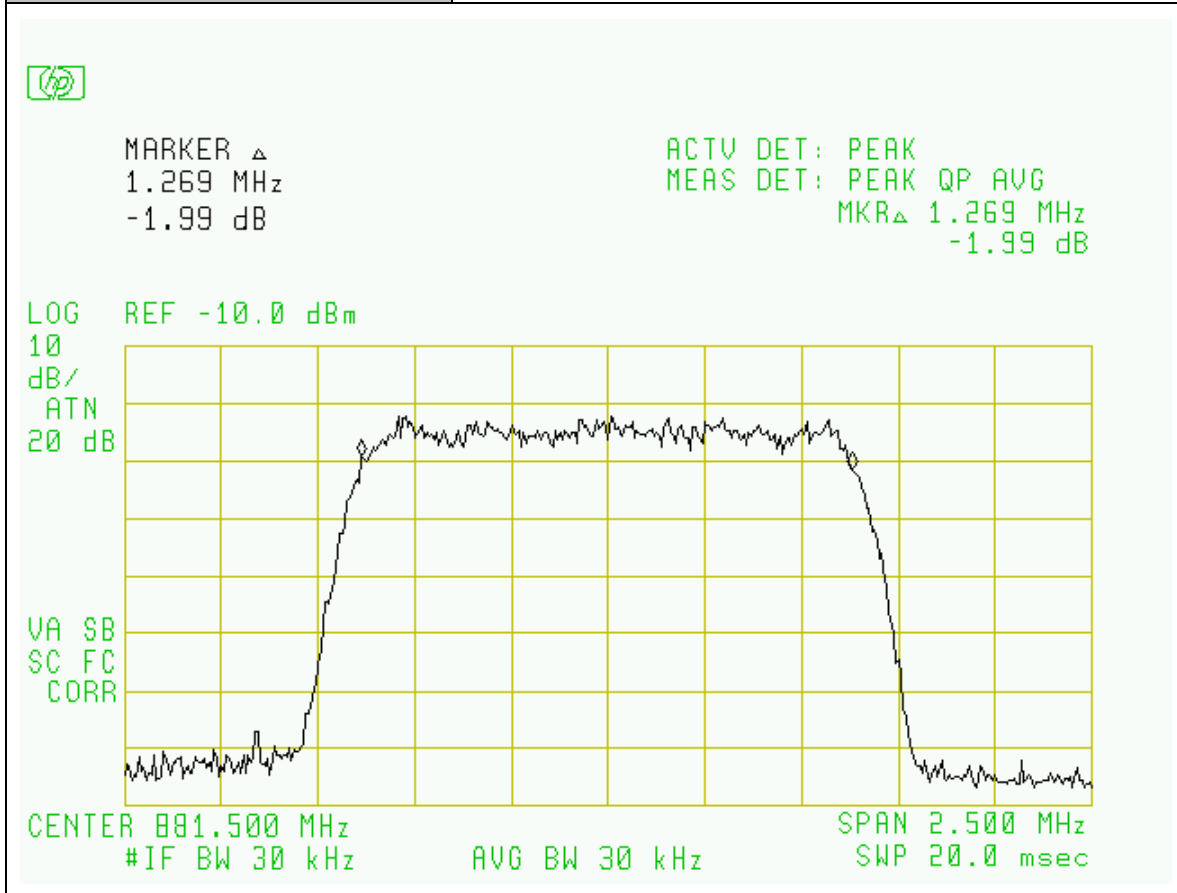
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



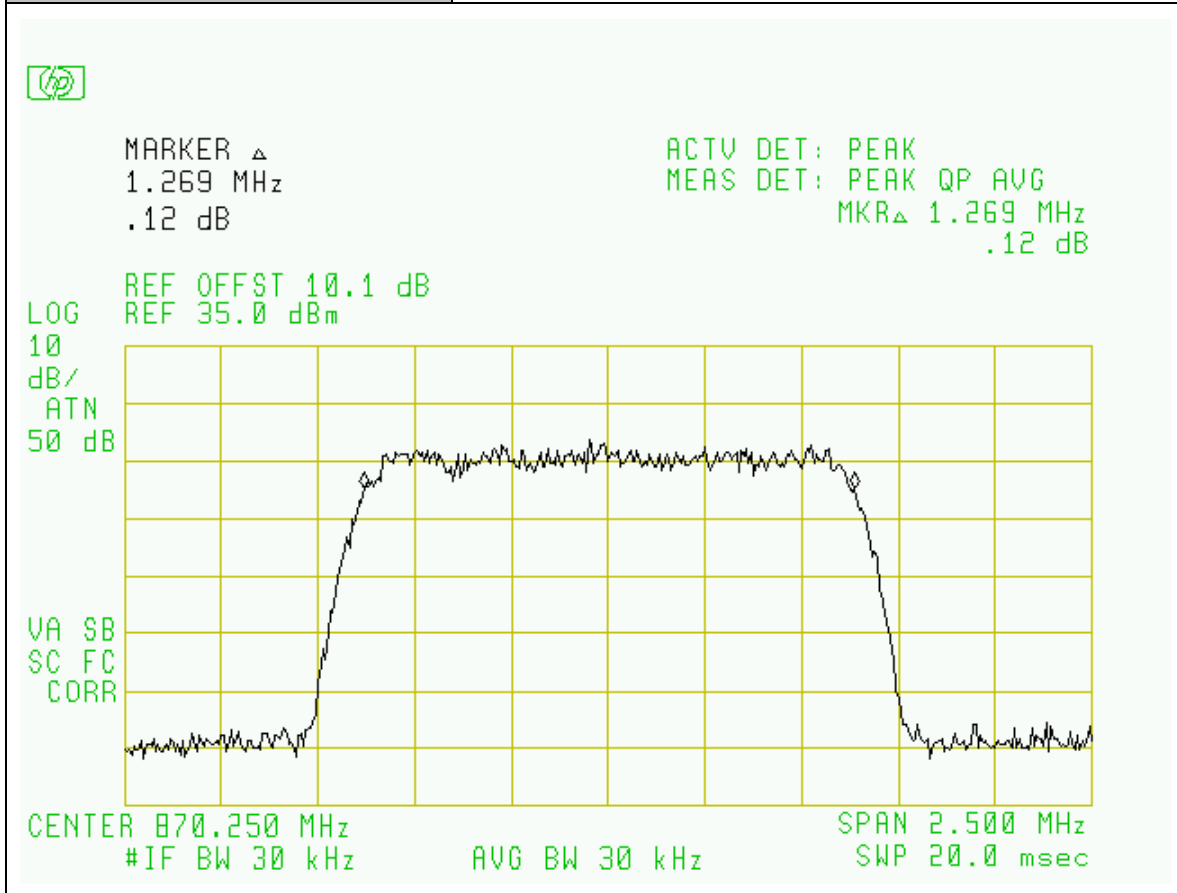
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



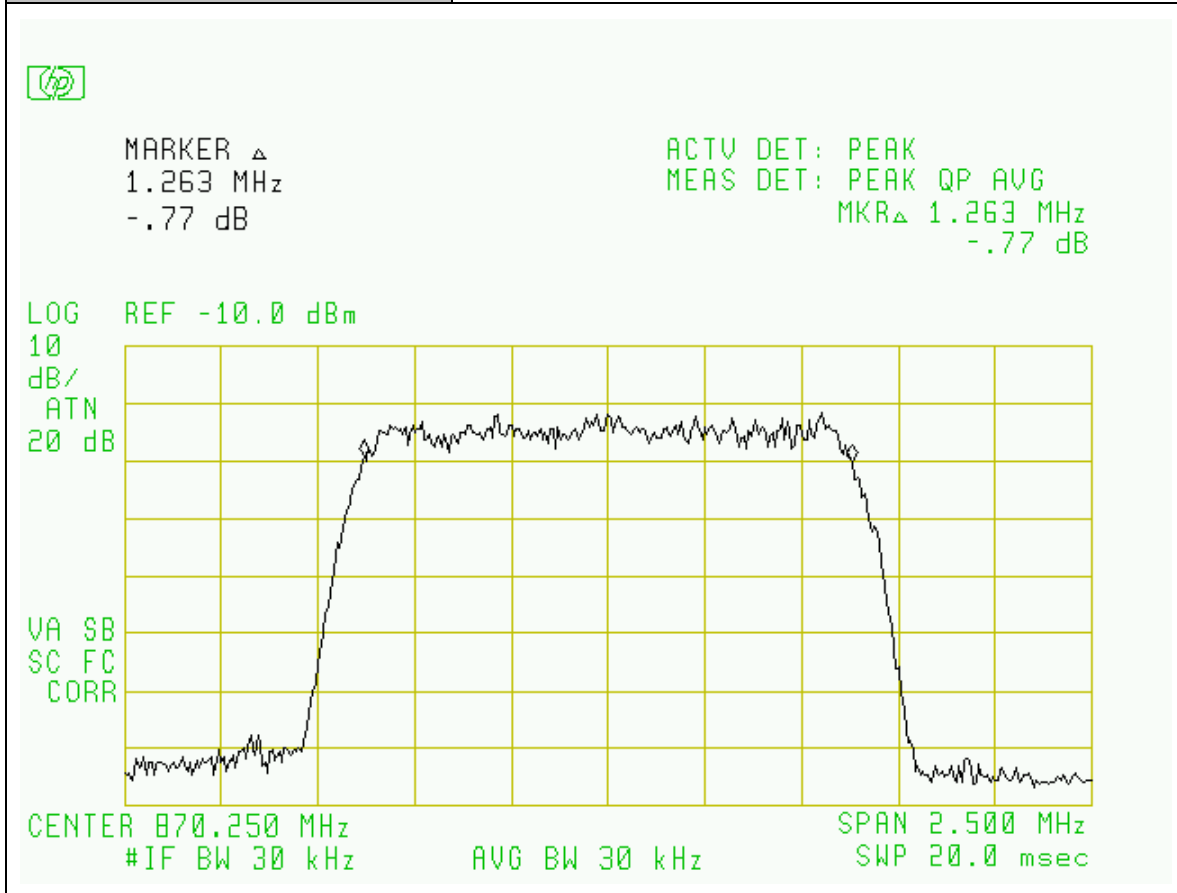
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Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MIBILE



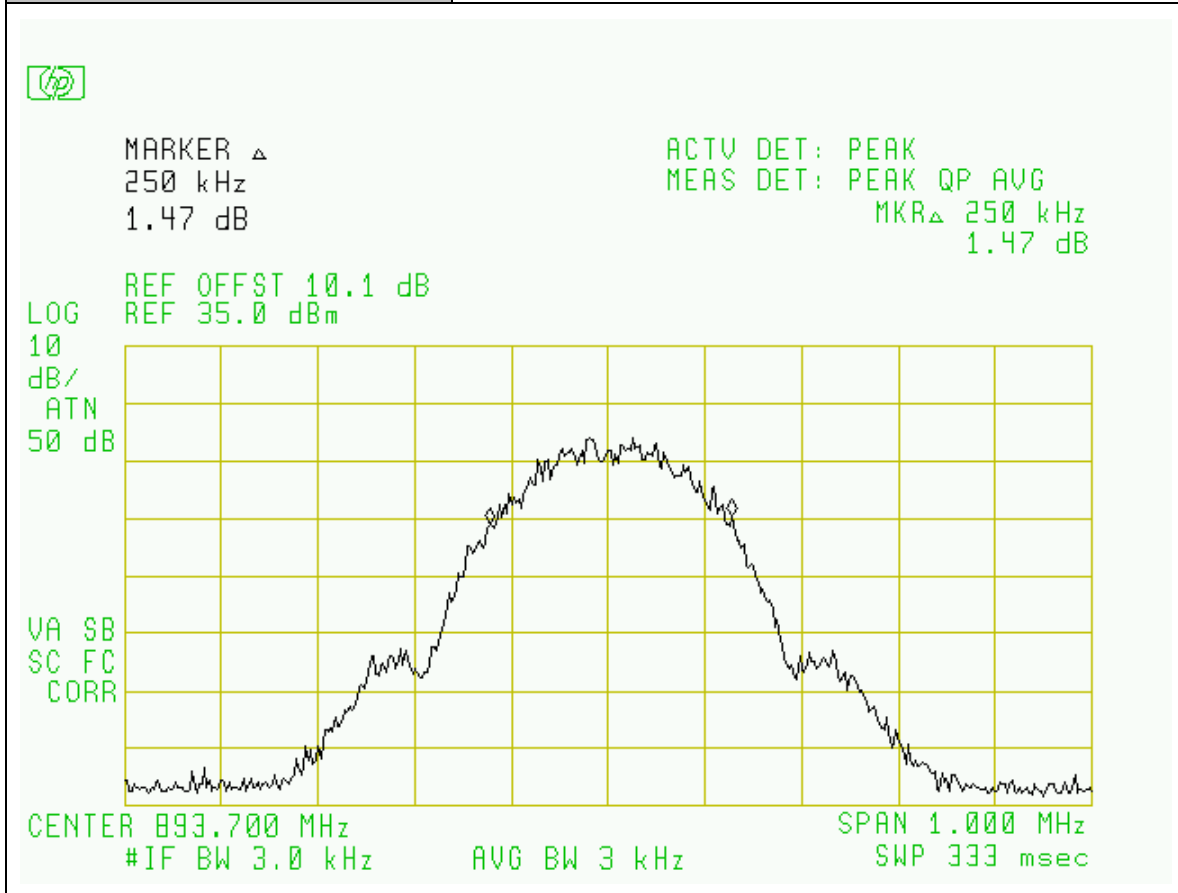
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Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



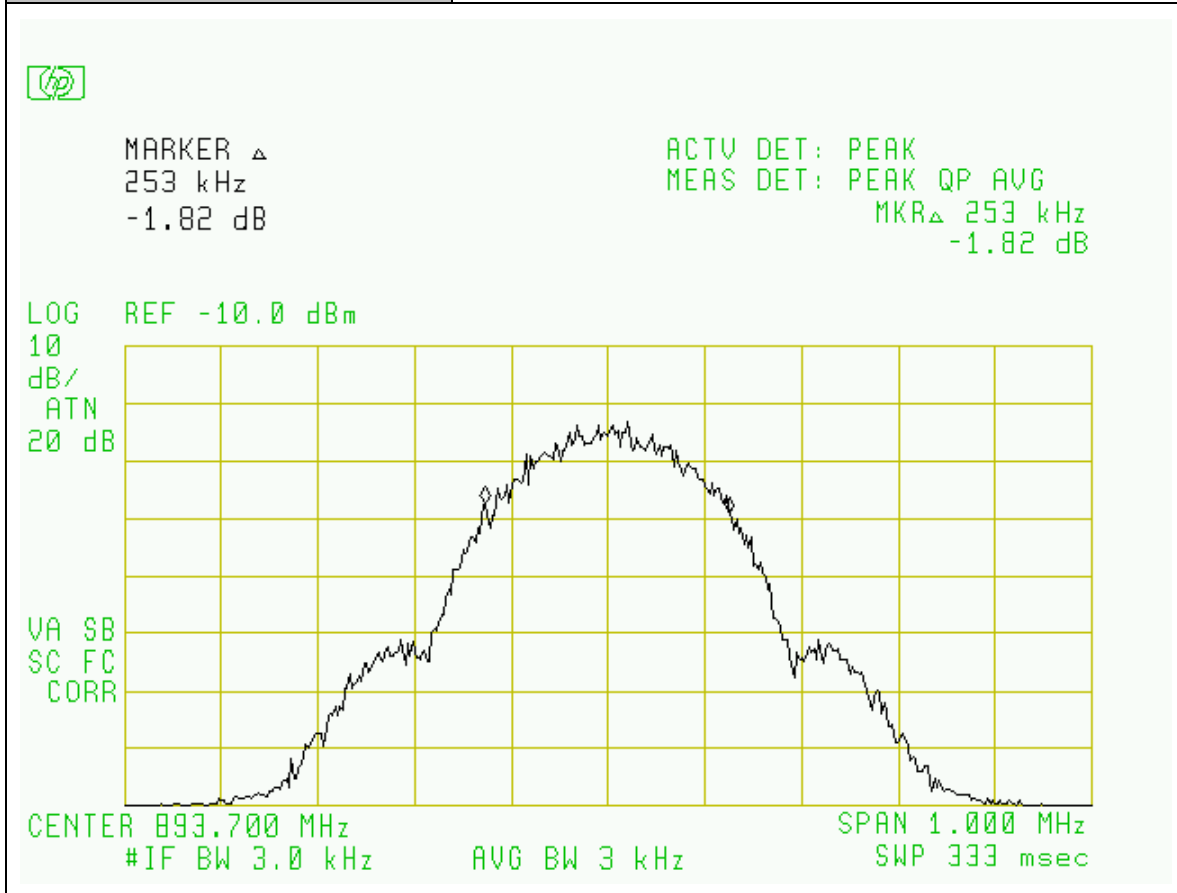
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Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



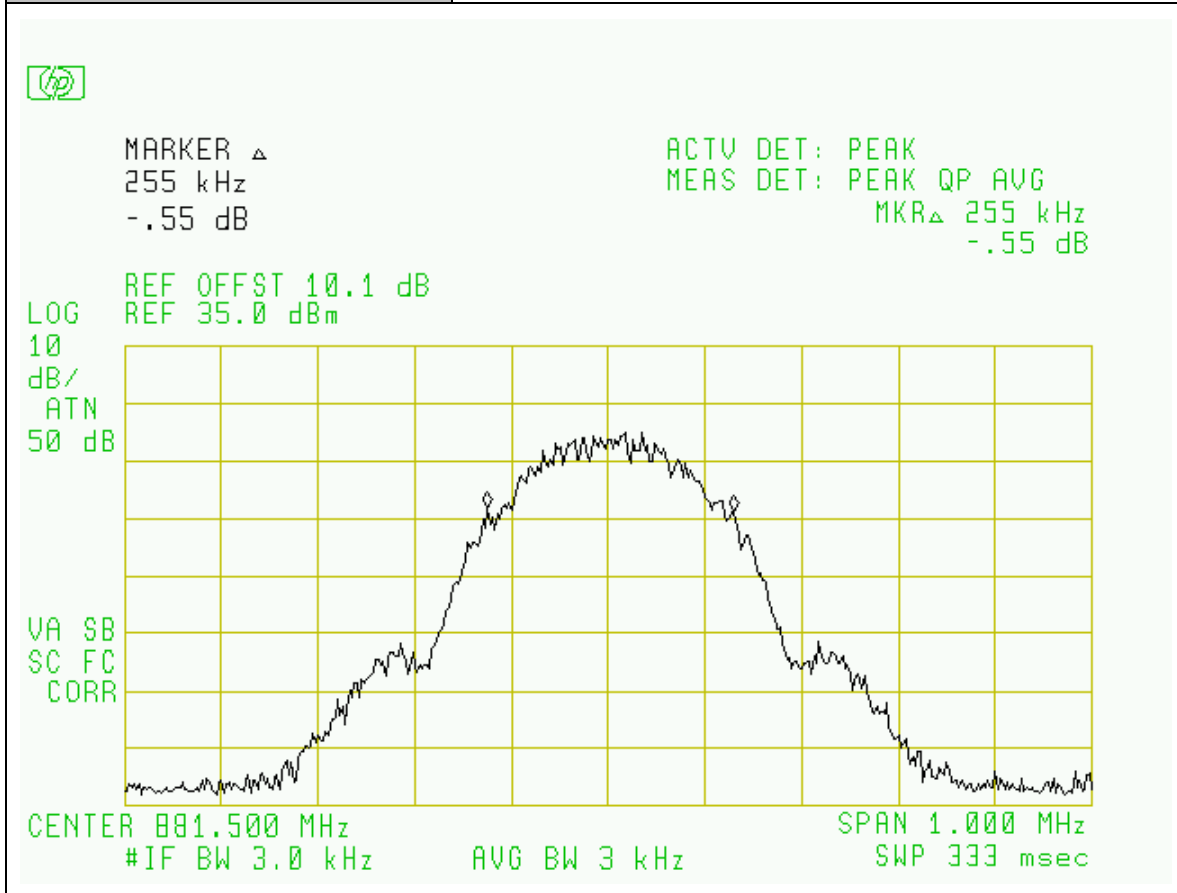
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



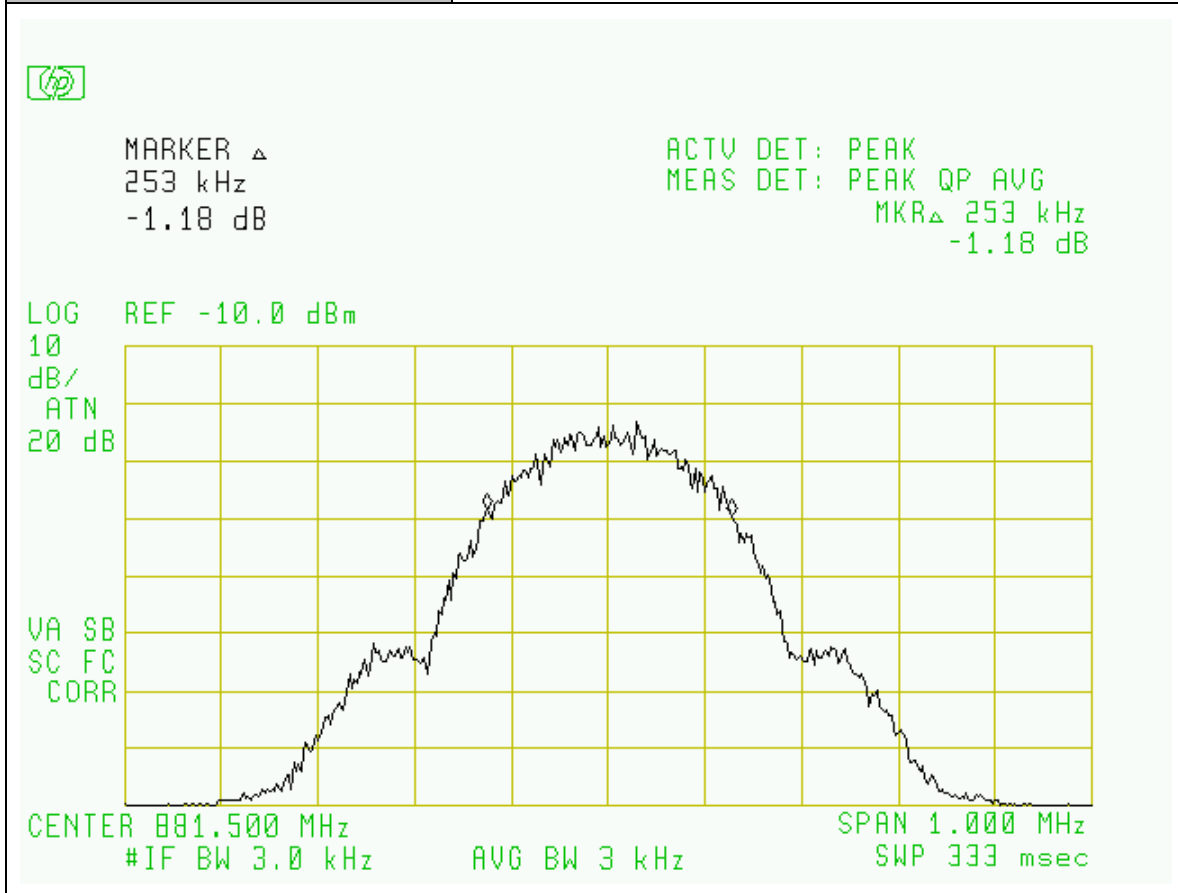
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



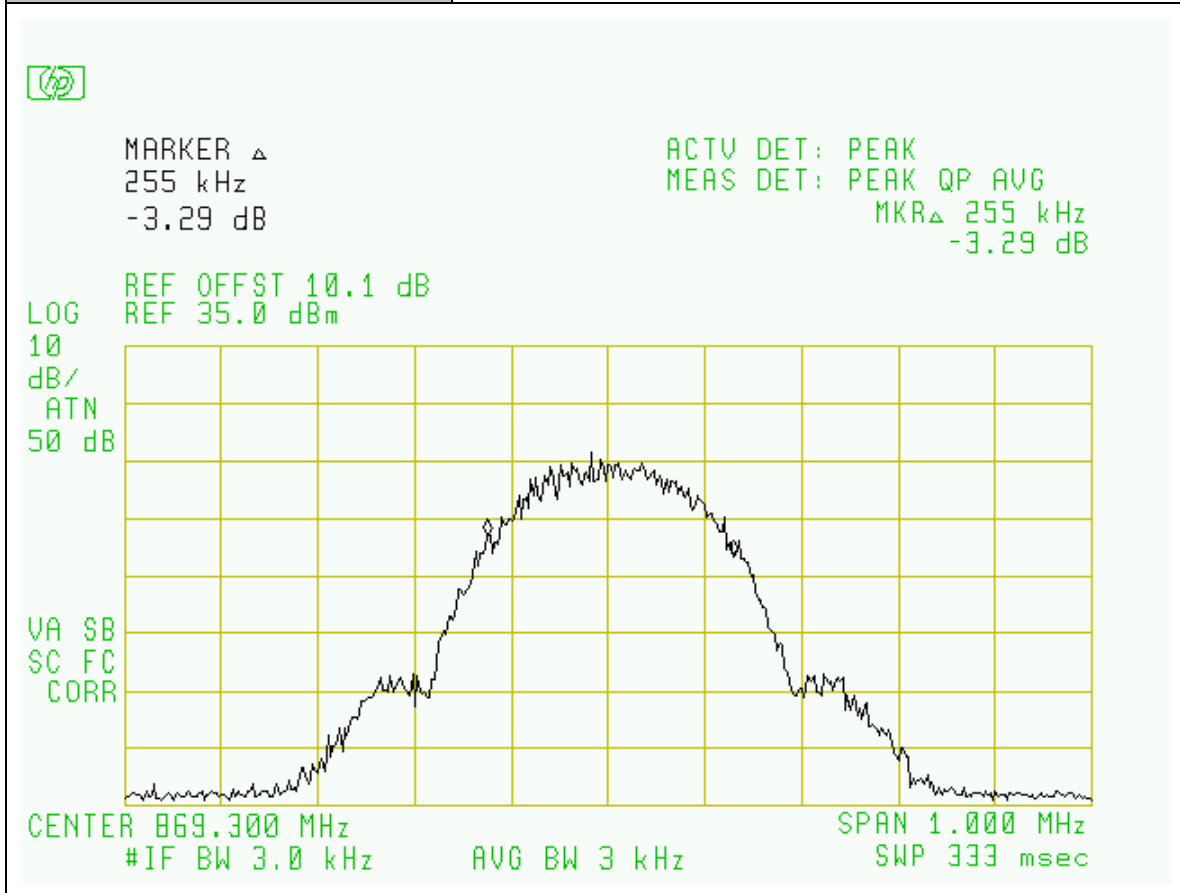
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



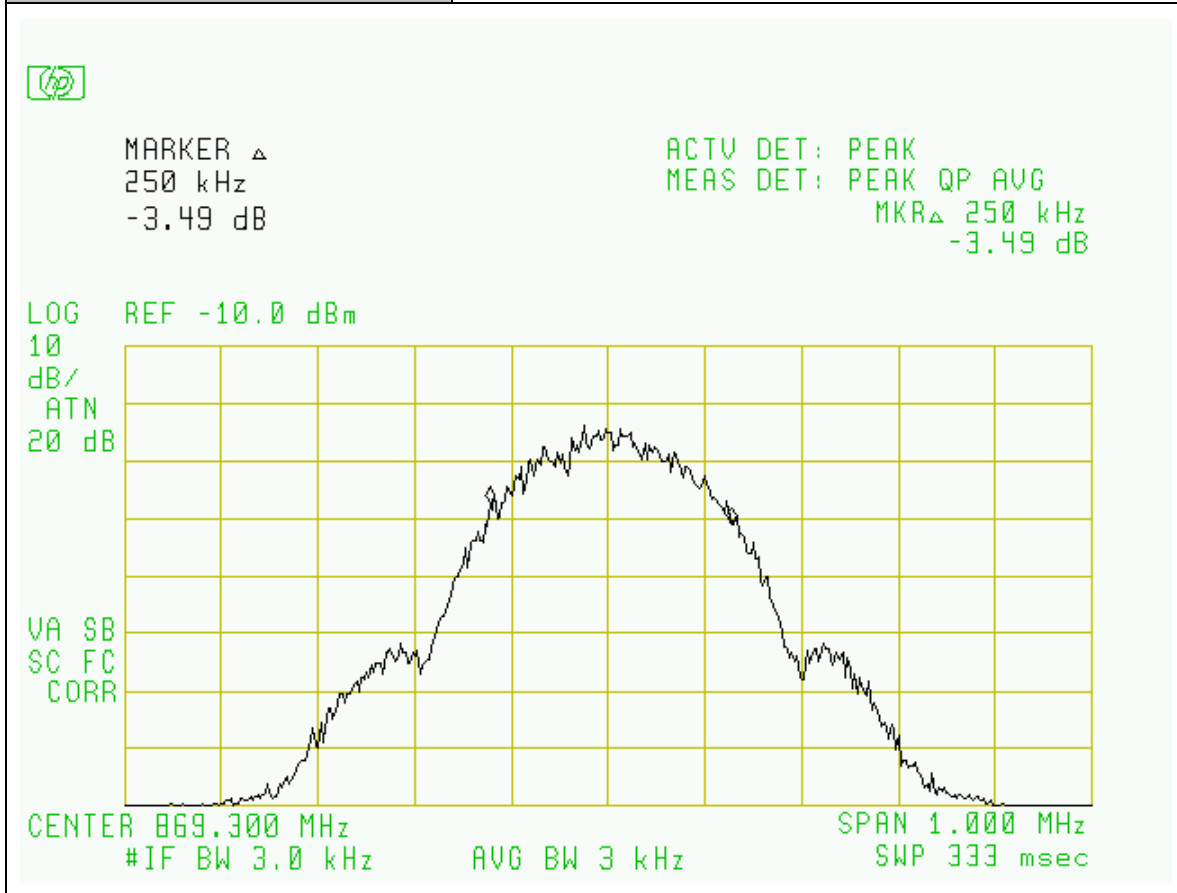
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



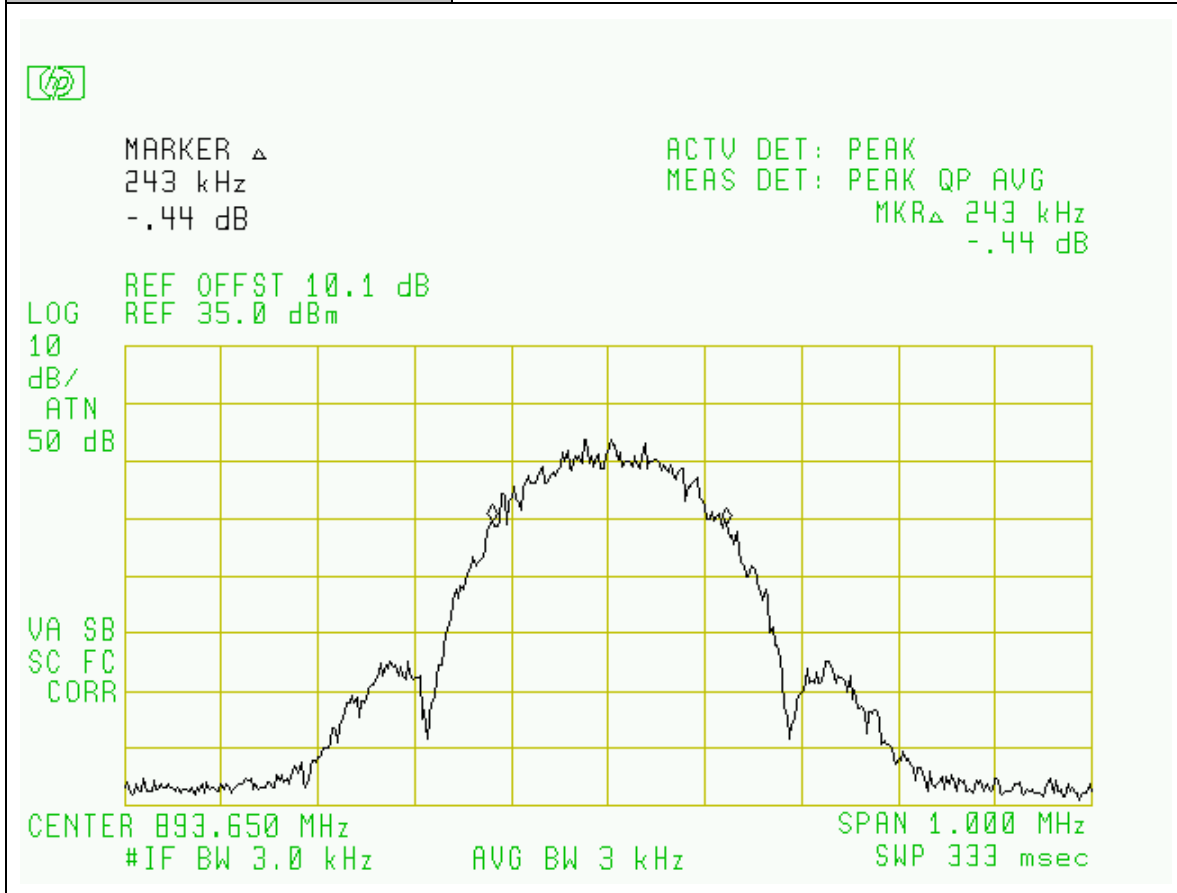
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



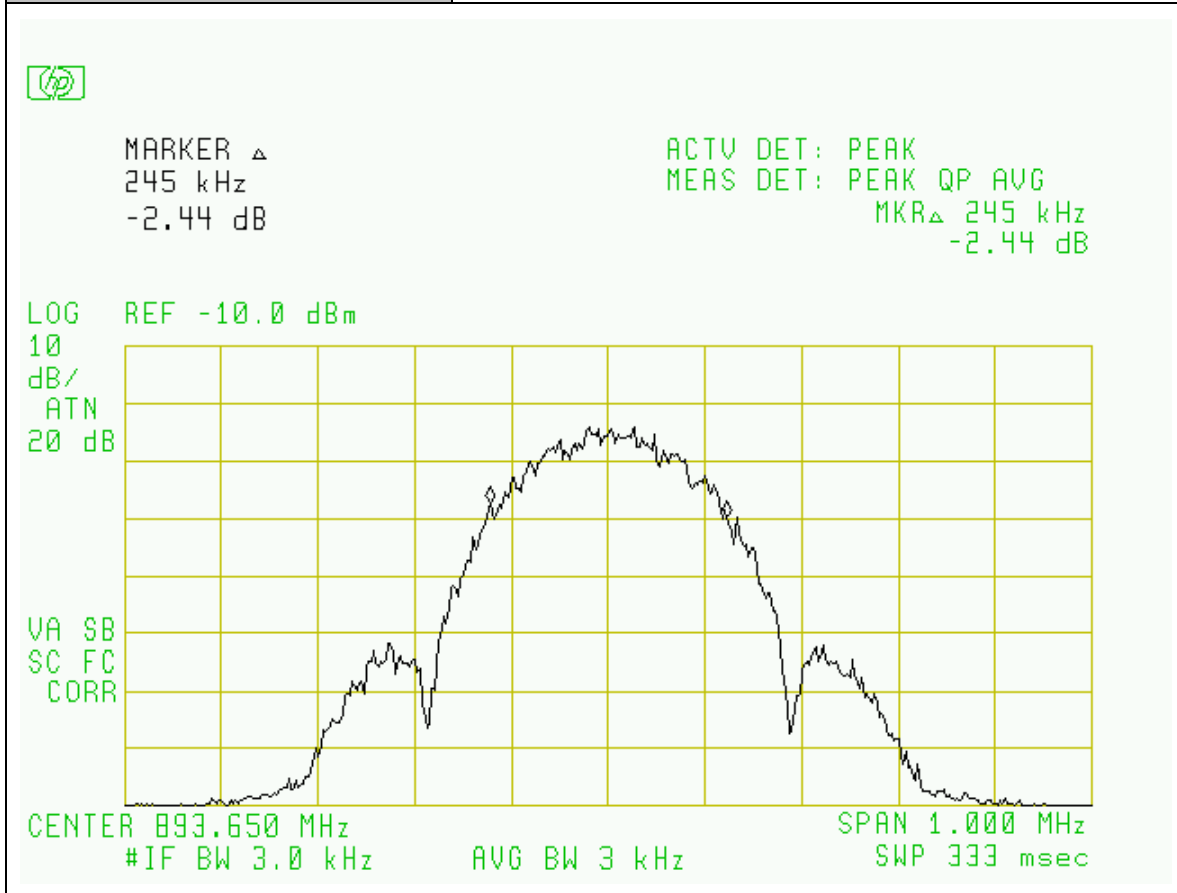
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



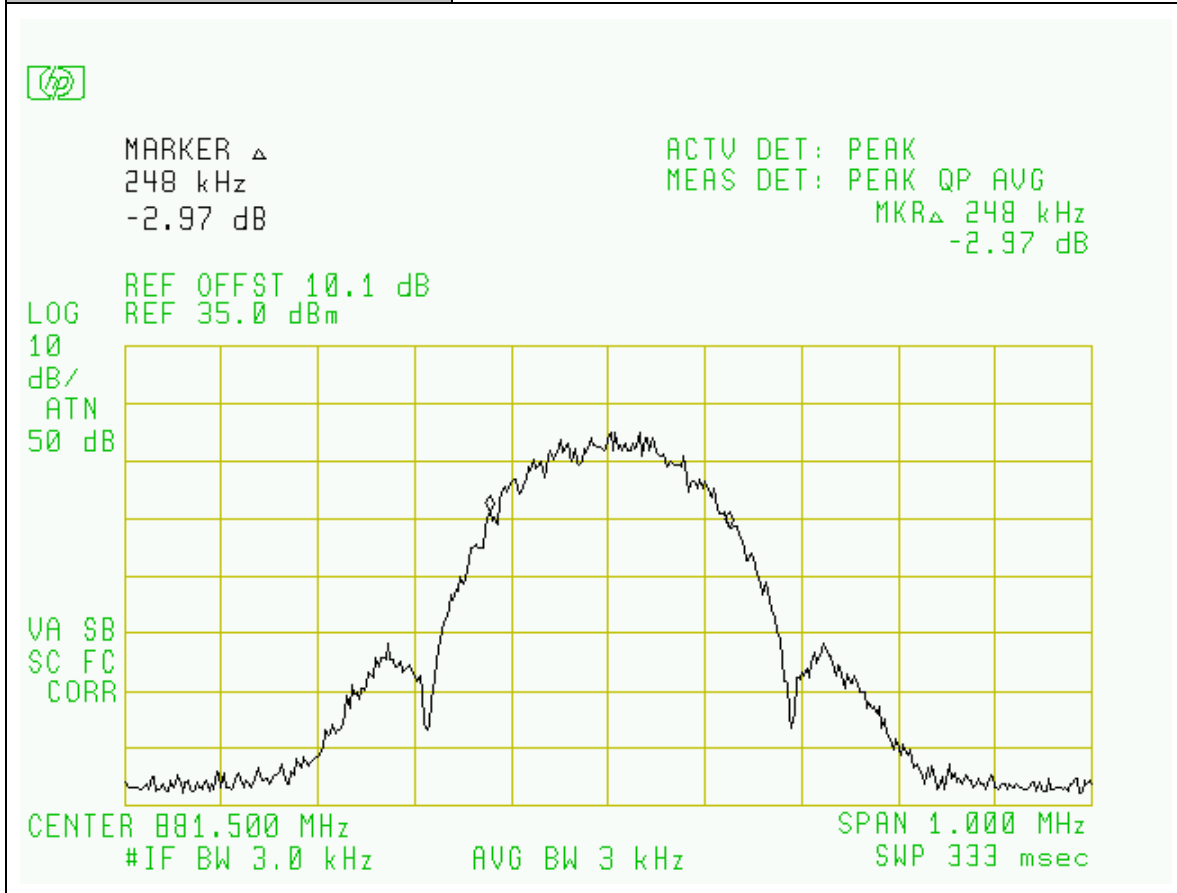
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



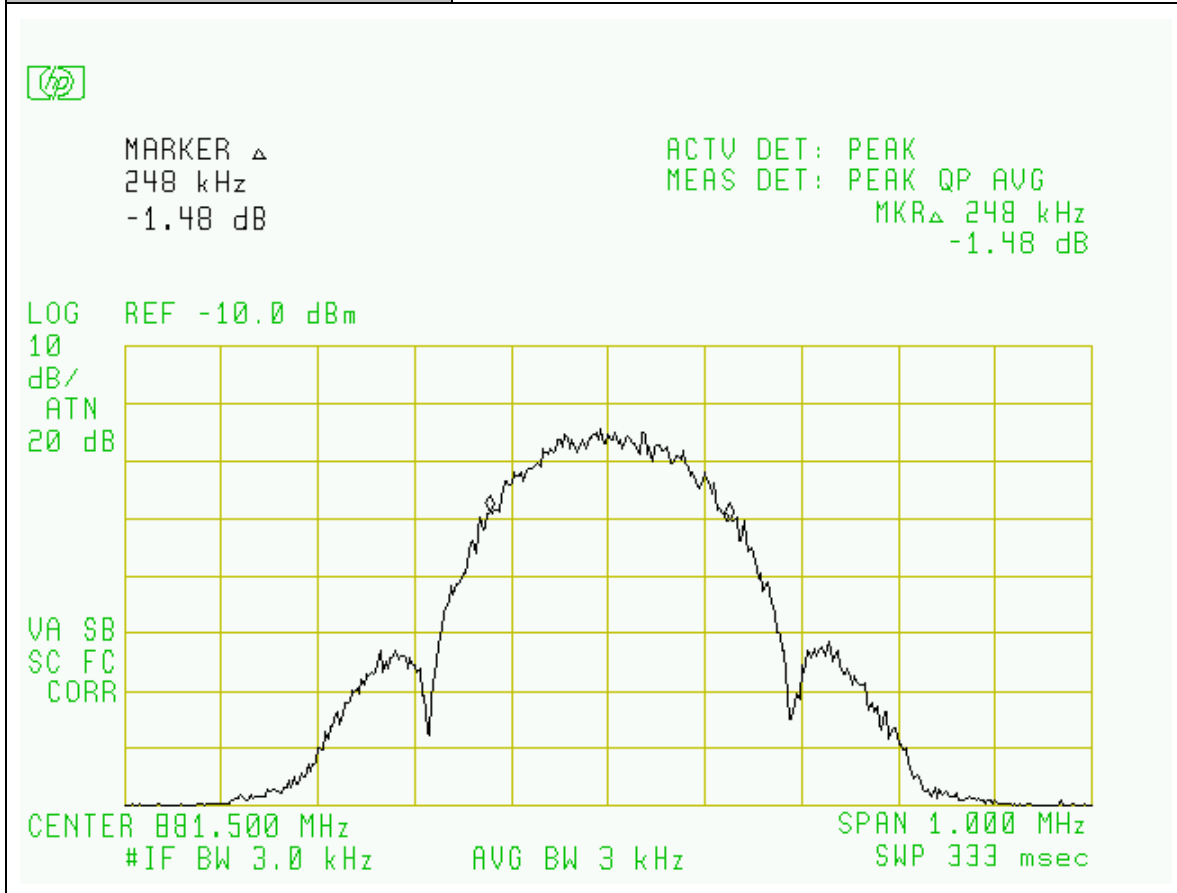
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



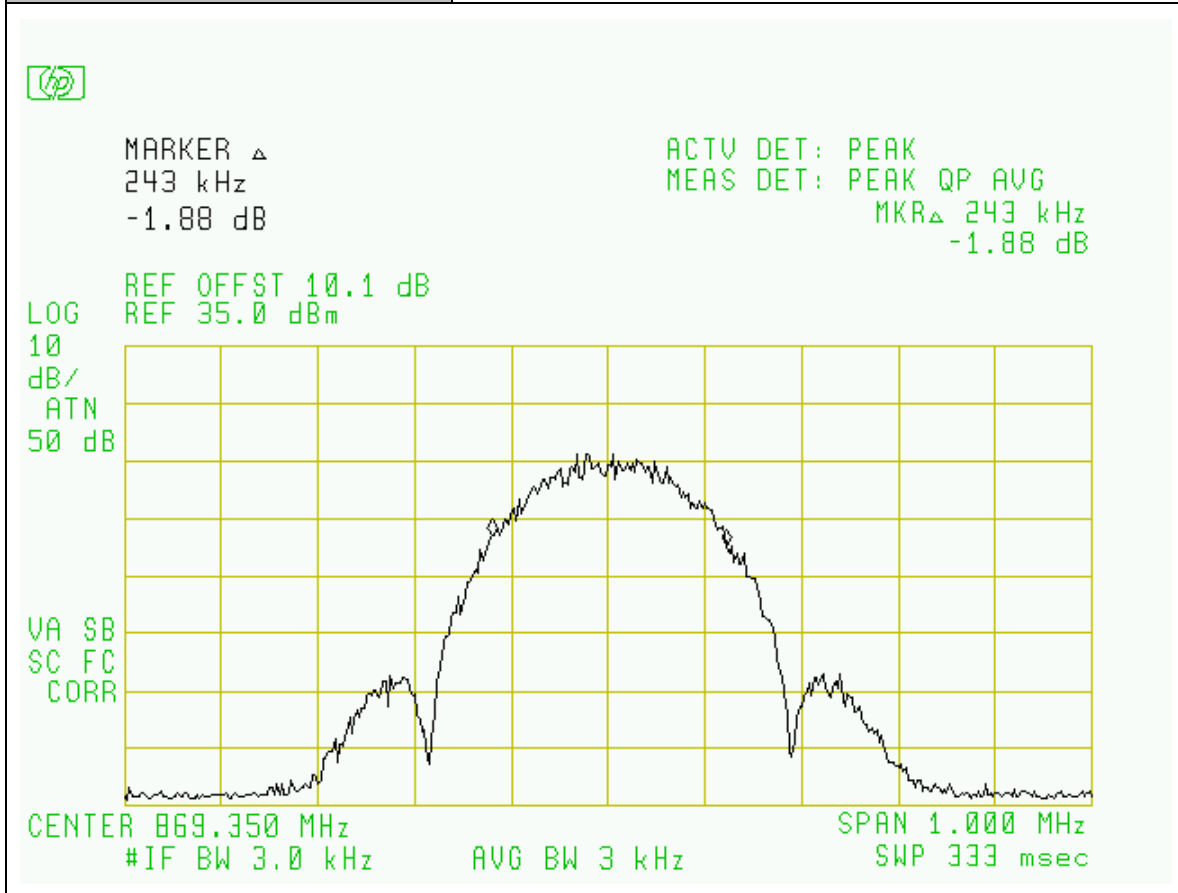
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



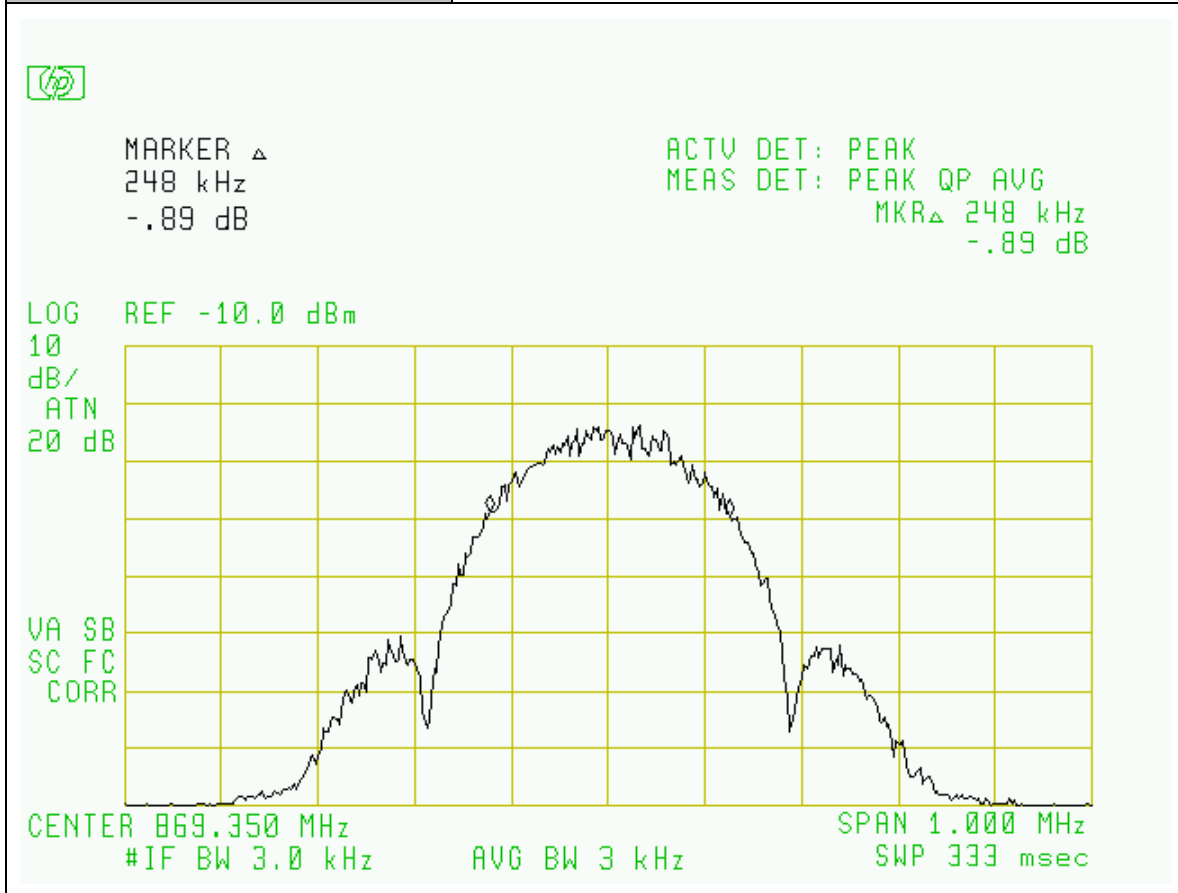
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



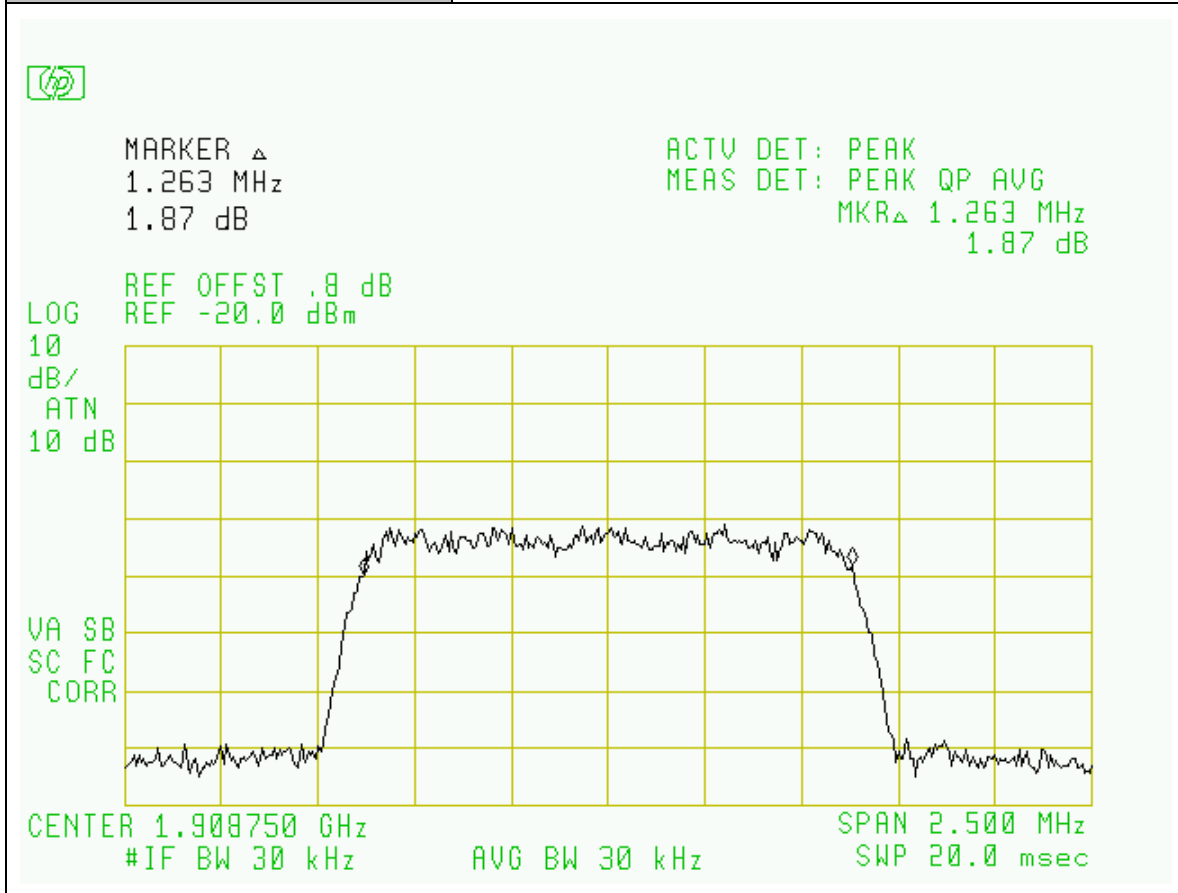
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Downlink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



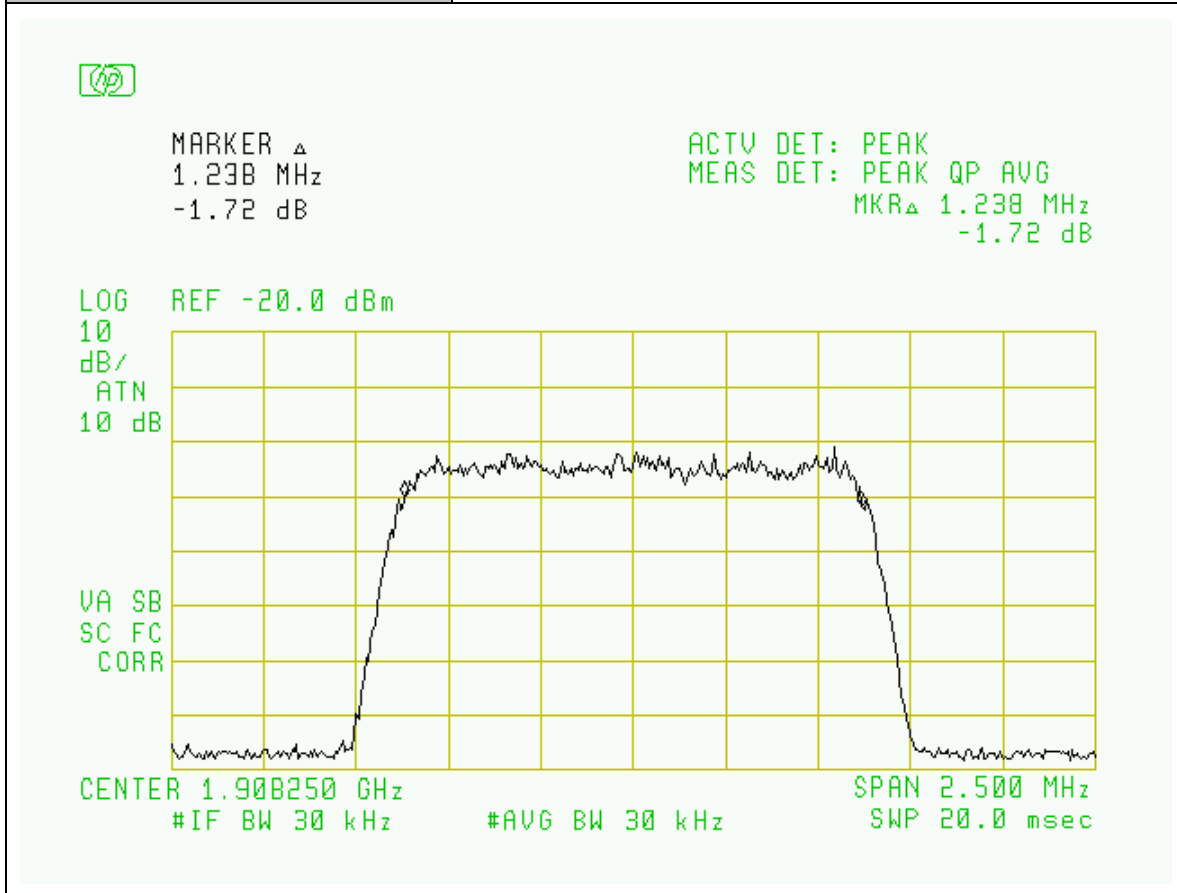
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



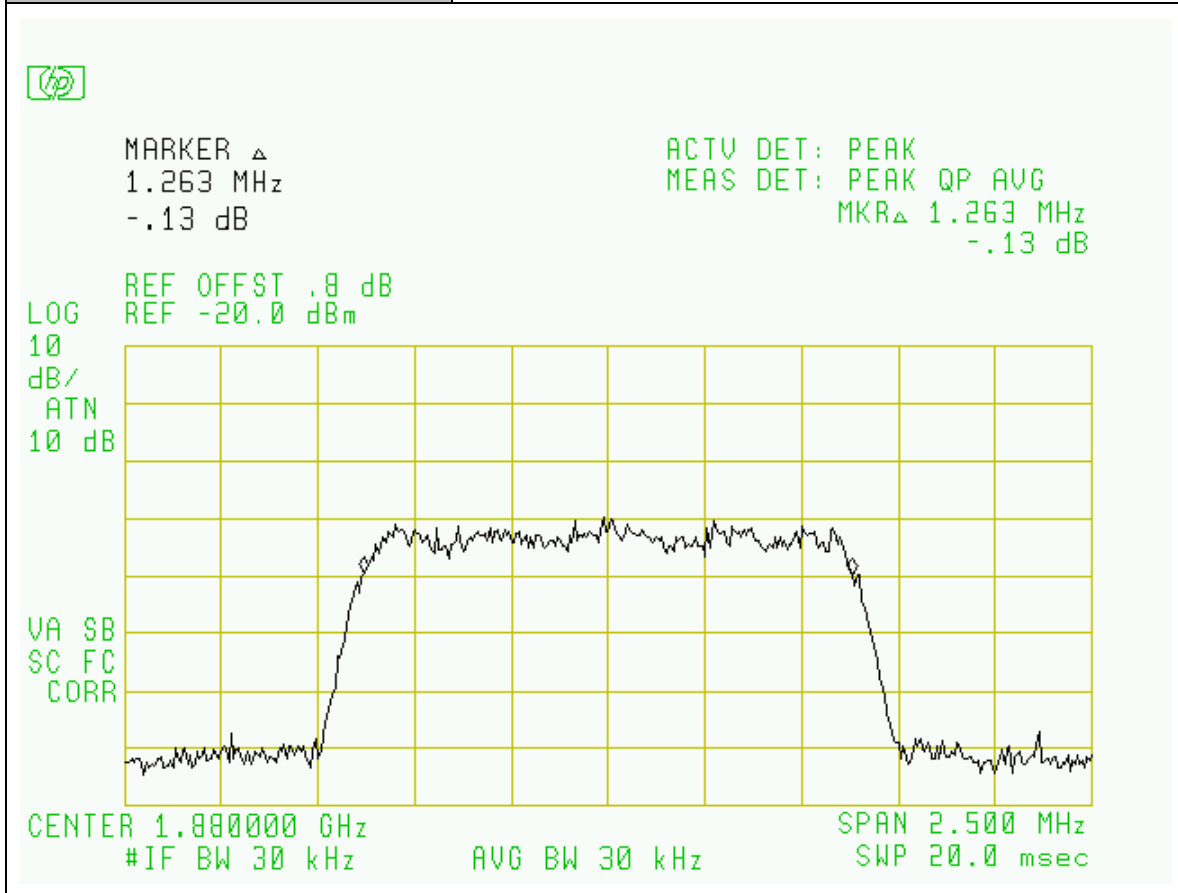
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



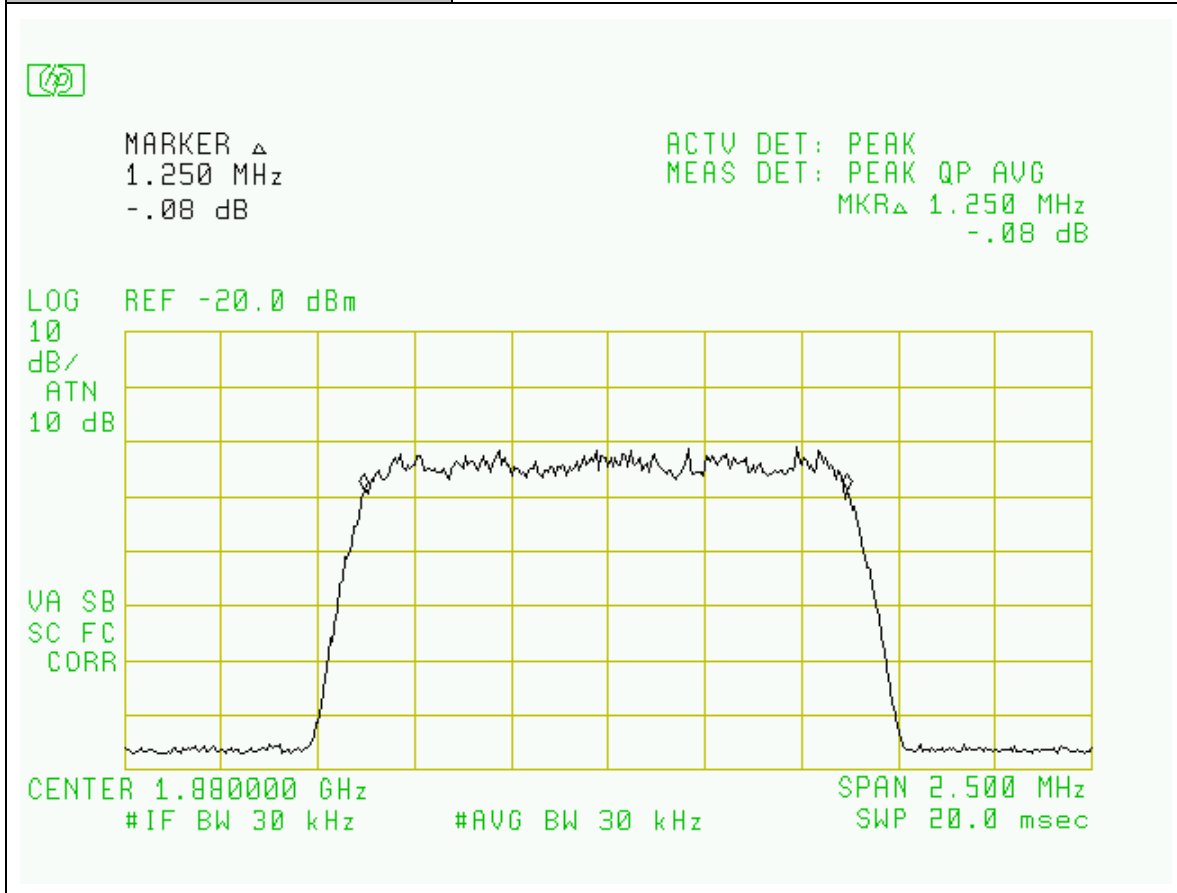
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: Cellular Bands
Plot Name:	Uplink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



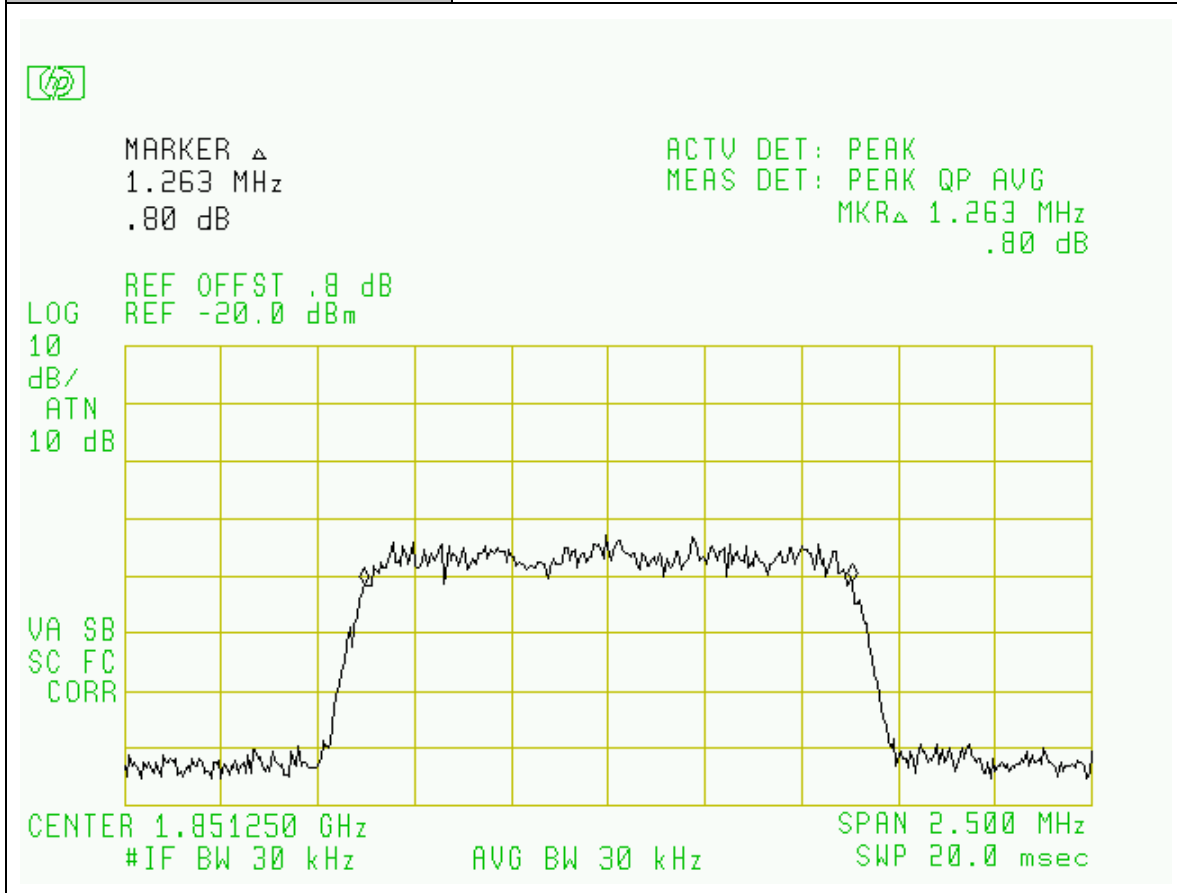
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



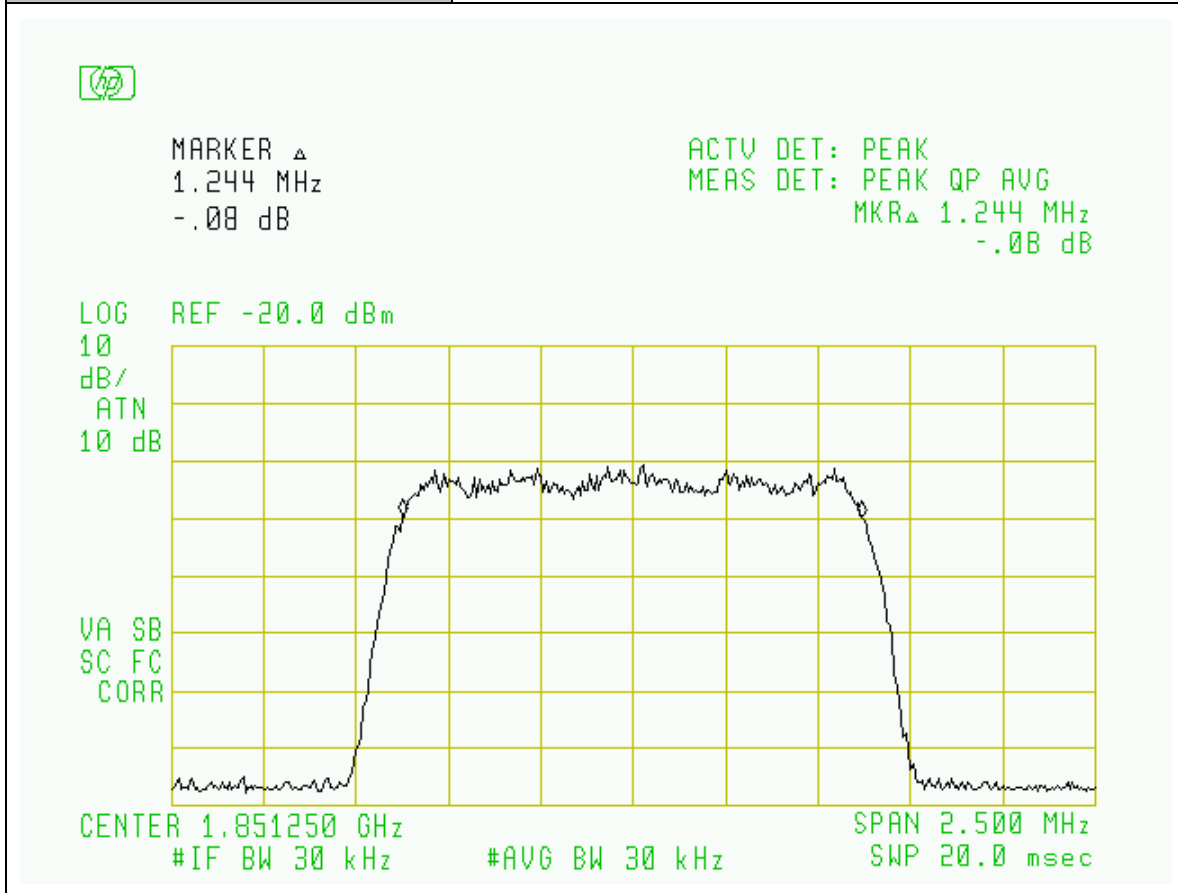
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



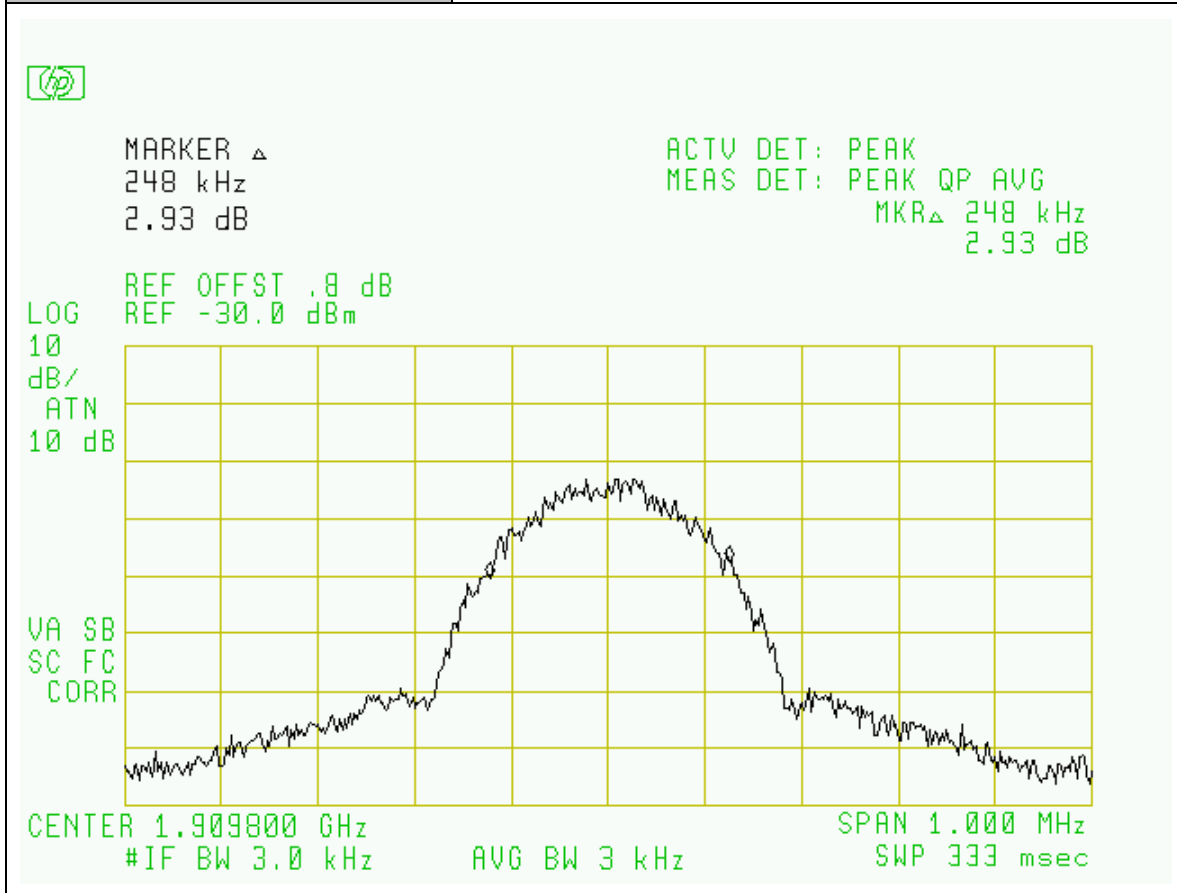
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



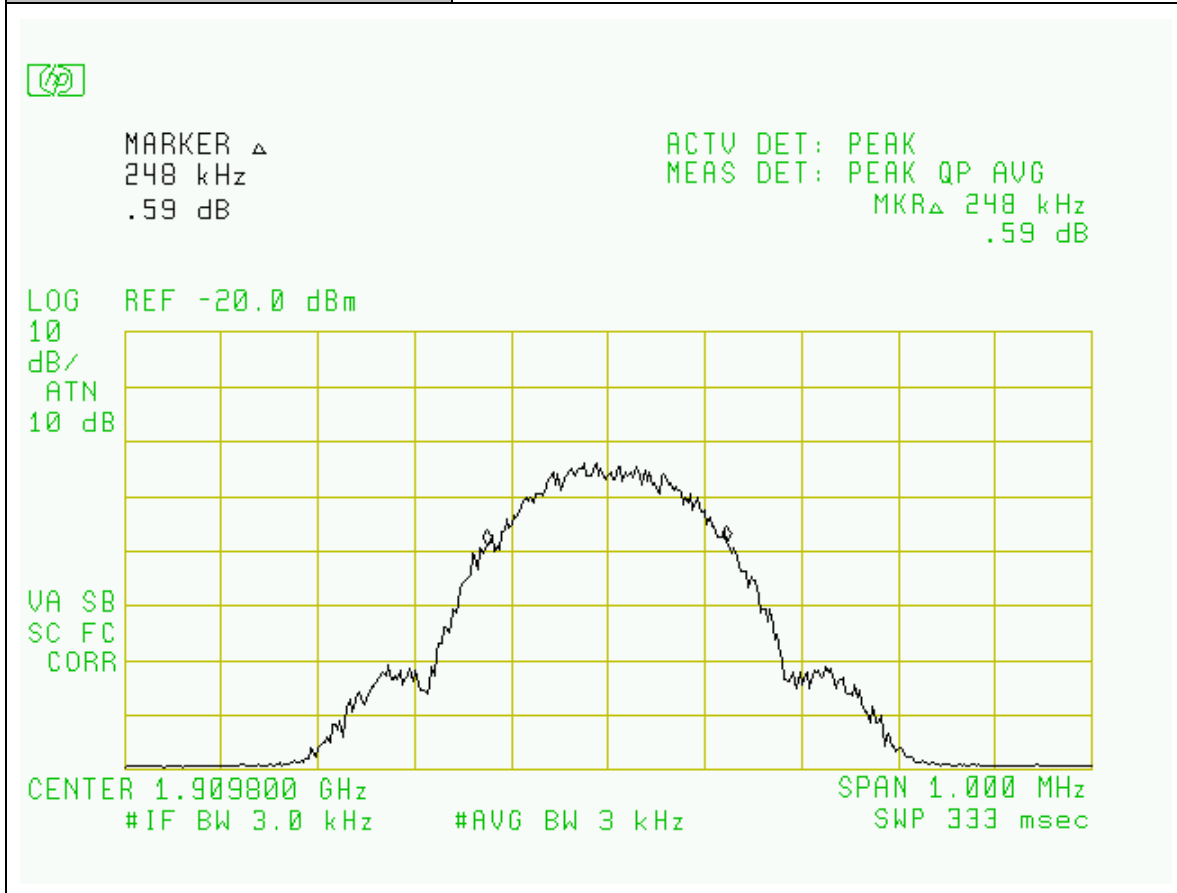
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



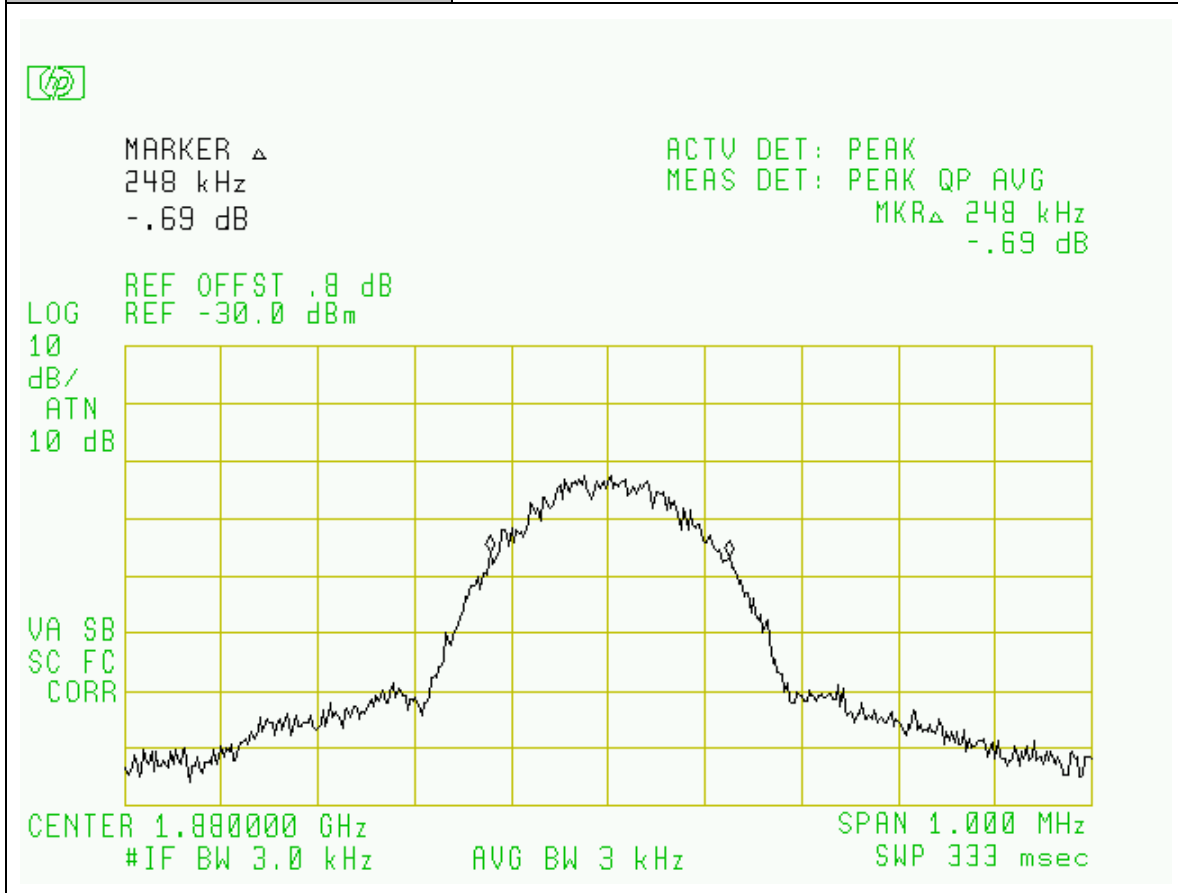
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



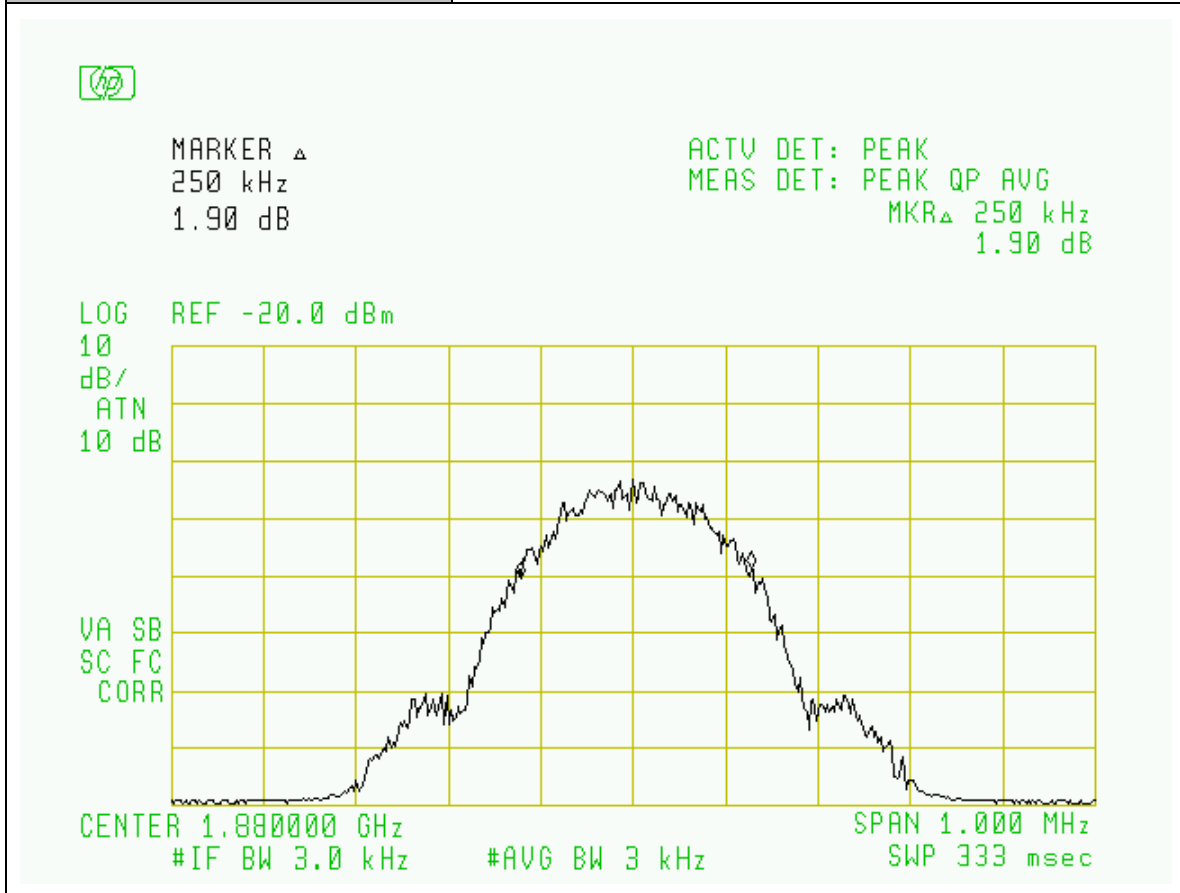
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



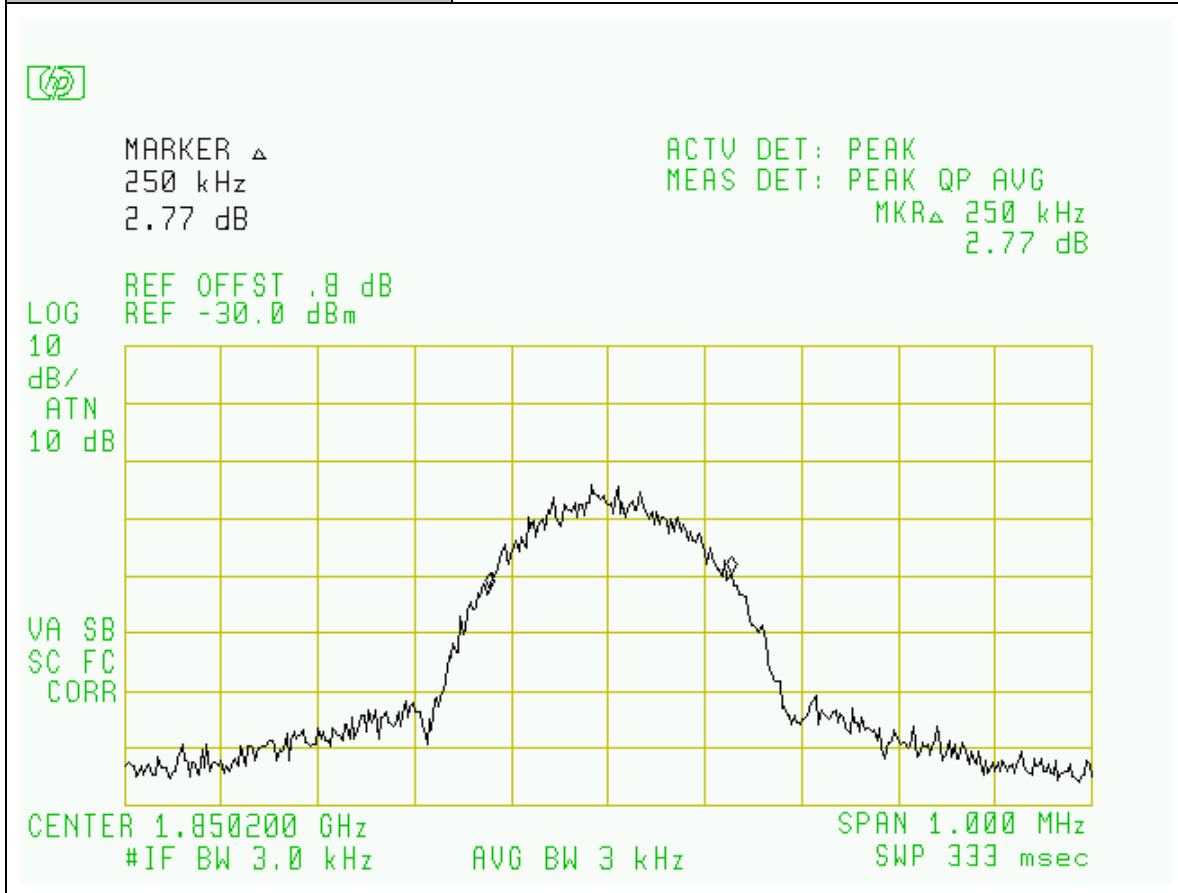
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



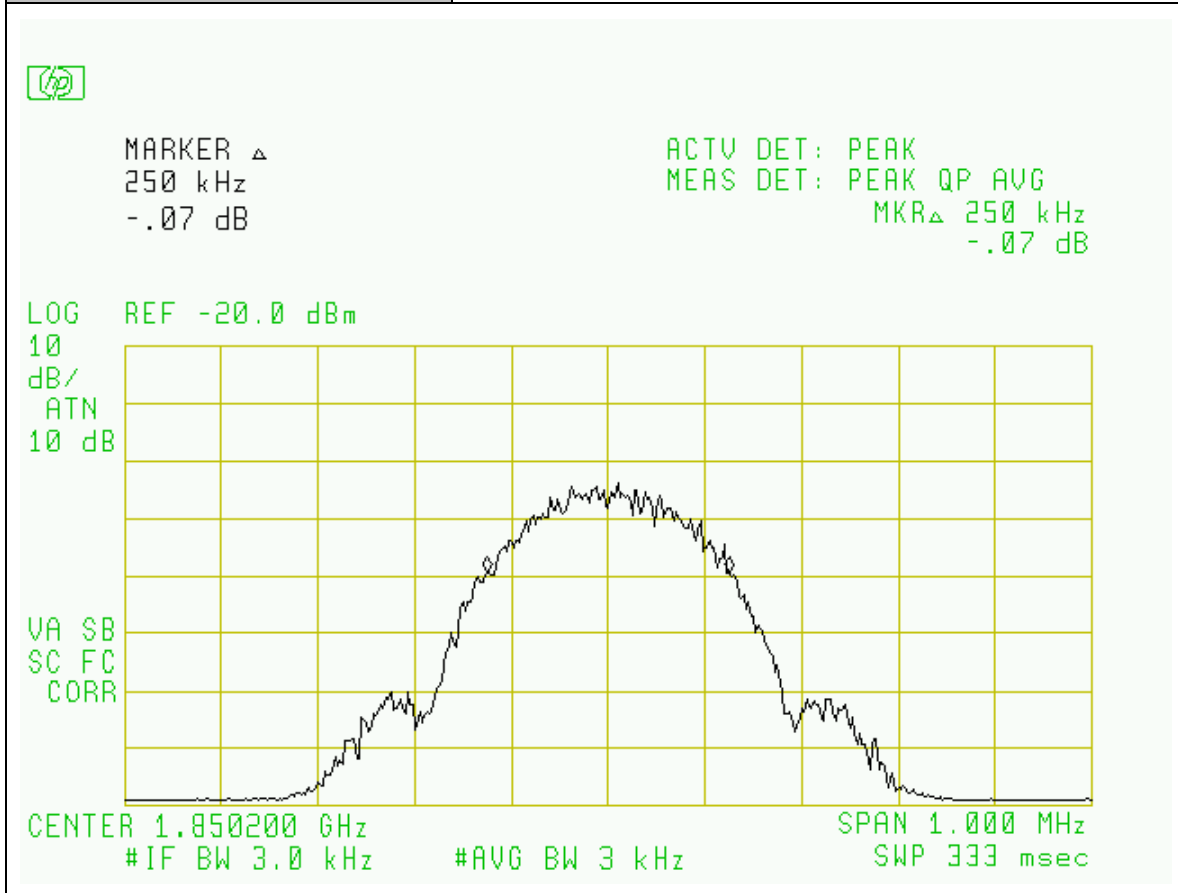
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



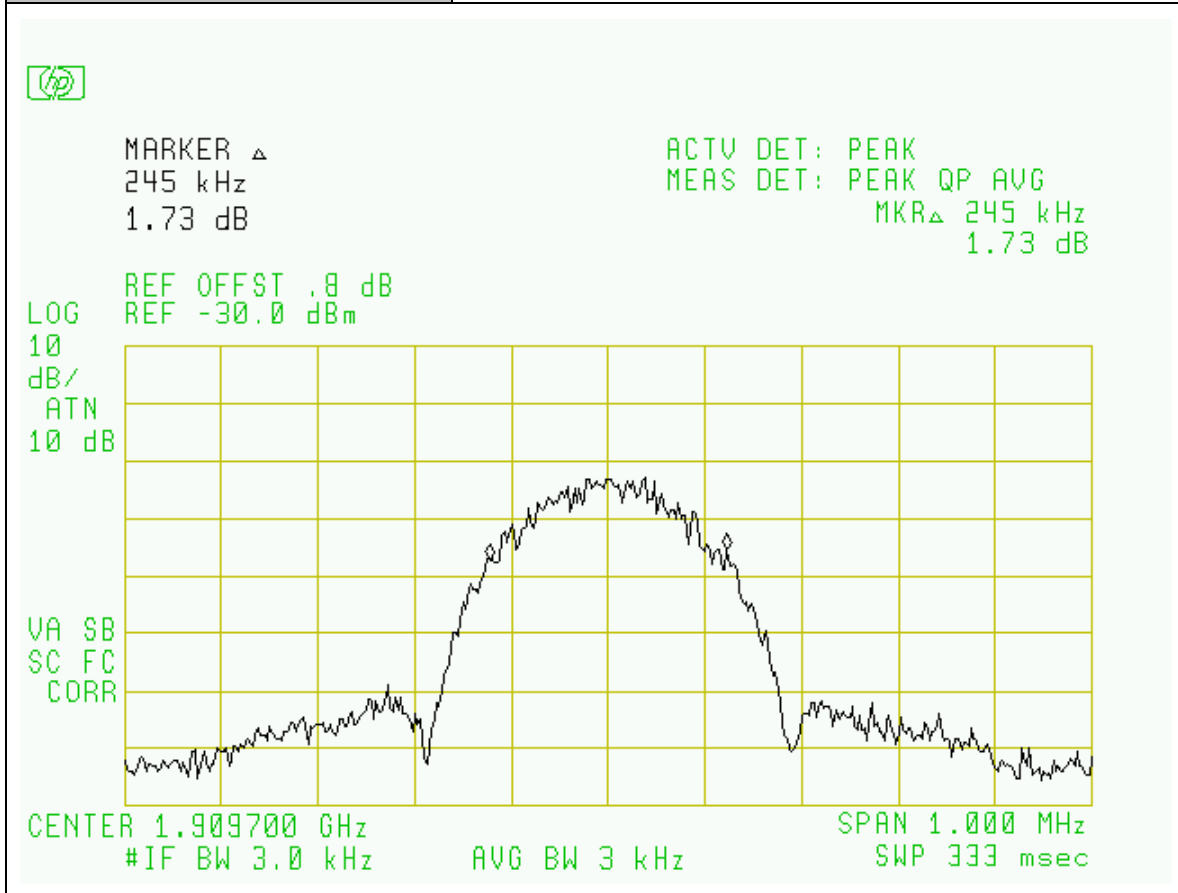
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, GSM Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



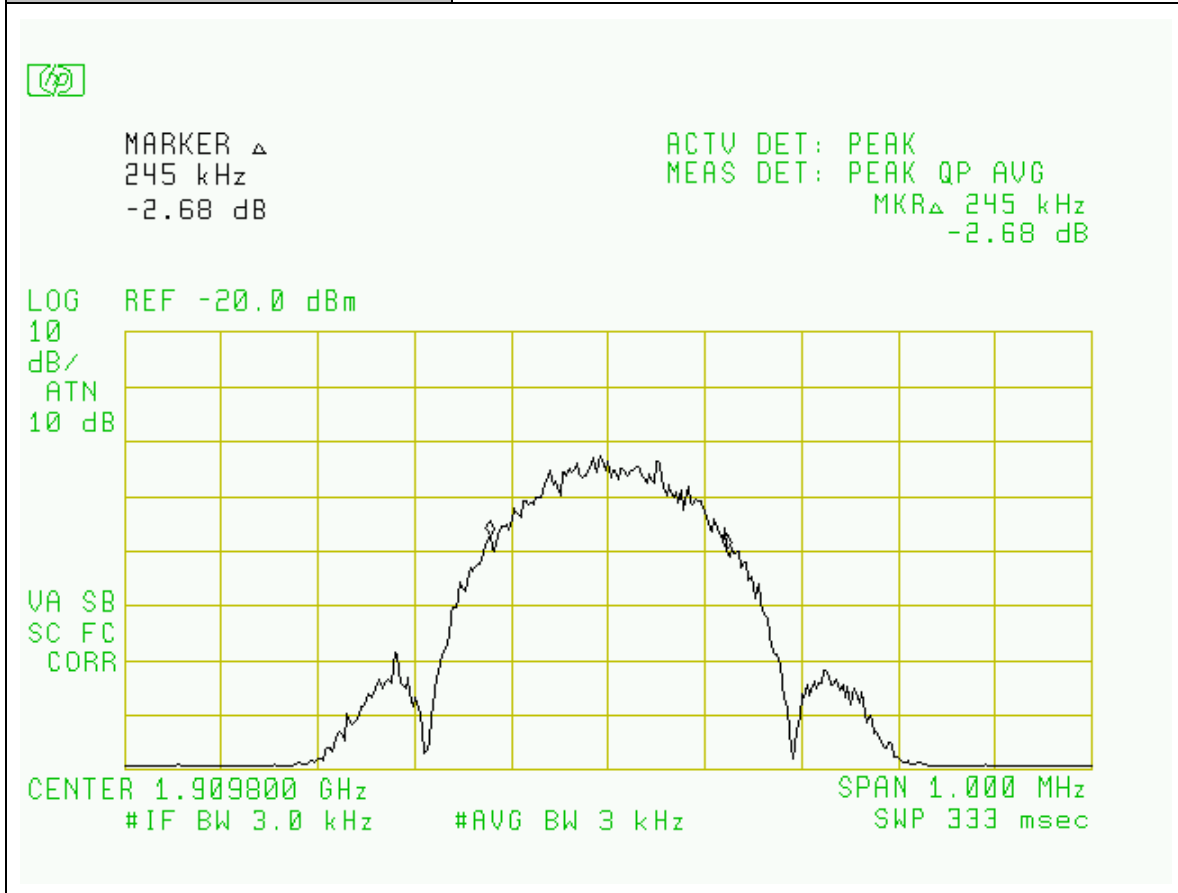
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



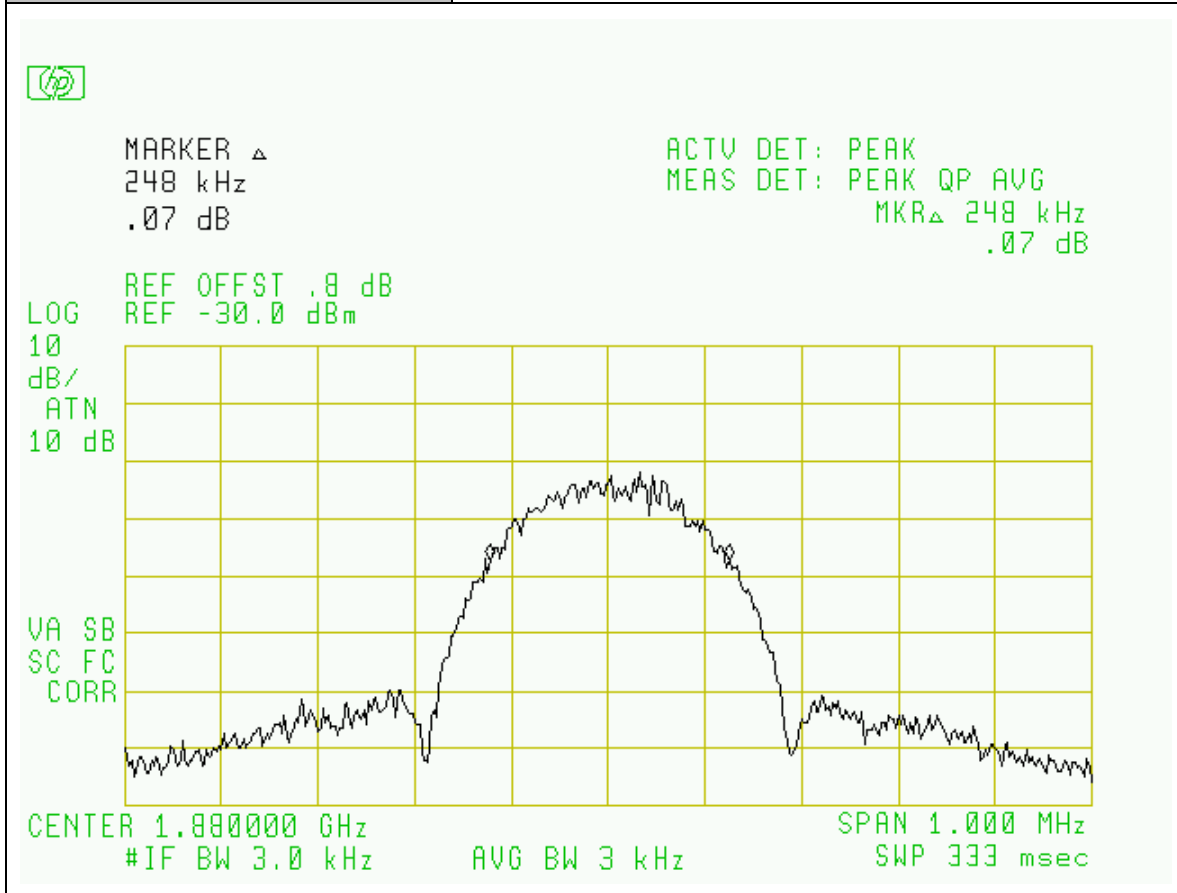
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



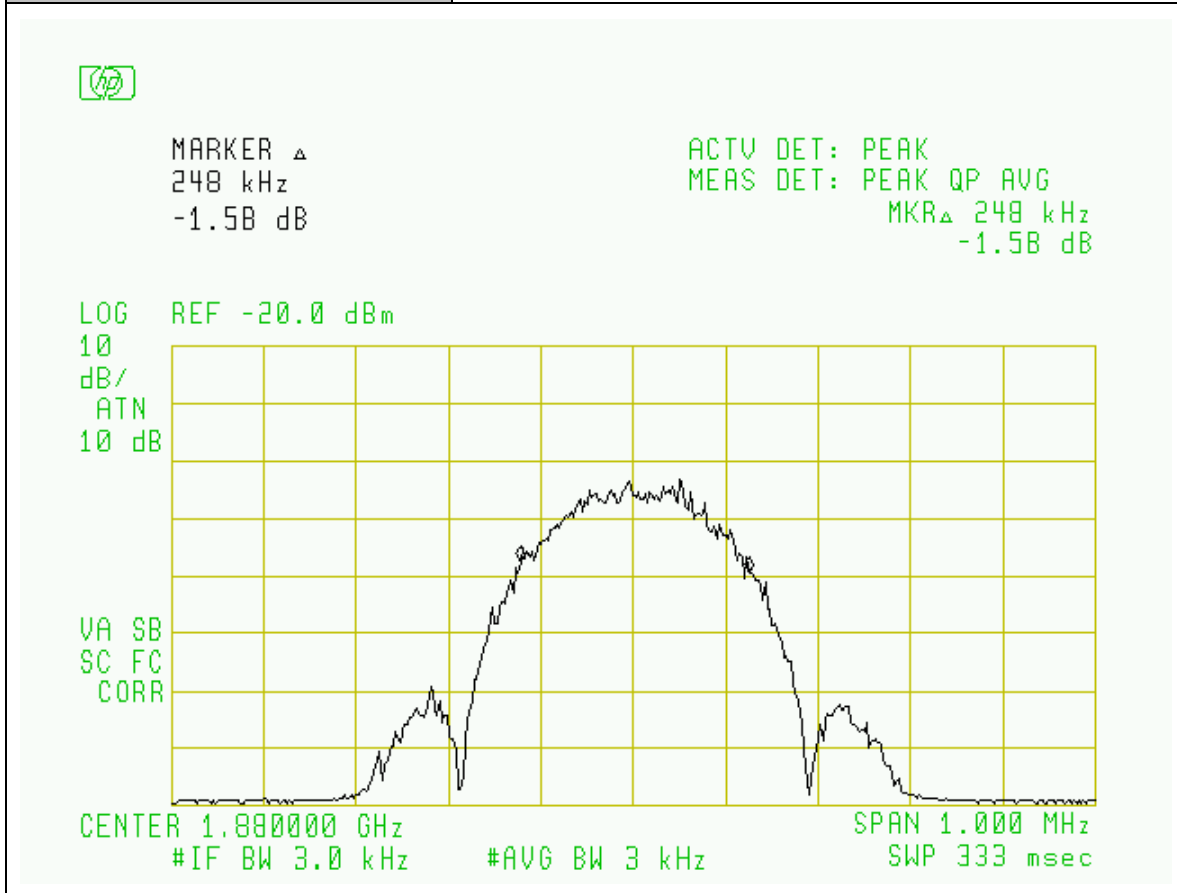
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



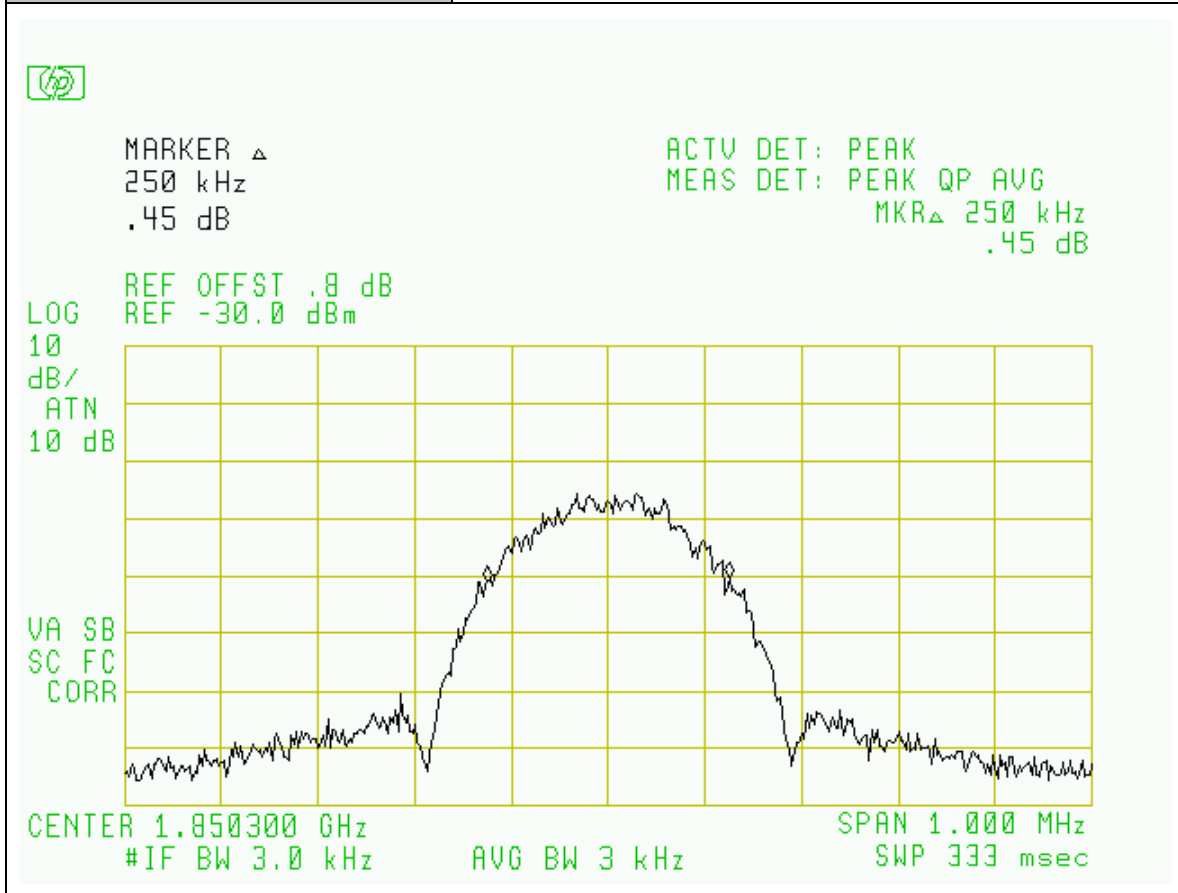
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



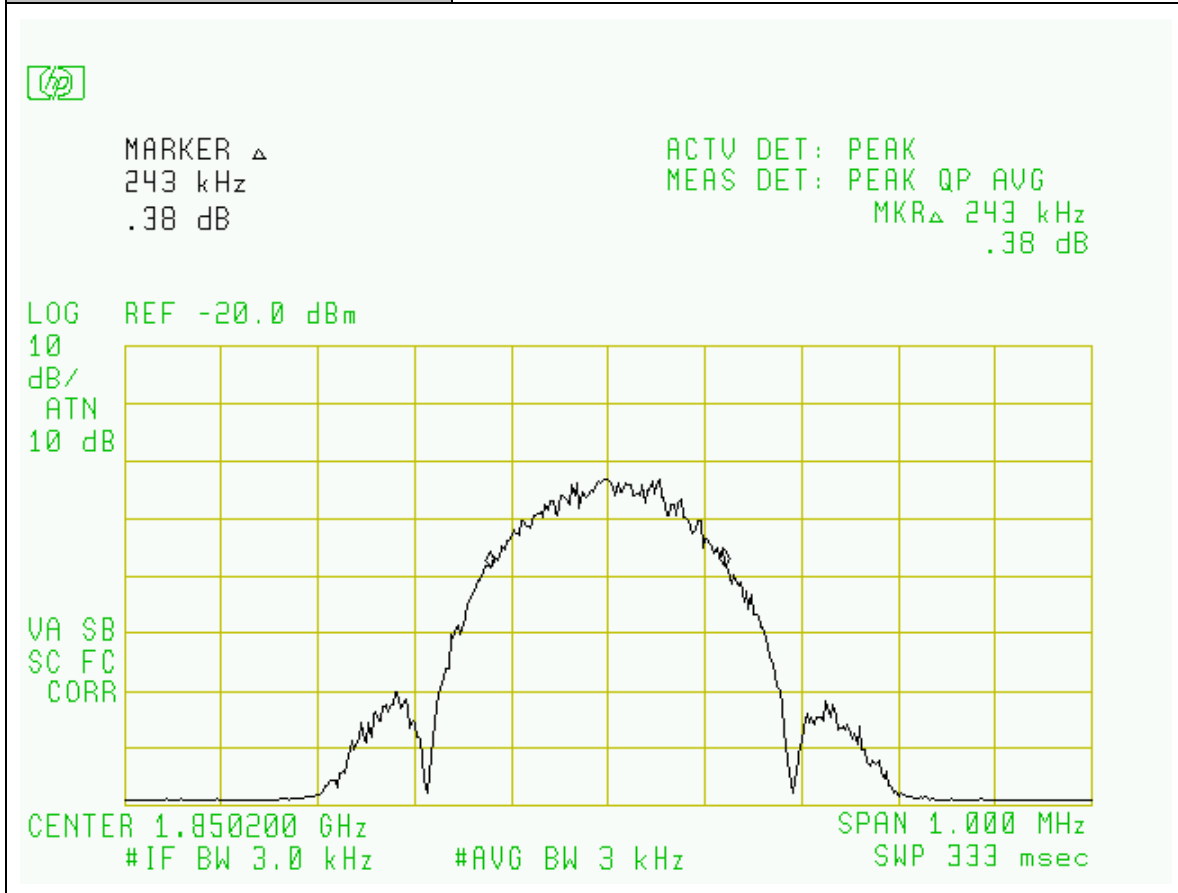
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: EUT BTS



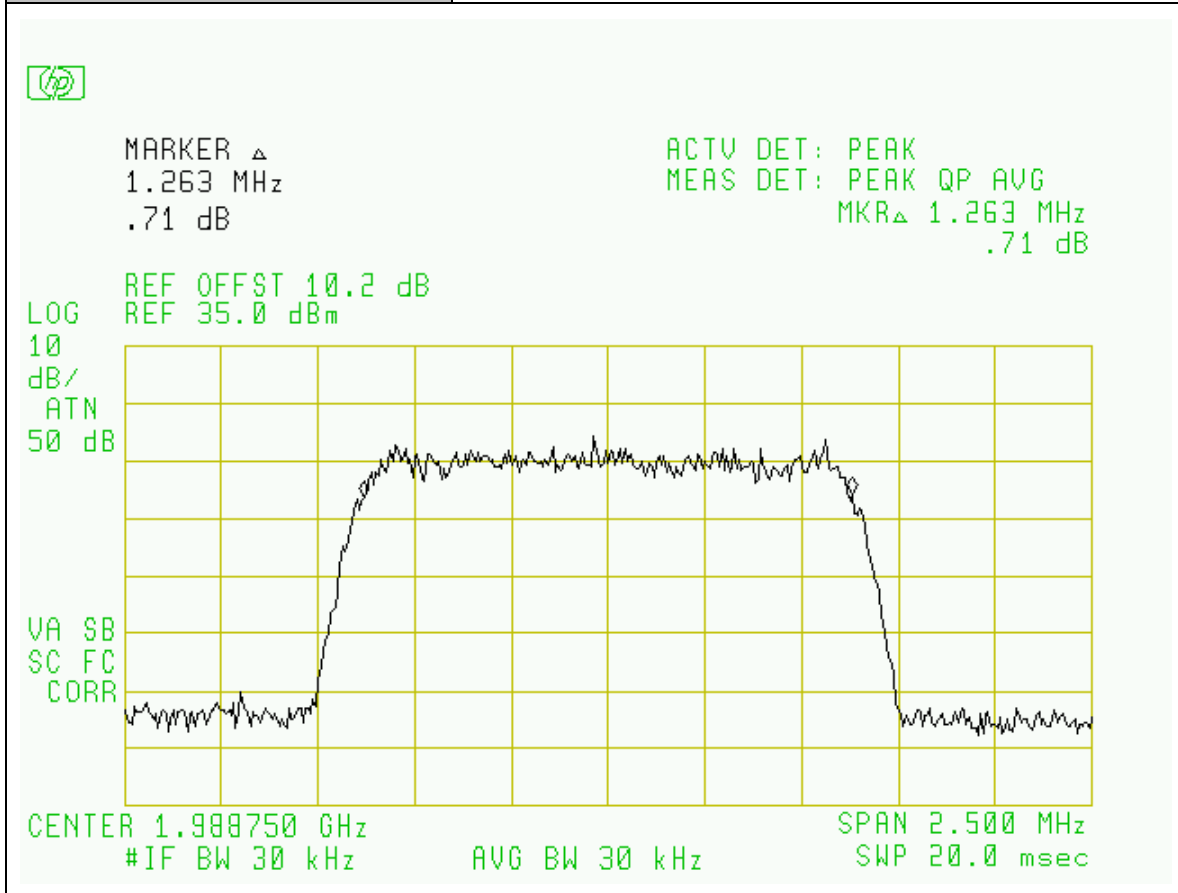
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Uplink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -55dBm, Output Port: SG



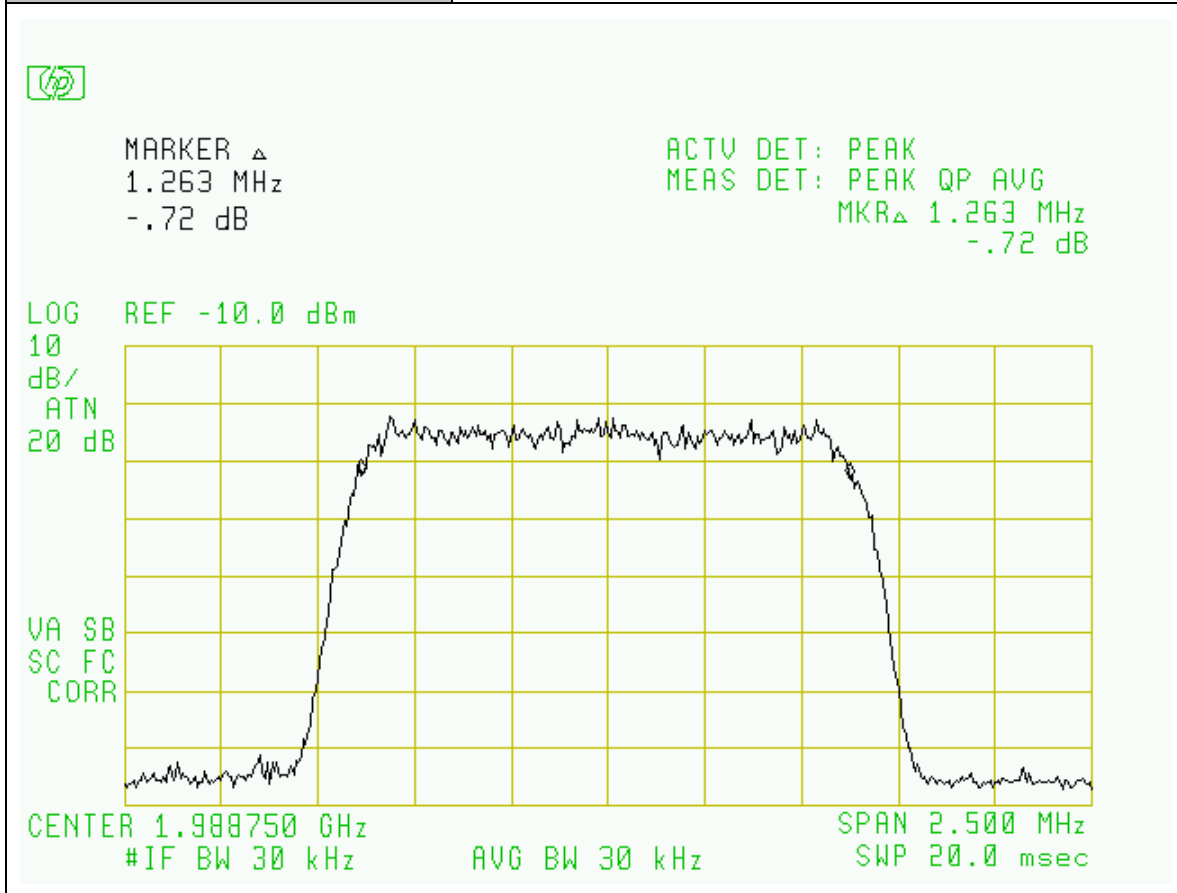
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



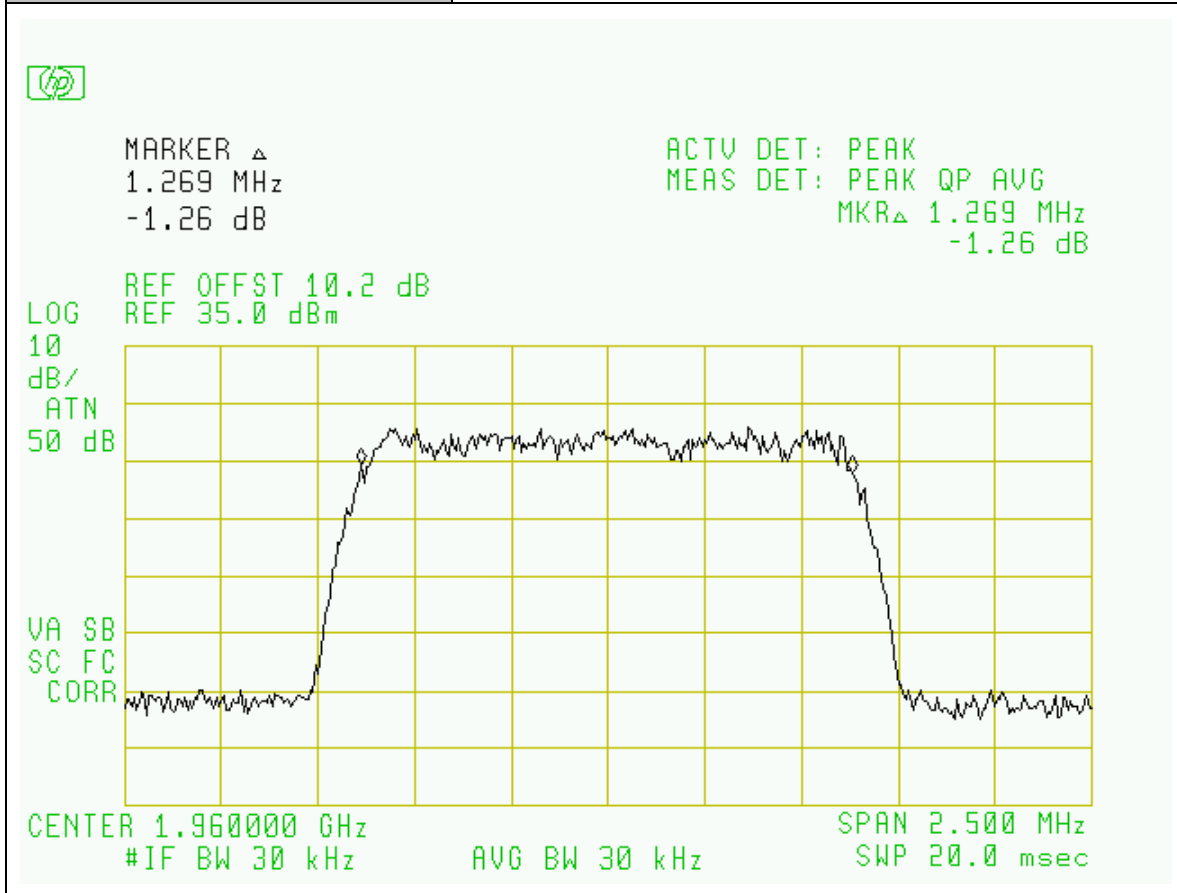
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



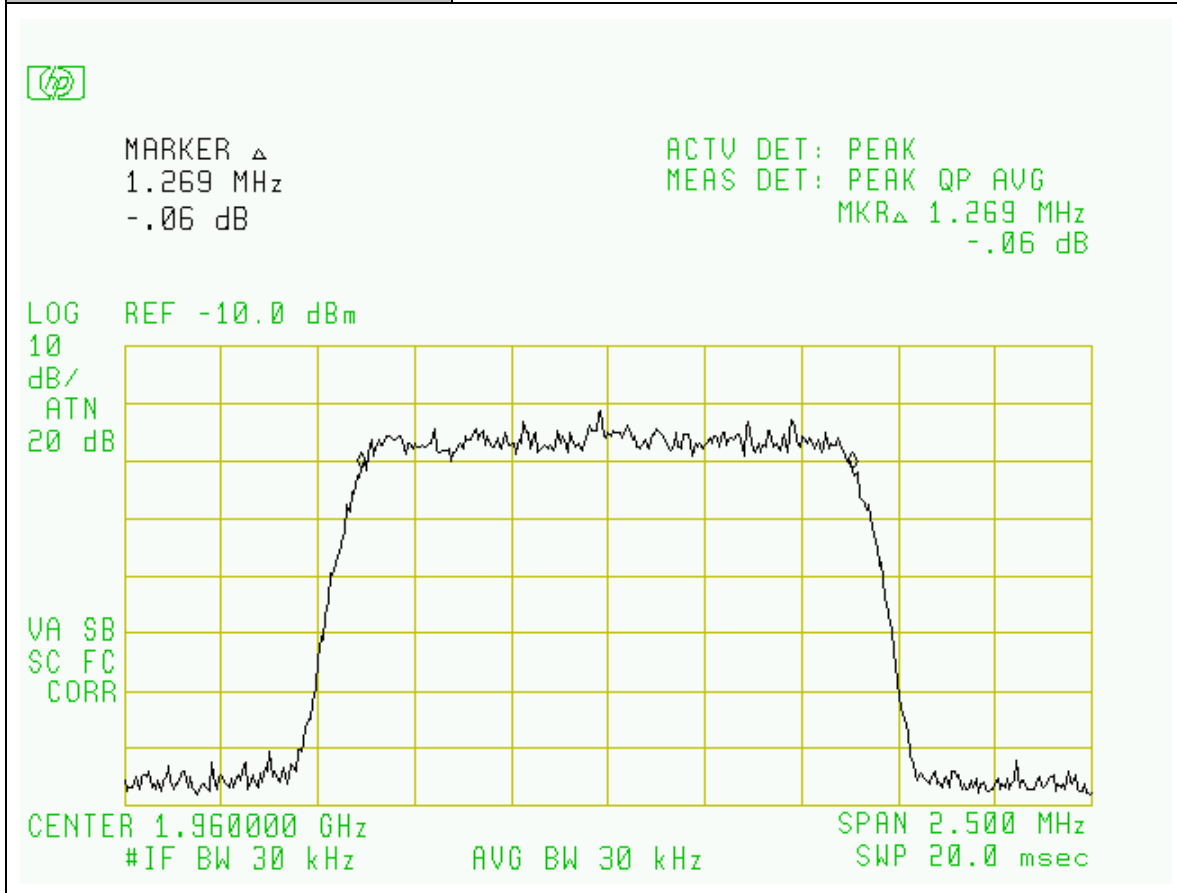
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



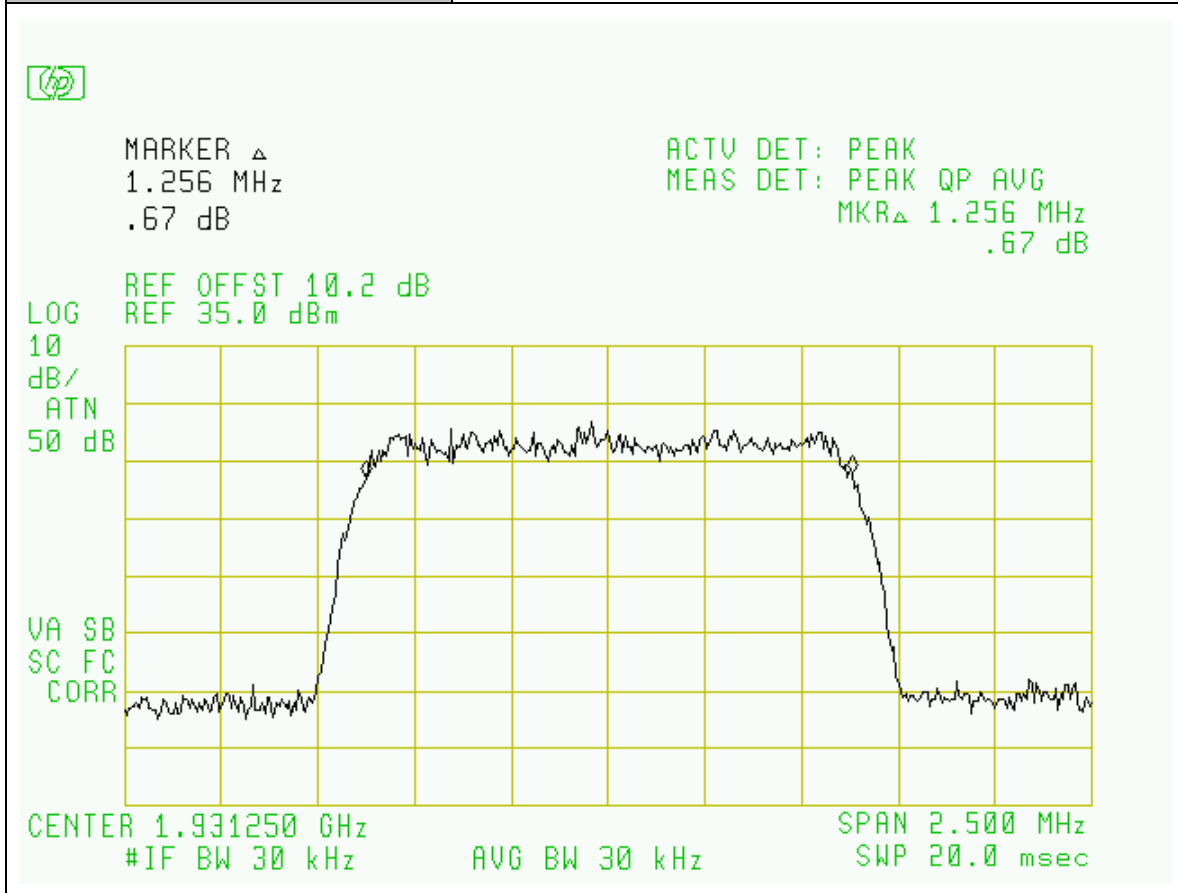
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



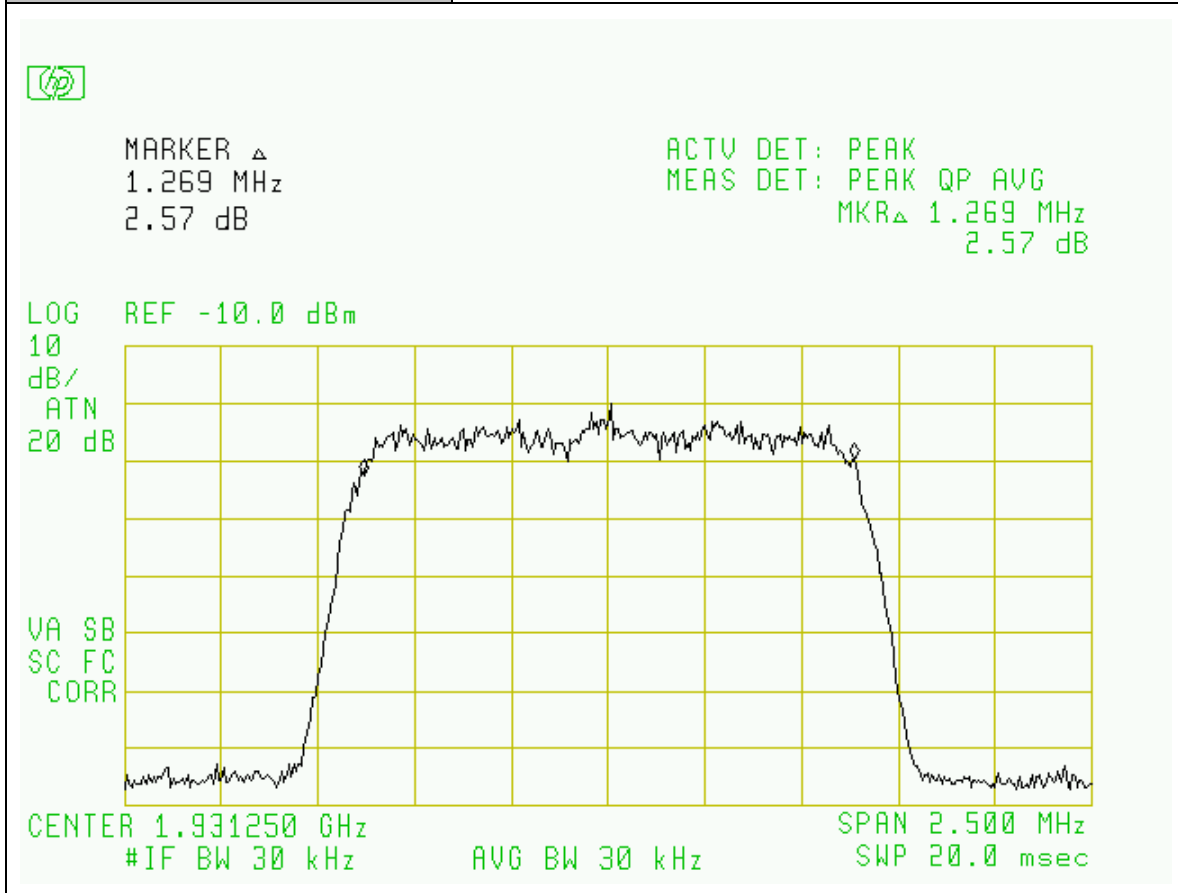
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MIBILE



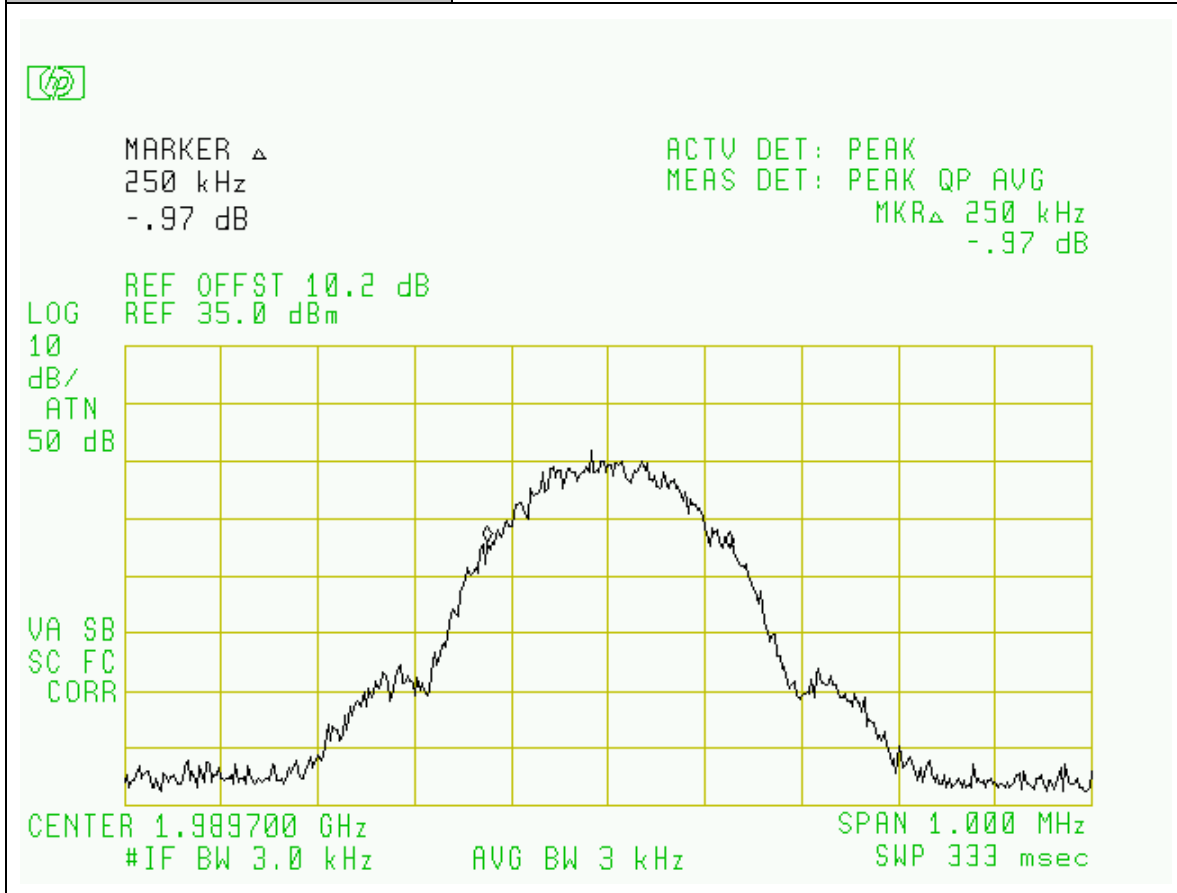
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, CDMA Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



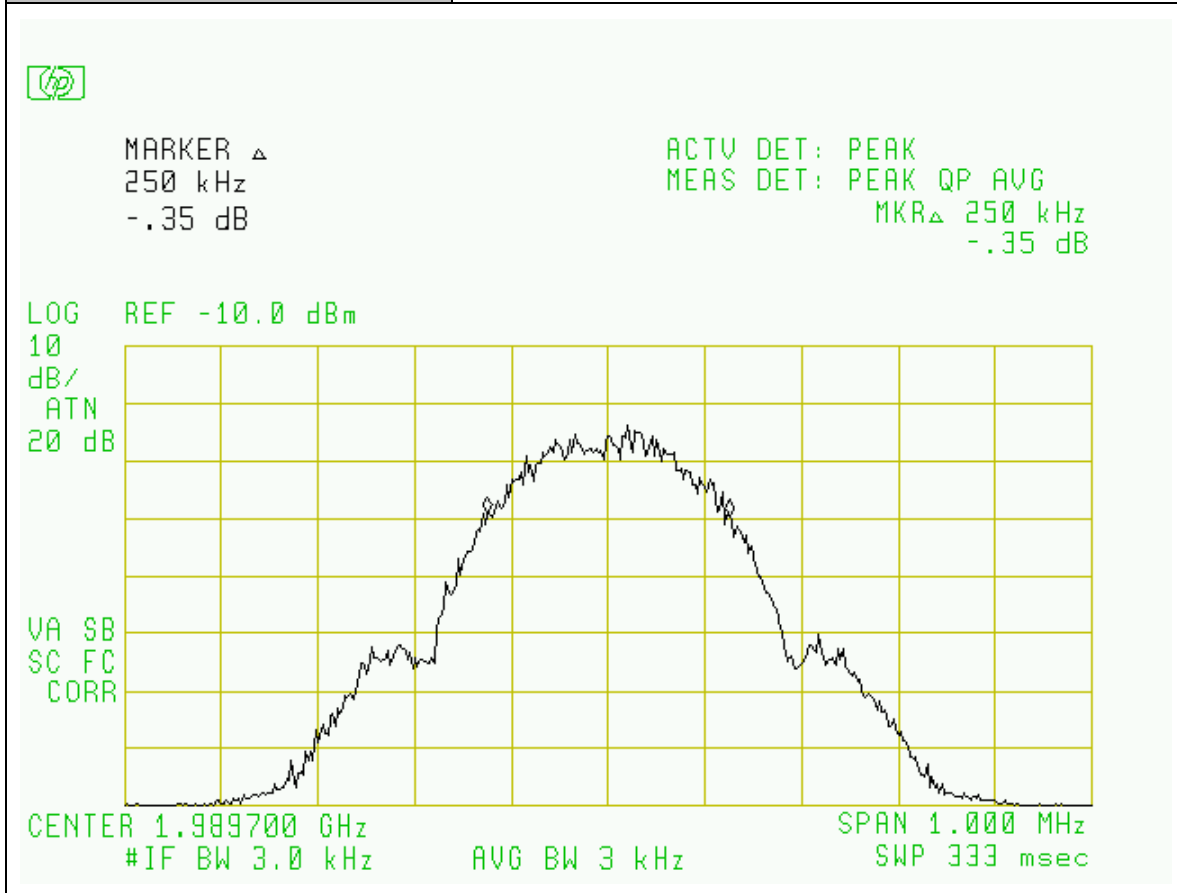
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



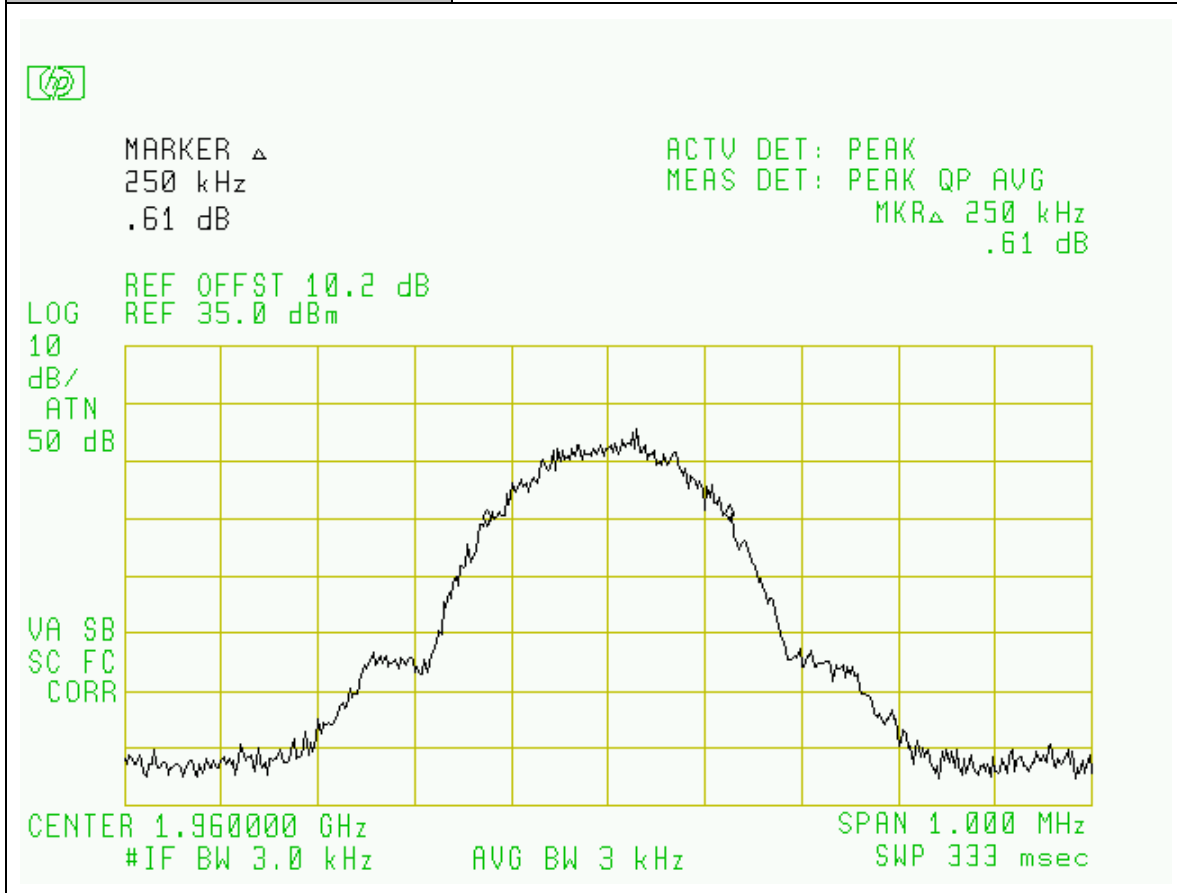
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



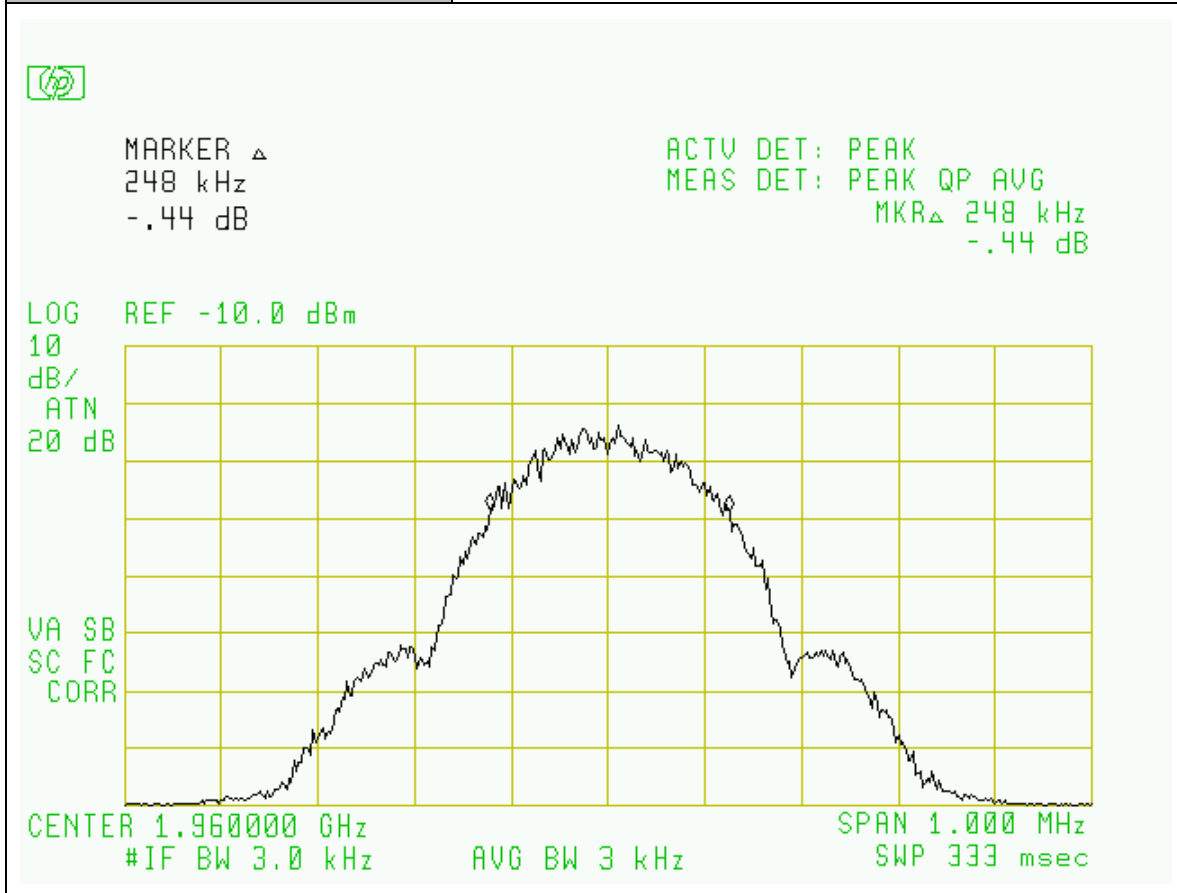
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EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



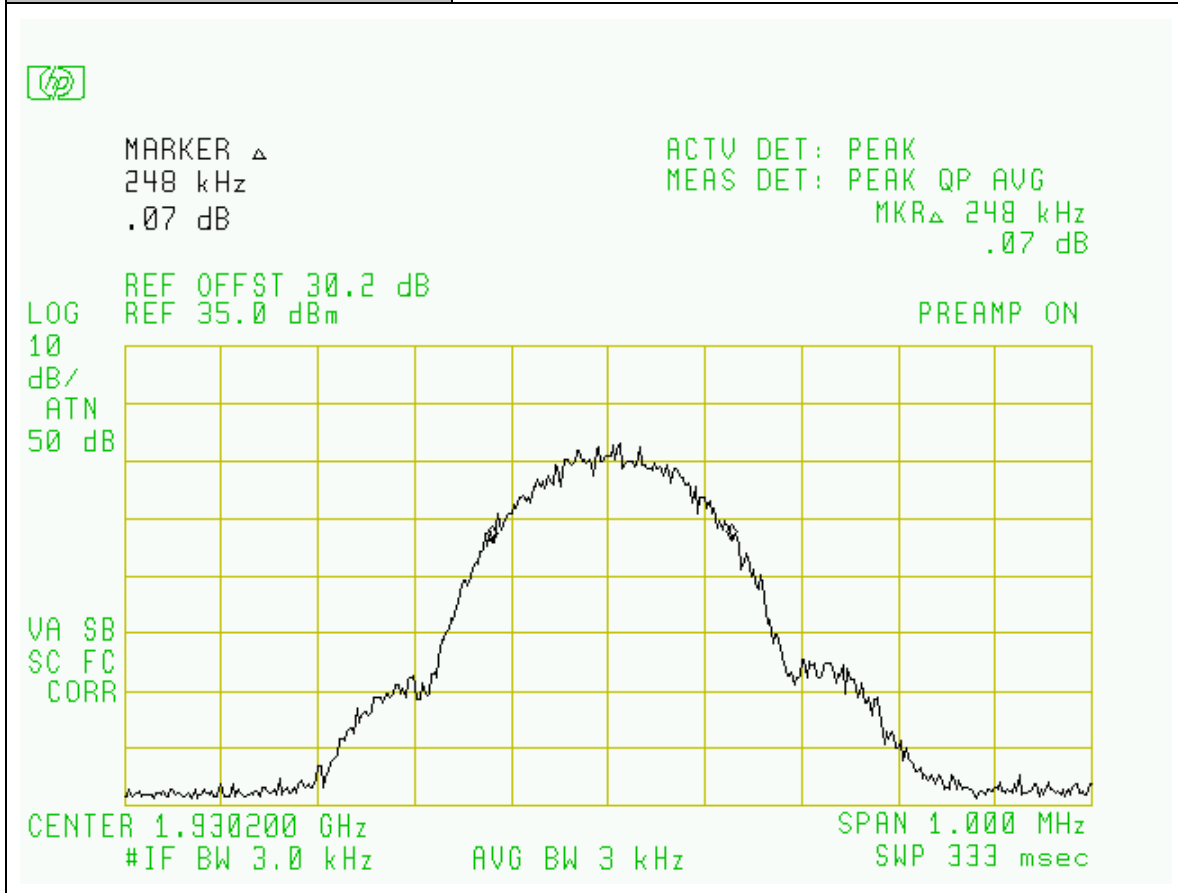
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



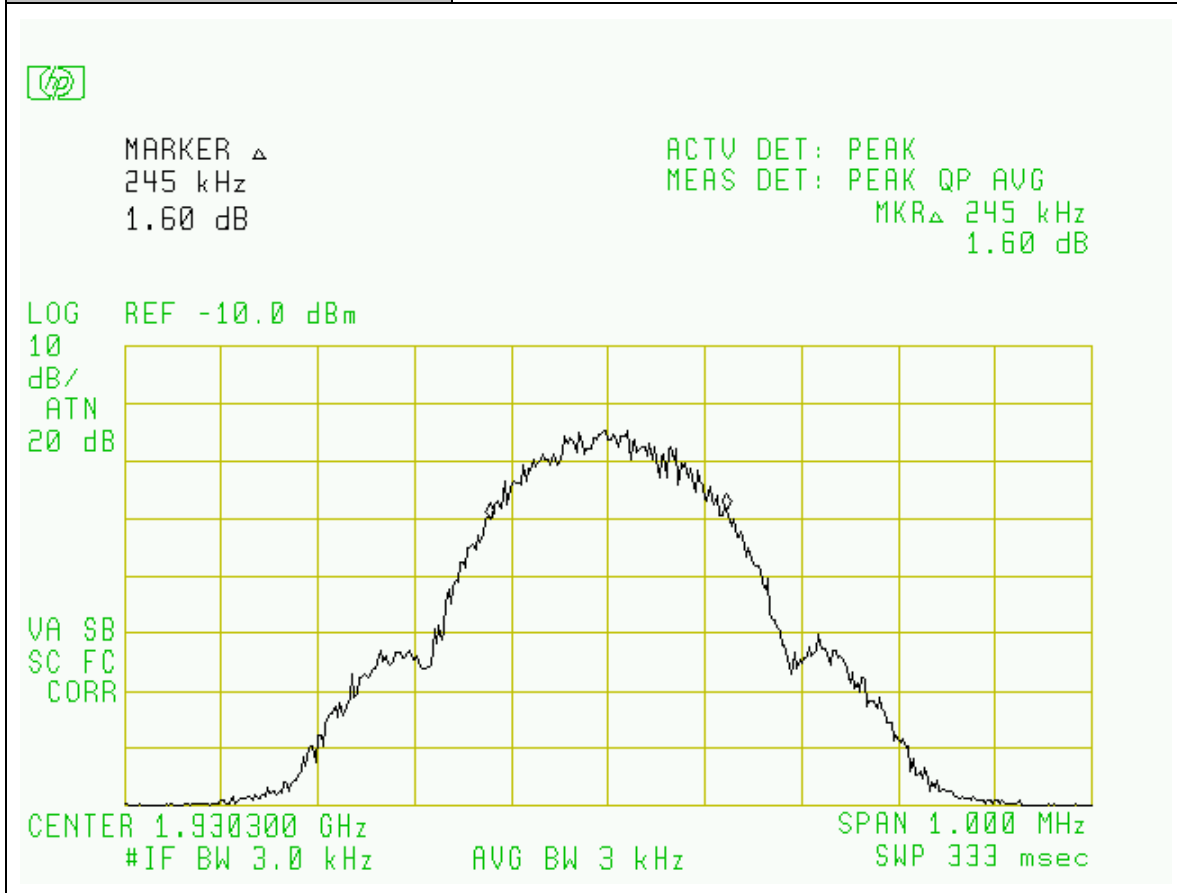
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, GSM Modulation
Configuration:	SG Input: -25dBm, Output Port: EUT MOBILE



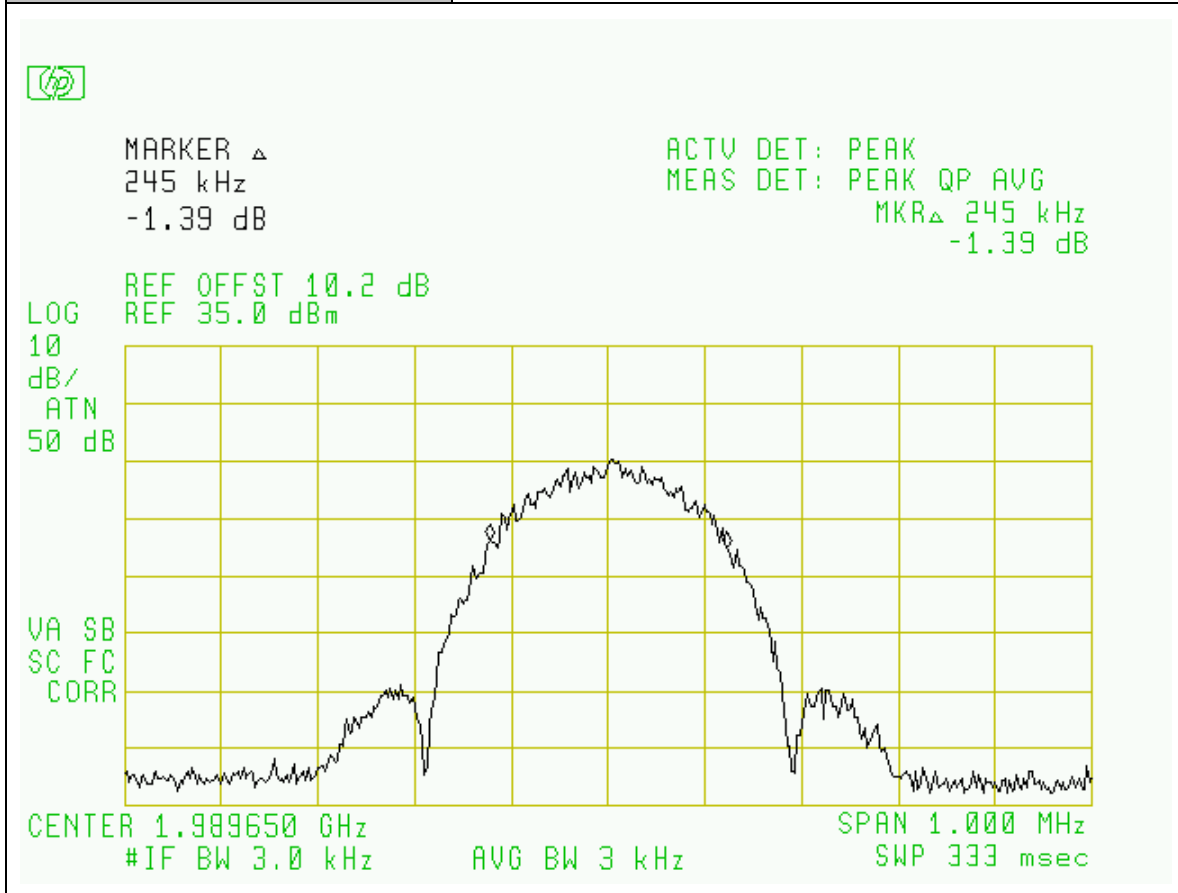
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, GSM Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



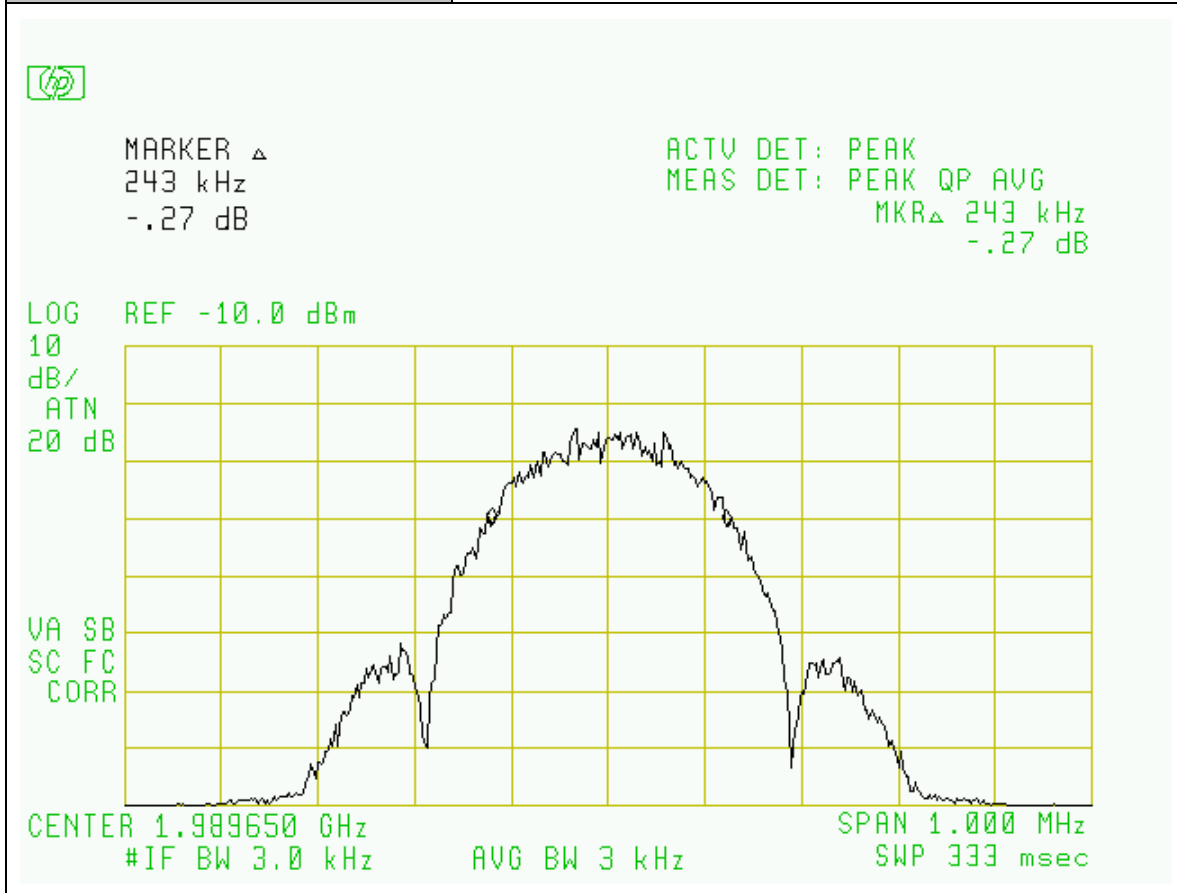
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



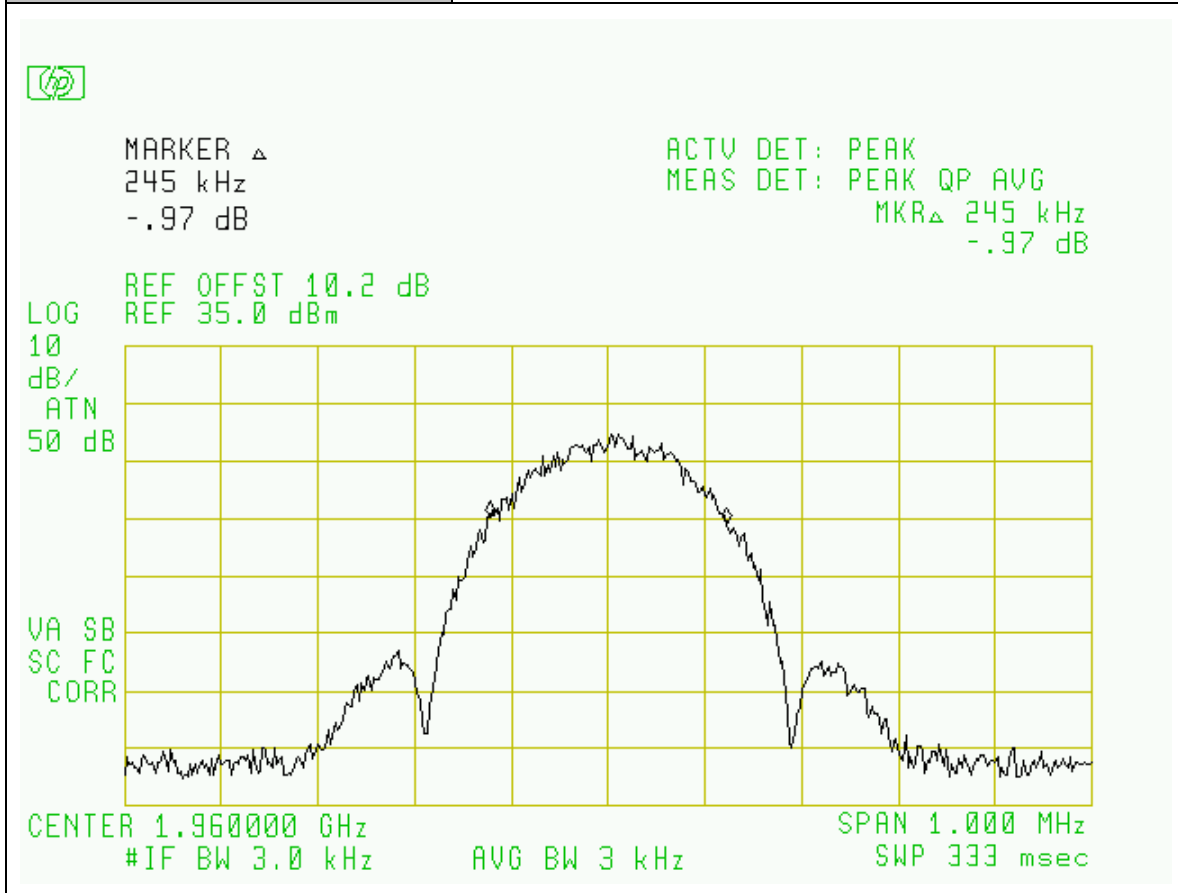
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Hi-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



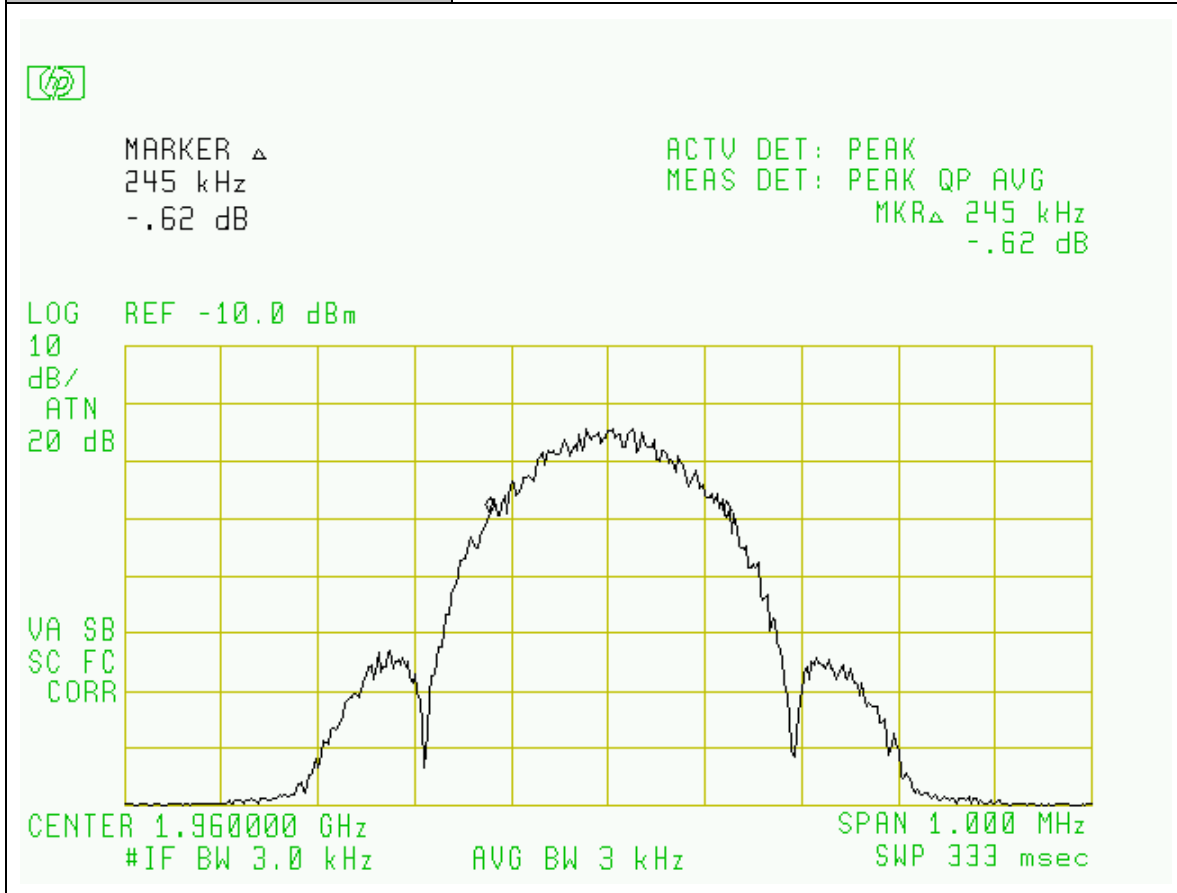
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



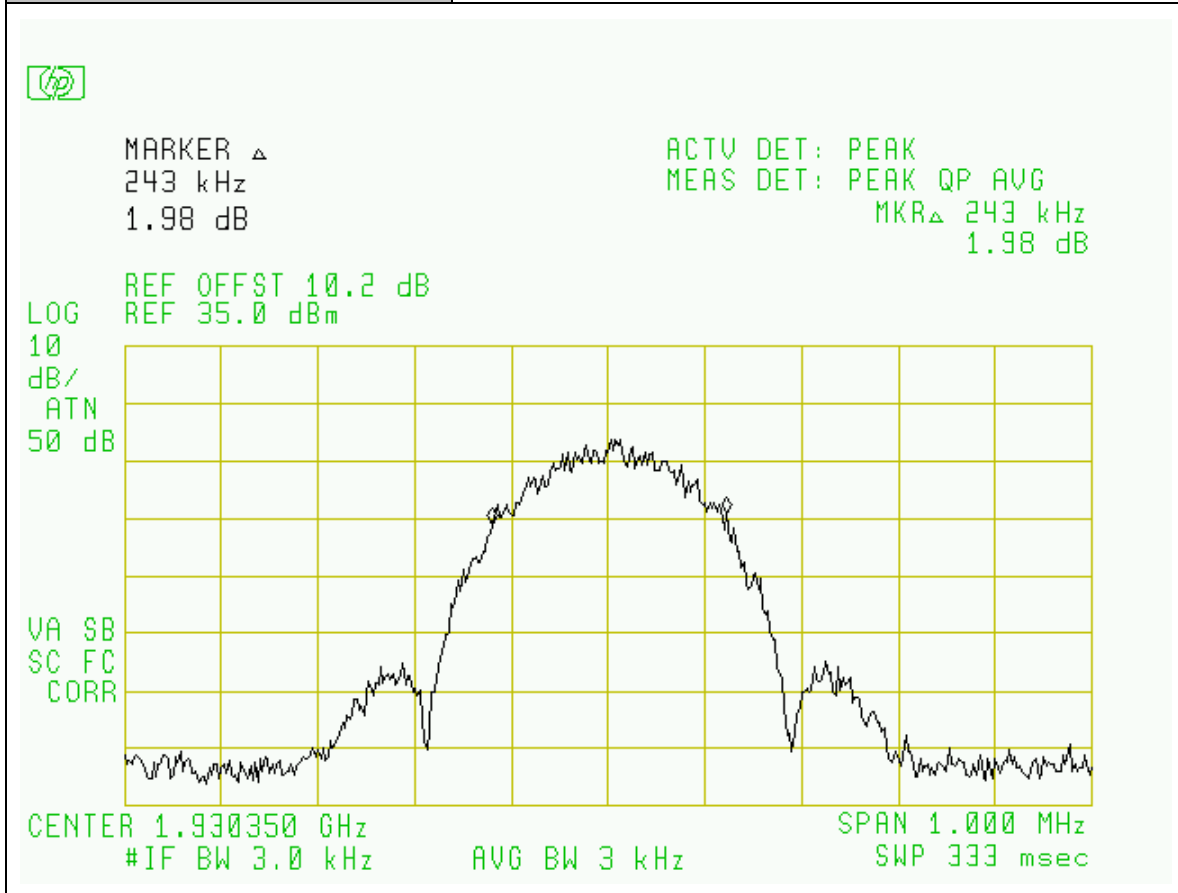
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Mid-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



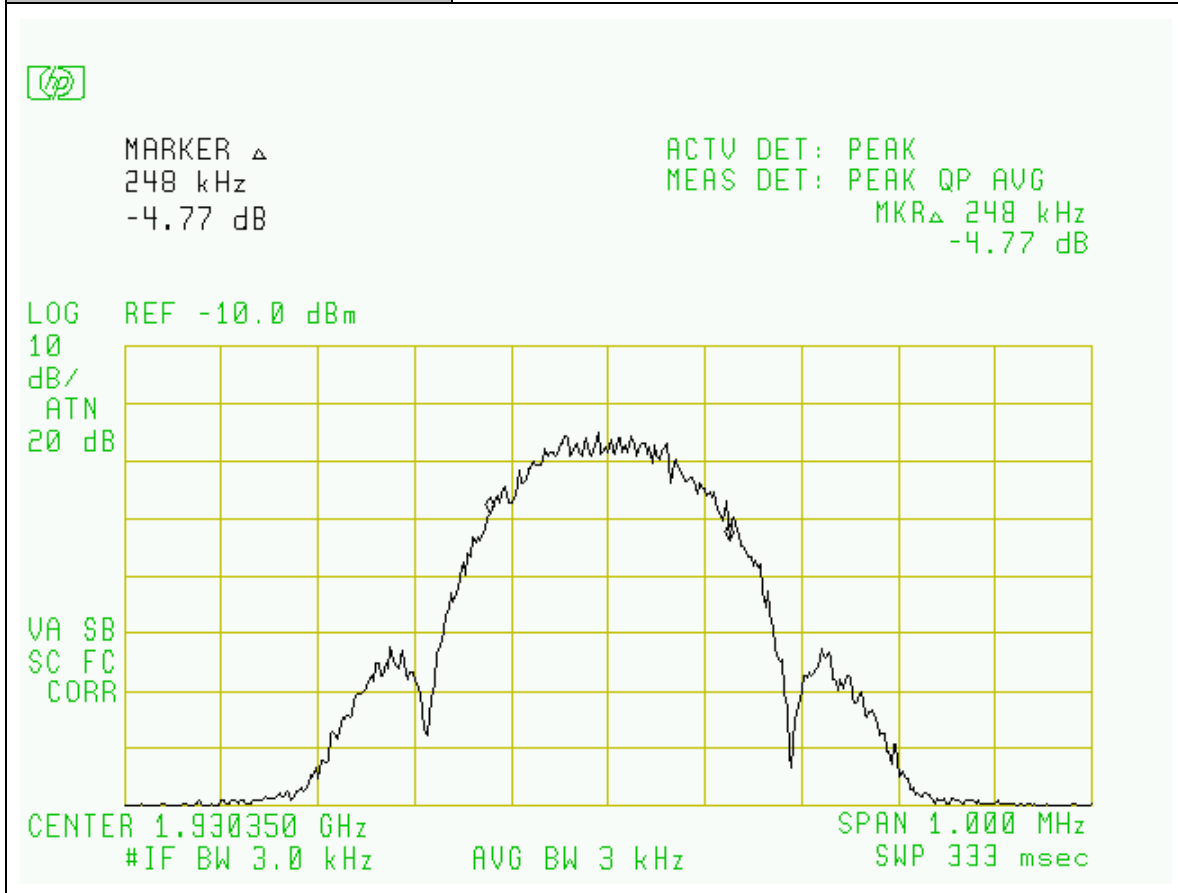
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Occupied Bandwidth: PCS Bands
Plot Name:	Downlink, Low-Channel, EDGE Modulation
Configuration:	SG Input: -15dBm, Output Port: SG



Section 5. Spurious Emissions at Antenna Terminals

Name of Test:	<i>Spurious Emissions at Antenna Terminals</i>	Test Standard:	22.917 24.238(a)
Tested By:	WEI LI EDWARD LEE	Test Date:	04/15/2008-04/30/2008

Minimum Standard: Para. No. 22.917(e). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least $43 + 10 \log P$. This is equivalent to -13 dBm absolute power.

Para. No. 24.238(a). The magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under conditions specified in the instruction manual and/or alignment procedure, shall not less than $43+10 \log$ (mean output power in watts) dBc below the mean power output outside a licensee's frequency block (-13dBm).

Method of Measurement: Spectrum Analyzer Settings:
RBW: 100 kHz&1MHz. As required for digital modulations.
VBW: \geq RBW
Start Frequency: 0 MHz or lowest EUT clock frequency.
Stop Frequency: 13 GHz (Cellular), 22GHz (PCS)
Sweep: Auto

For Inter-modulation measurement: Two RF signals set as inputs. The frequencies of both RF signals shall be within the repeater's operating band. The spacing between both RF signals shall be the minimum possible spacing applied in a network. The level of both RF input signals shall be increased, until the maximum rated output power per channel, as declared by the manufacturer, is reached.

Frequencies: $f1=F_{(Low\ CH/Mid\ CH/High\ CH)}$, $f2=f1 \pm \Delta$
Min. spacing $\Delta=2.5MHz$ for CDMA and 600KHz for GSM&EDGE
Each RF Input Level:
about -3dB comparing to the max. input level of single RF Input test

Only M-CH was selected as the worst case for UL path spurious due to its low output power.

Test Result:

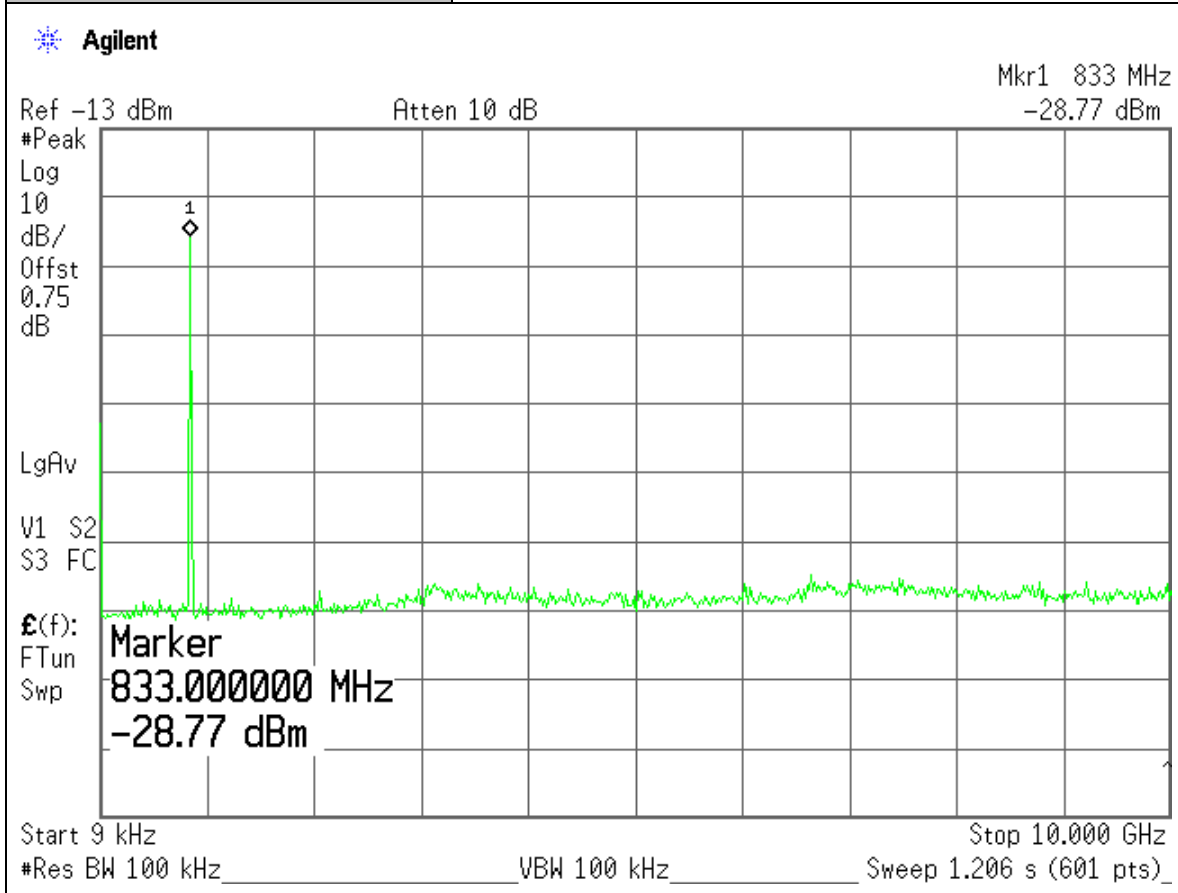
Complies

Test Data:

Attached Plots

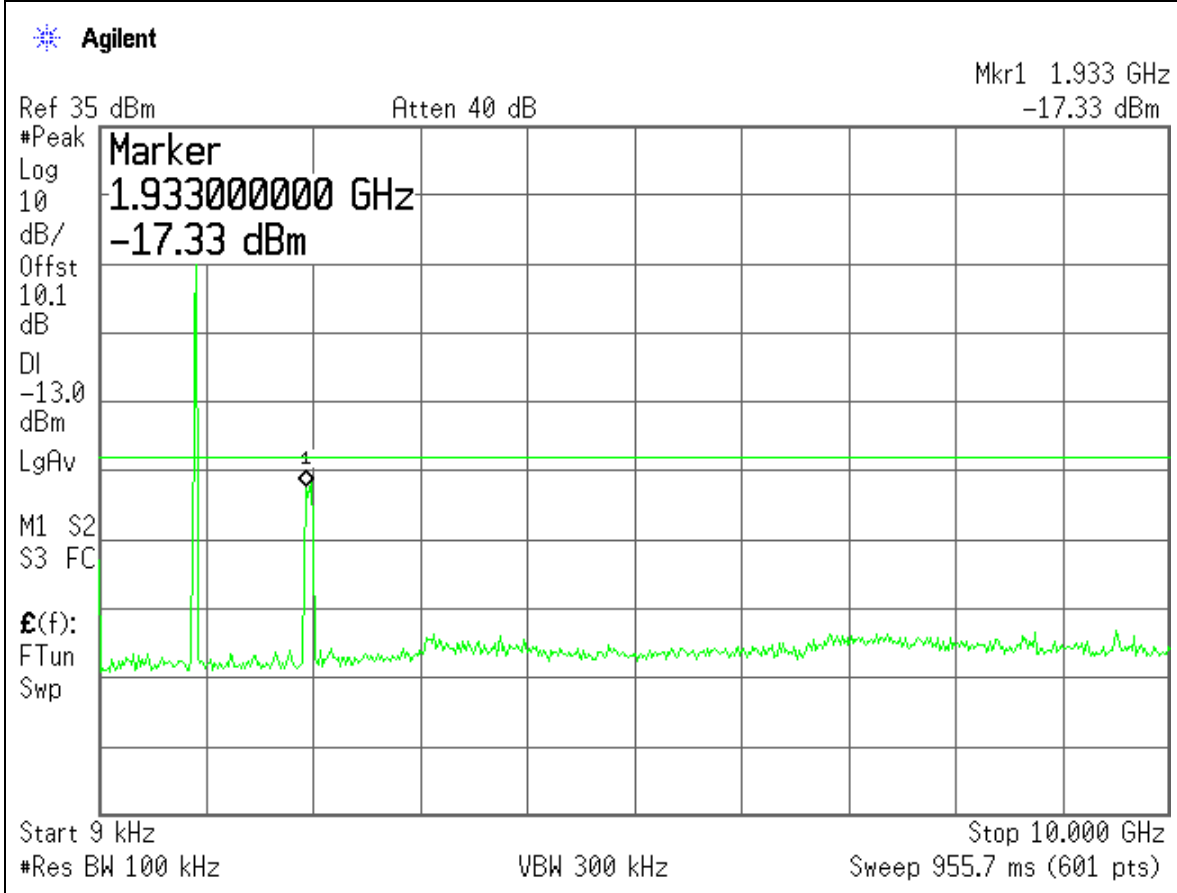
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



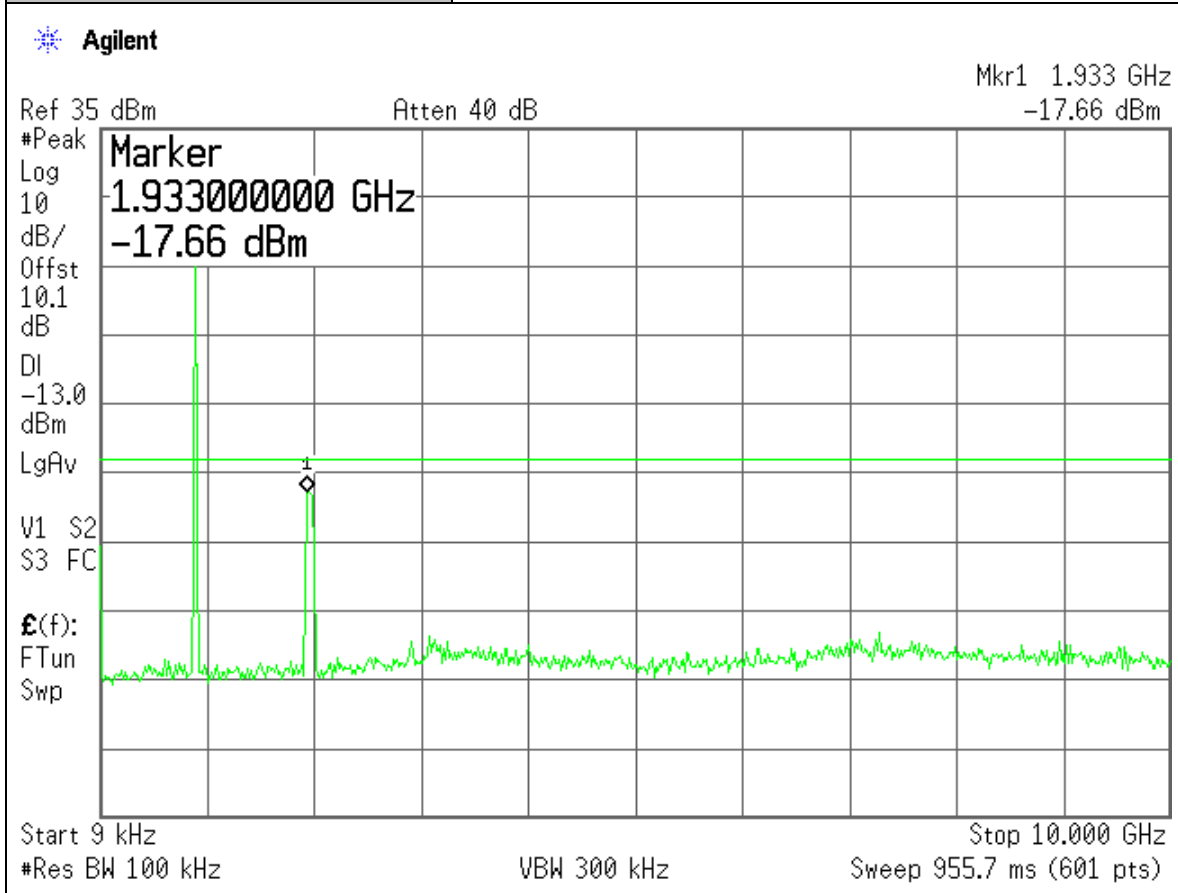
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



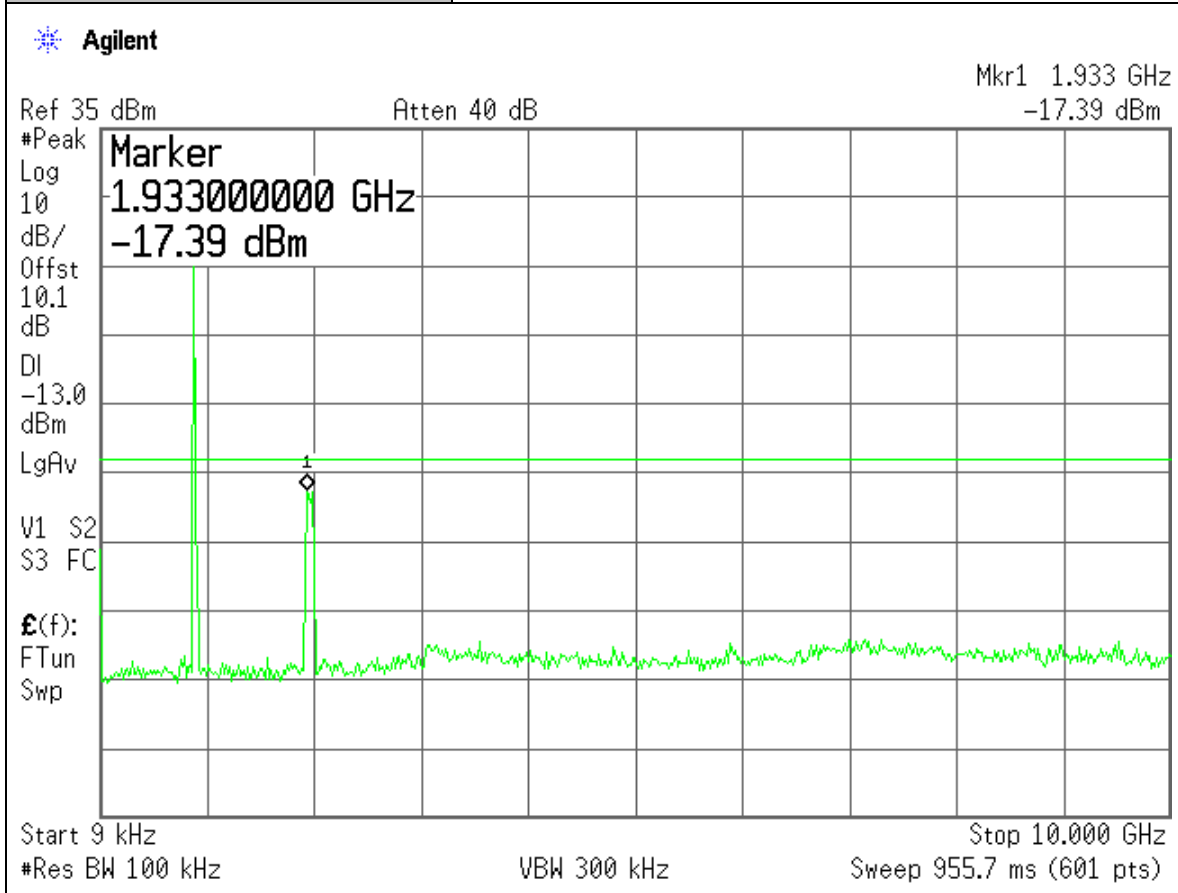
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



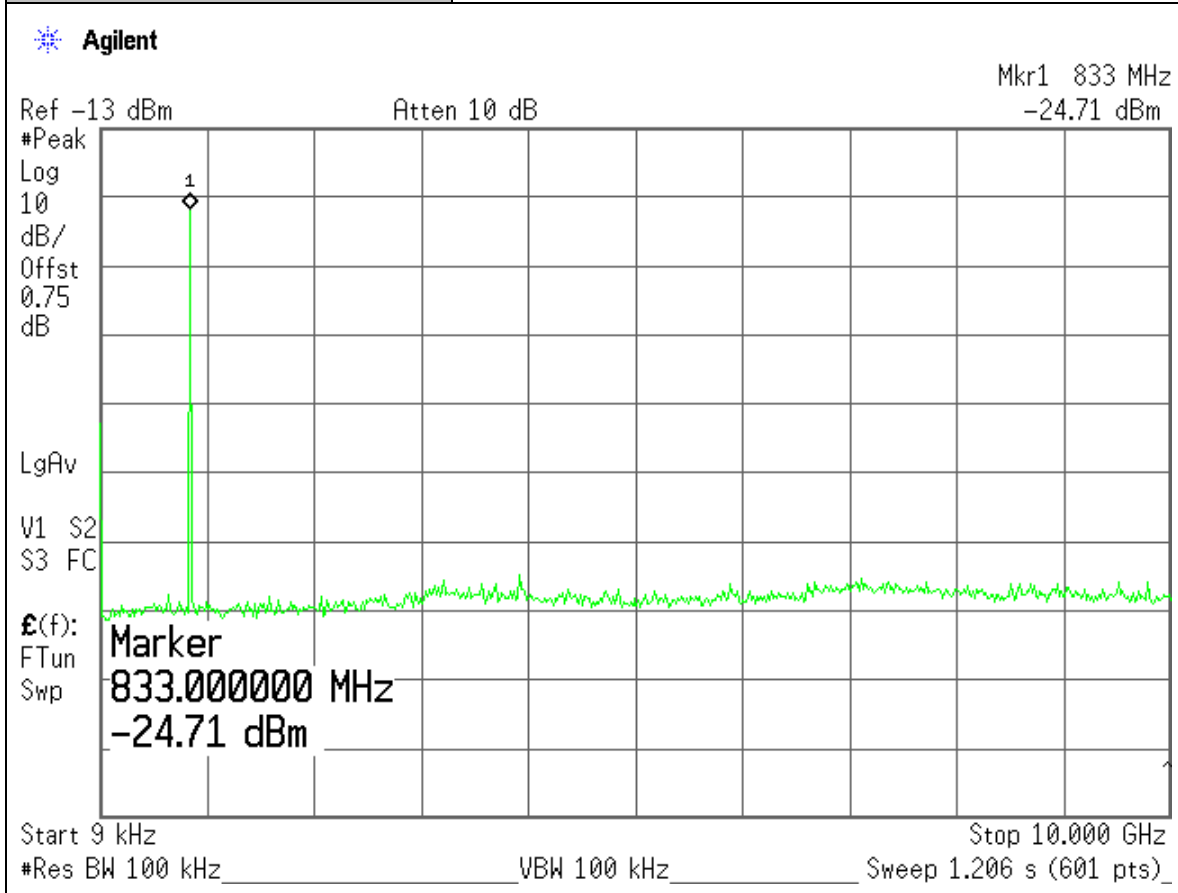
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70°F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



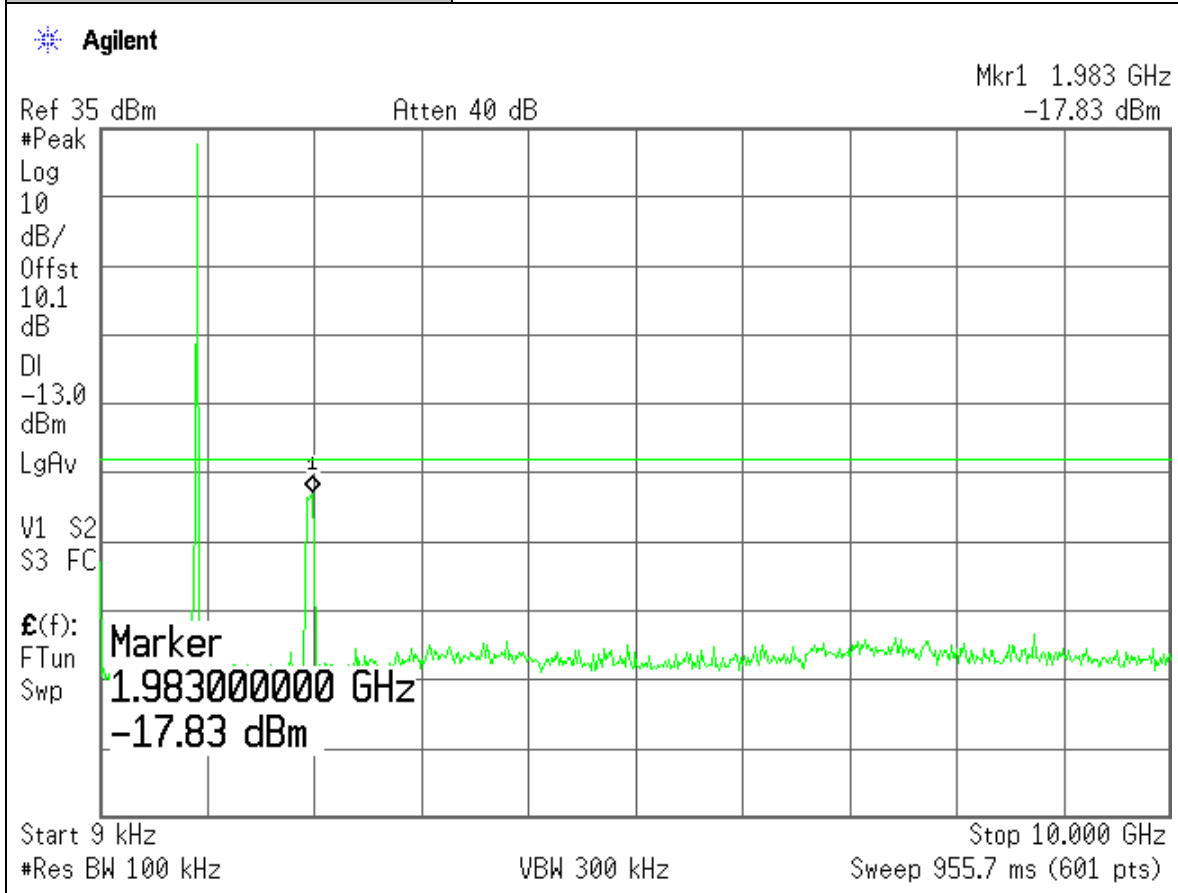
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



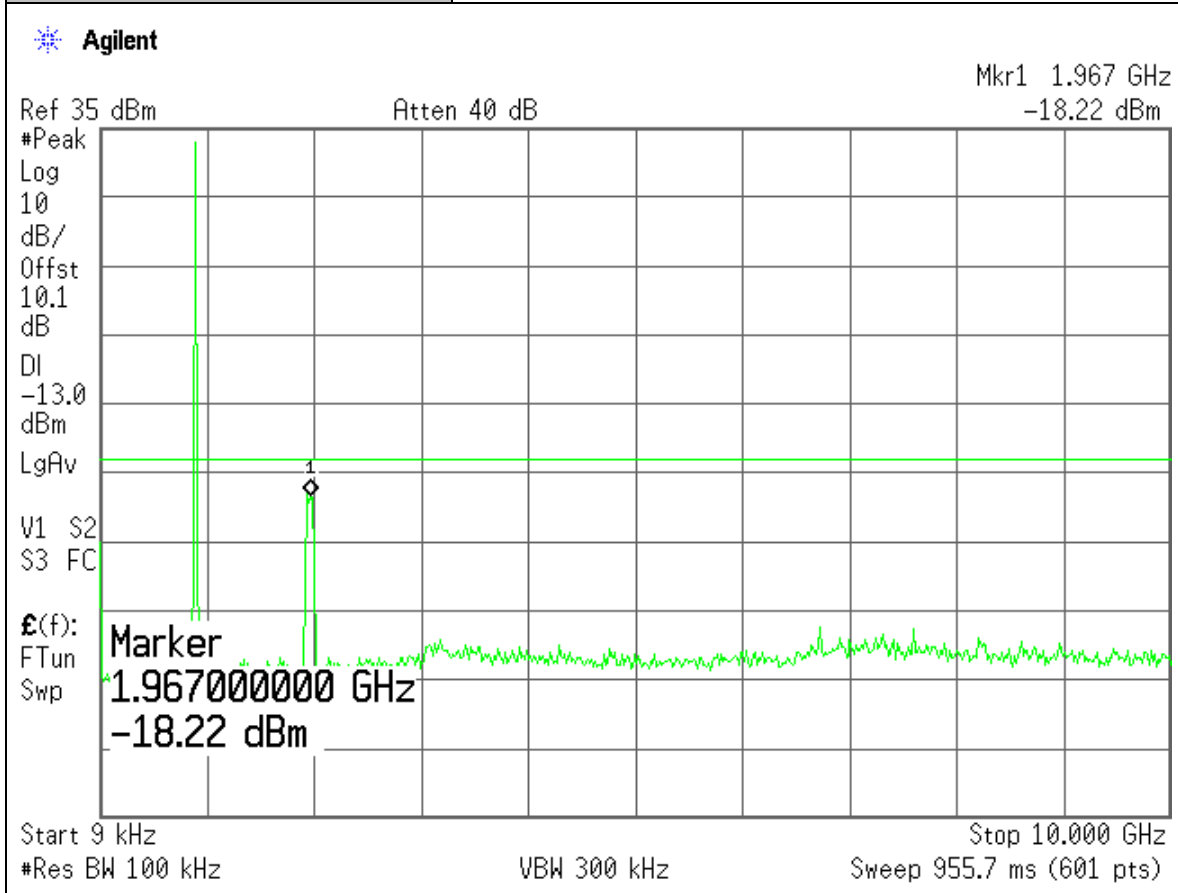
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



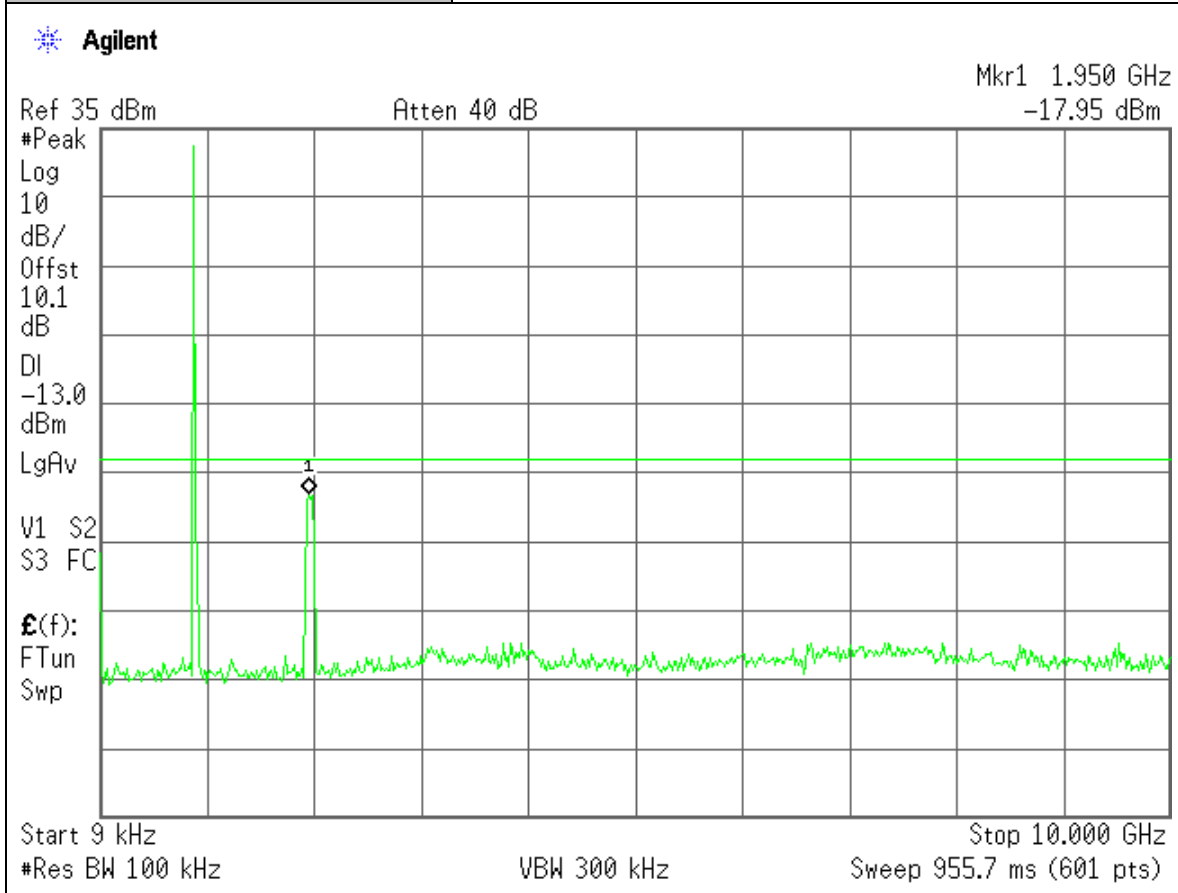
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



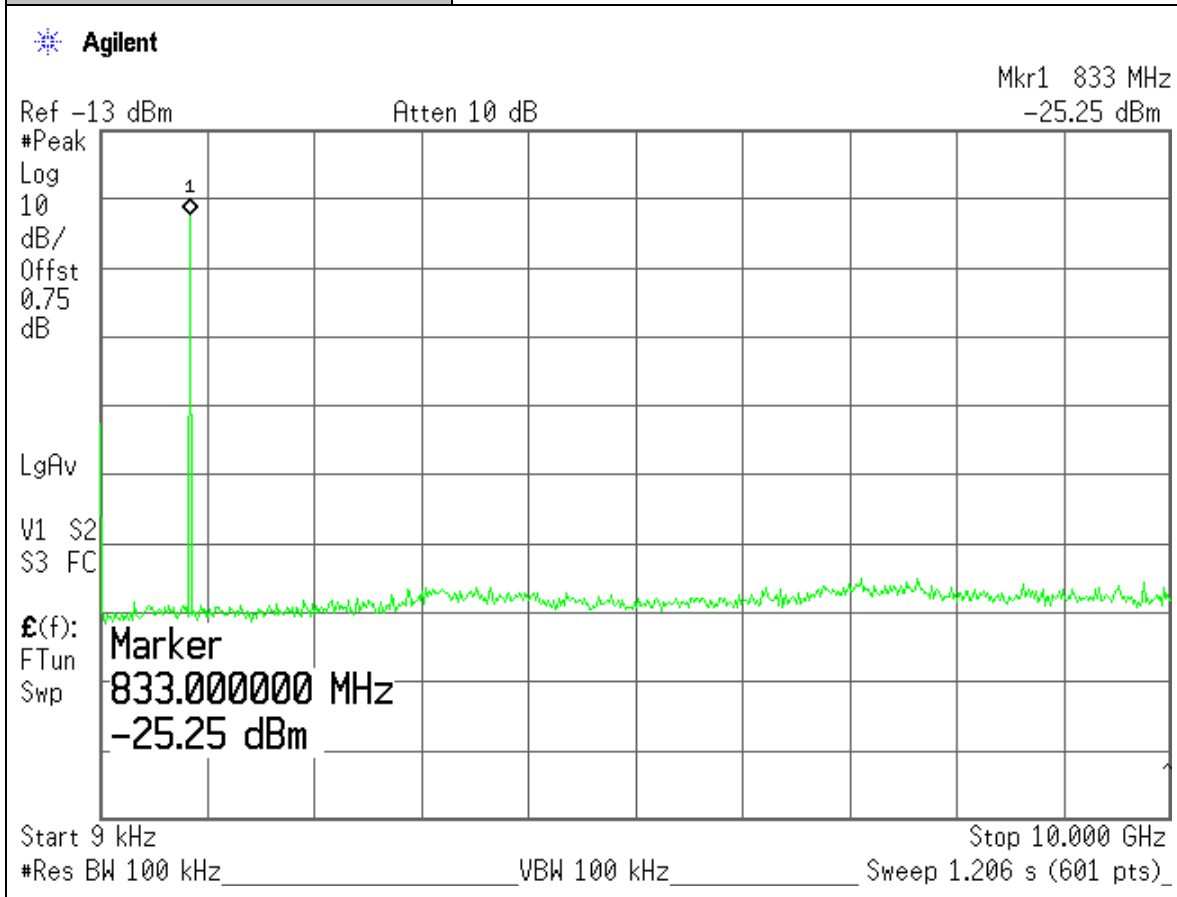
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



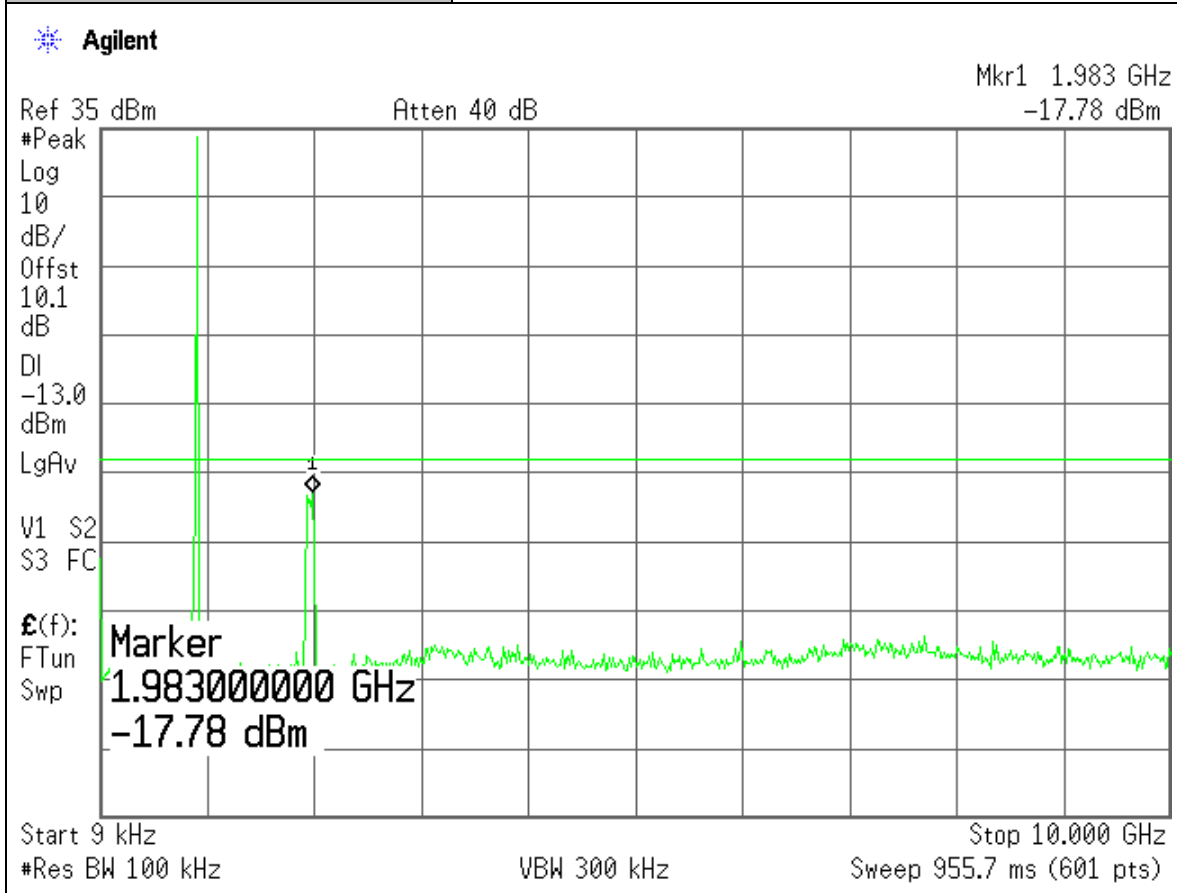
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



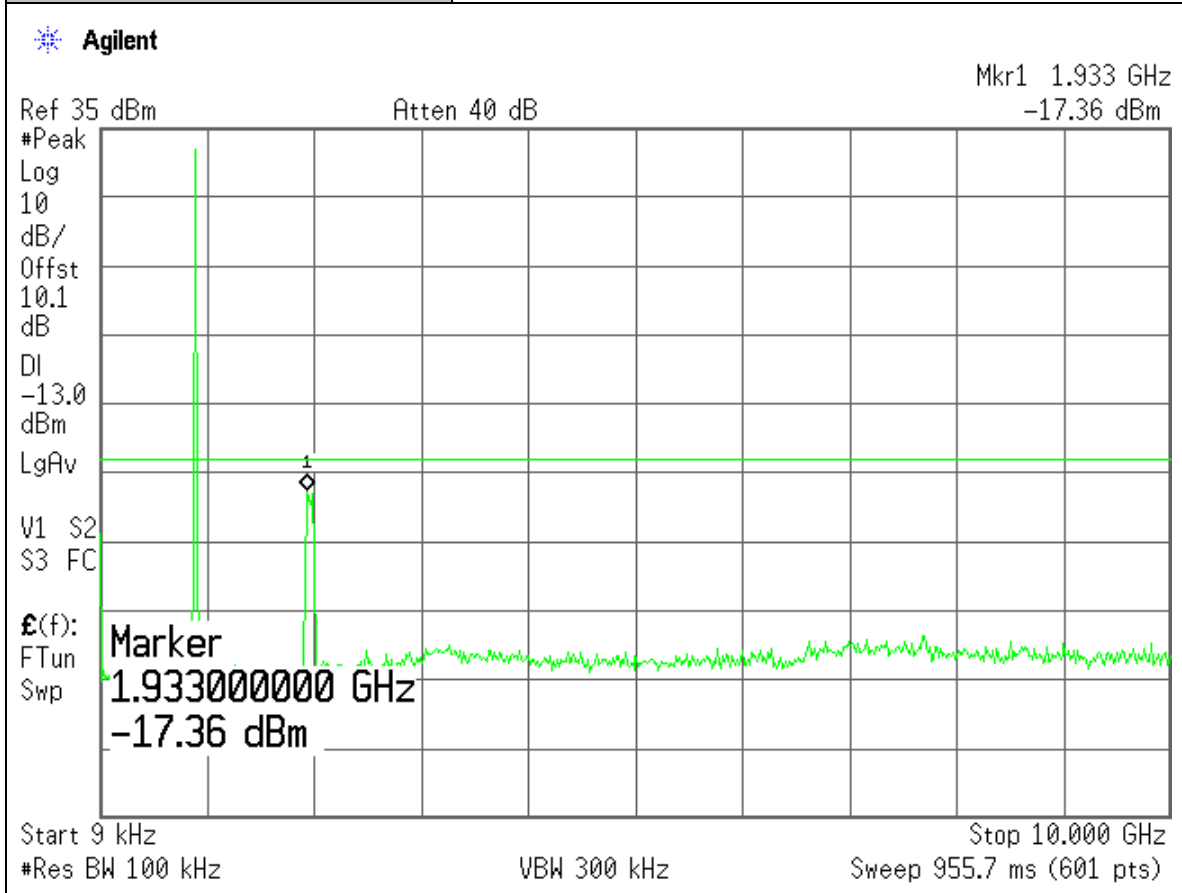
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



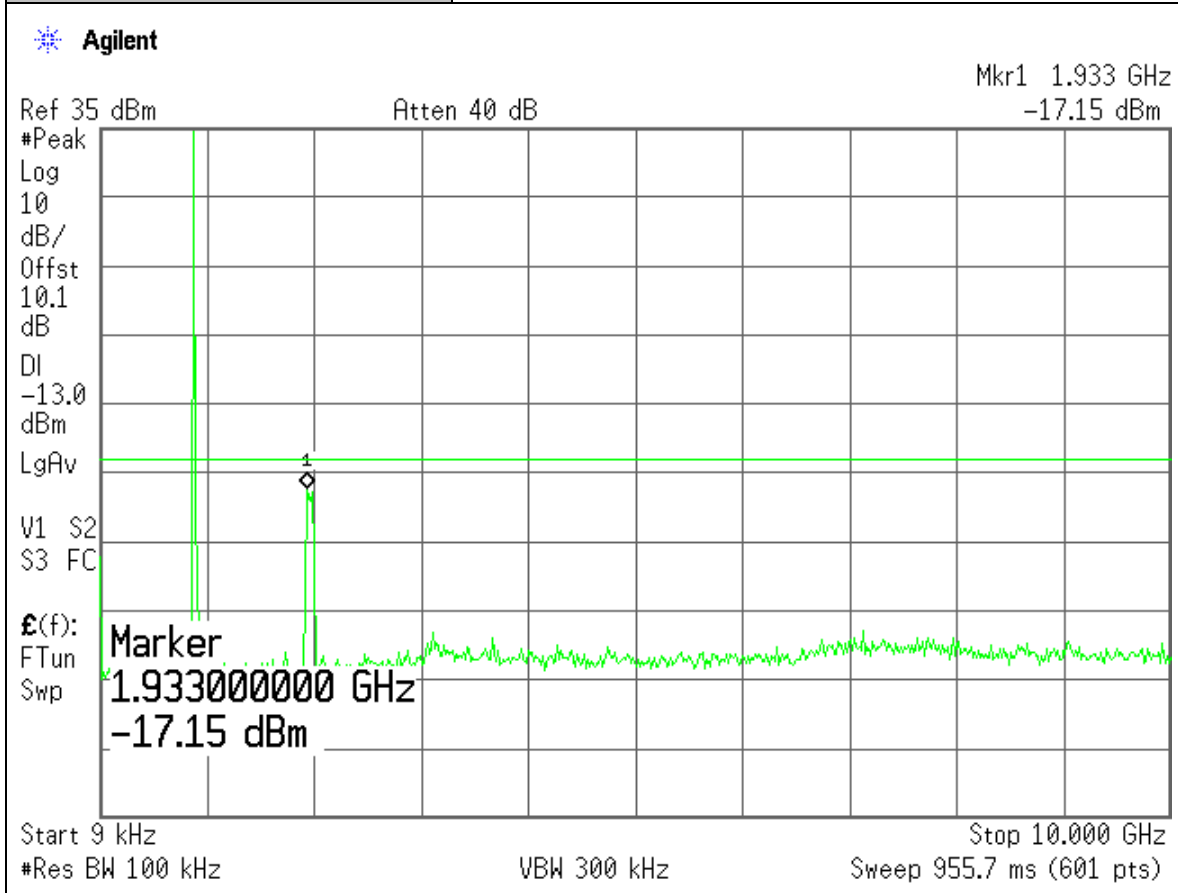
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



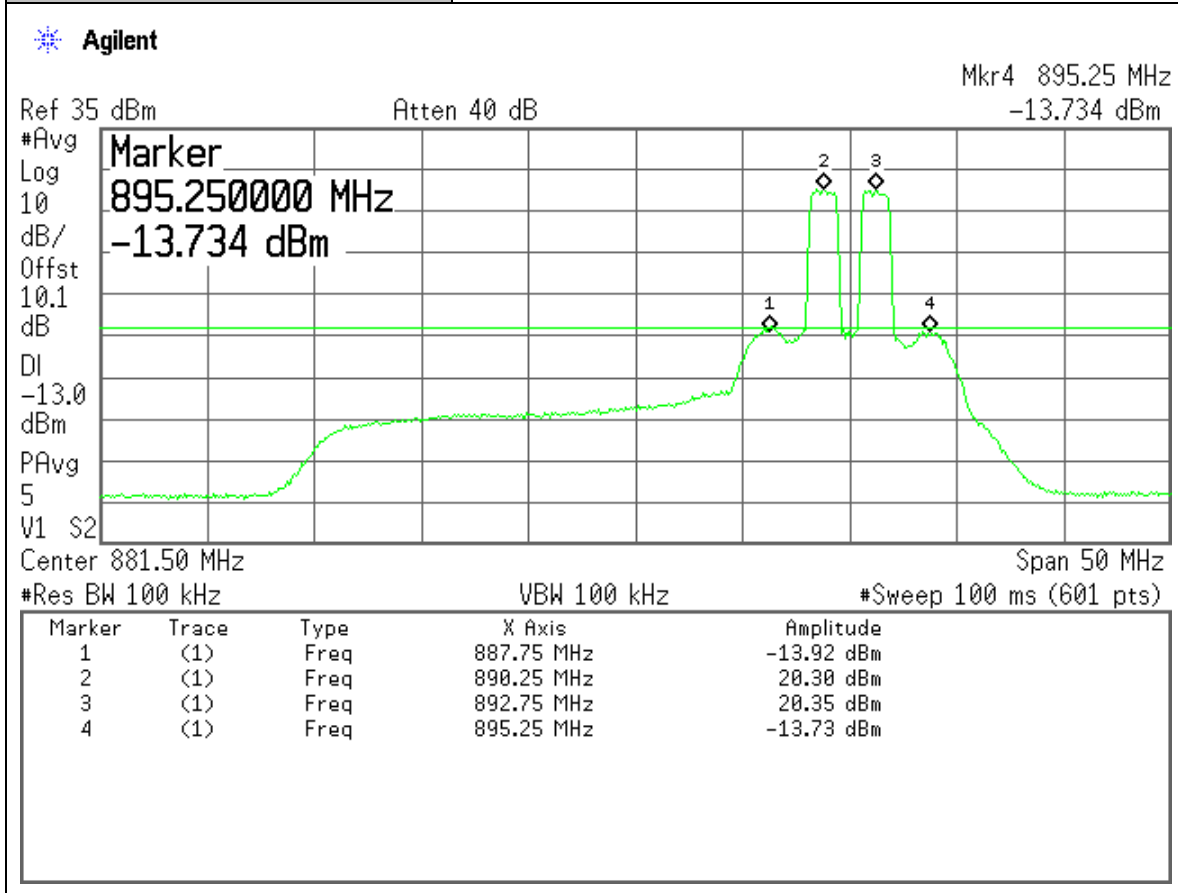
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



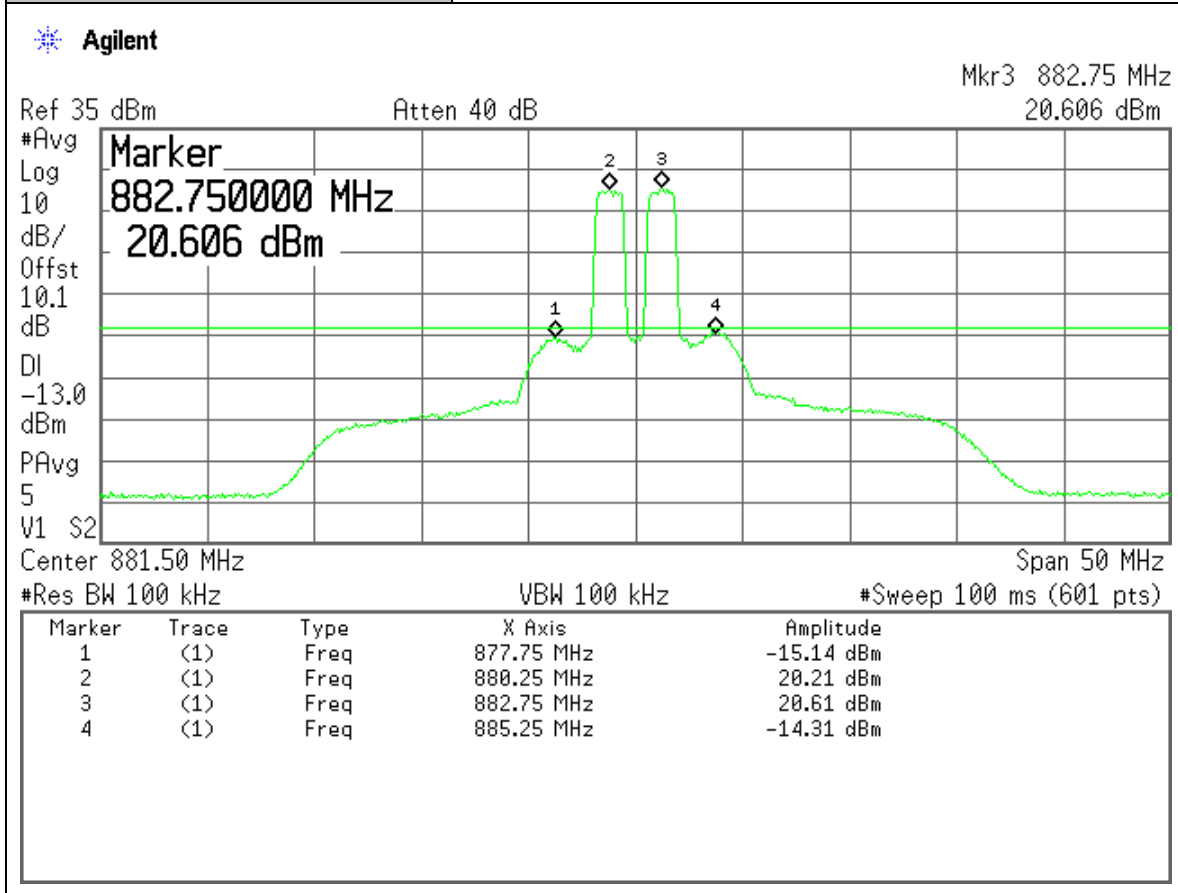
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	DL, High-Chn, Intermodulation, Upper Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



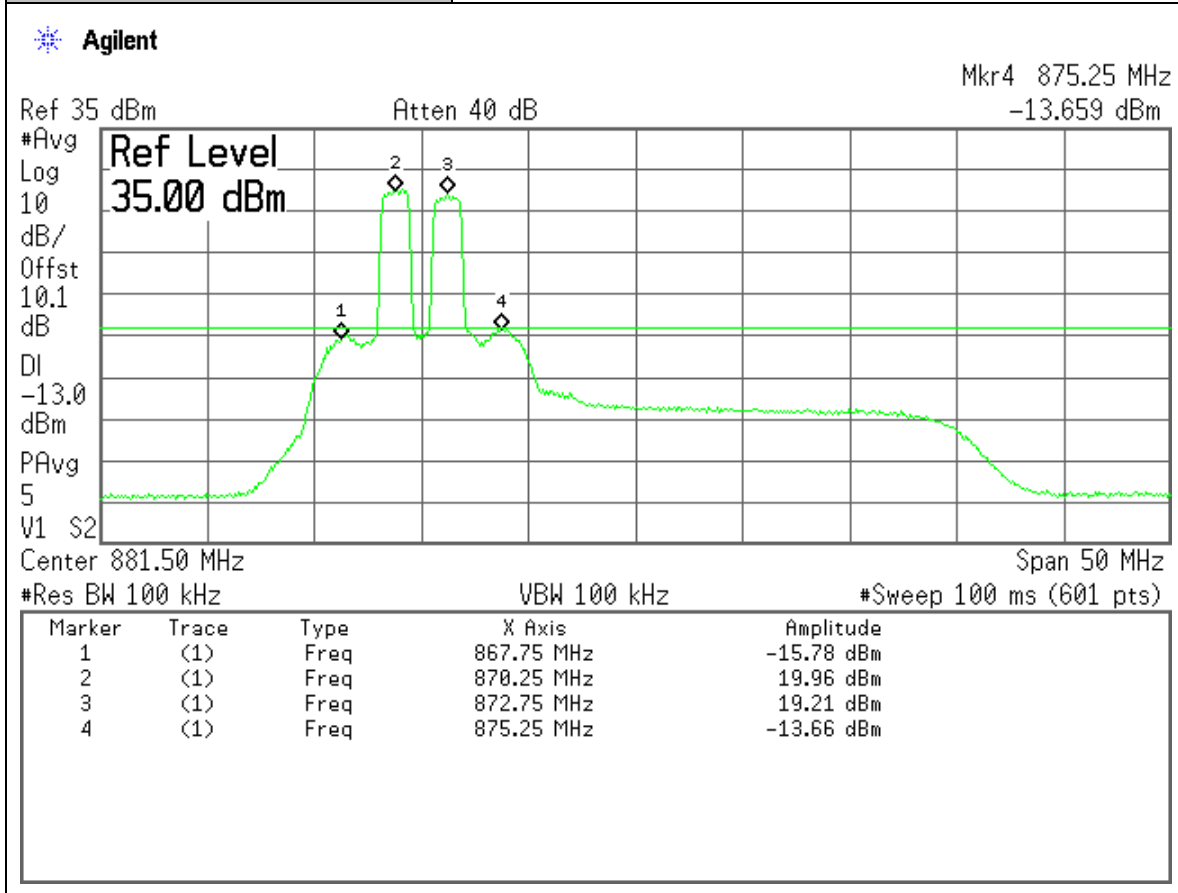
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	DL, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



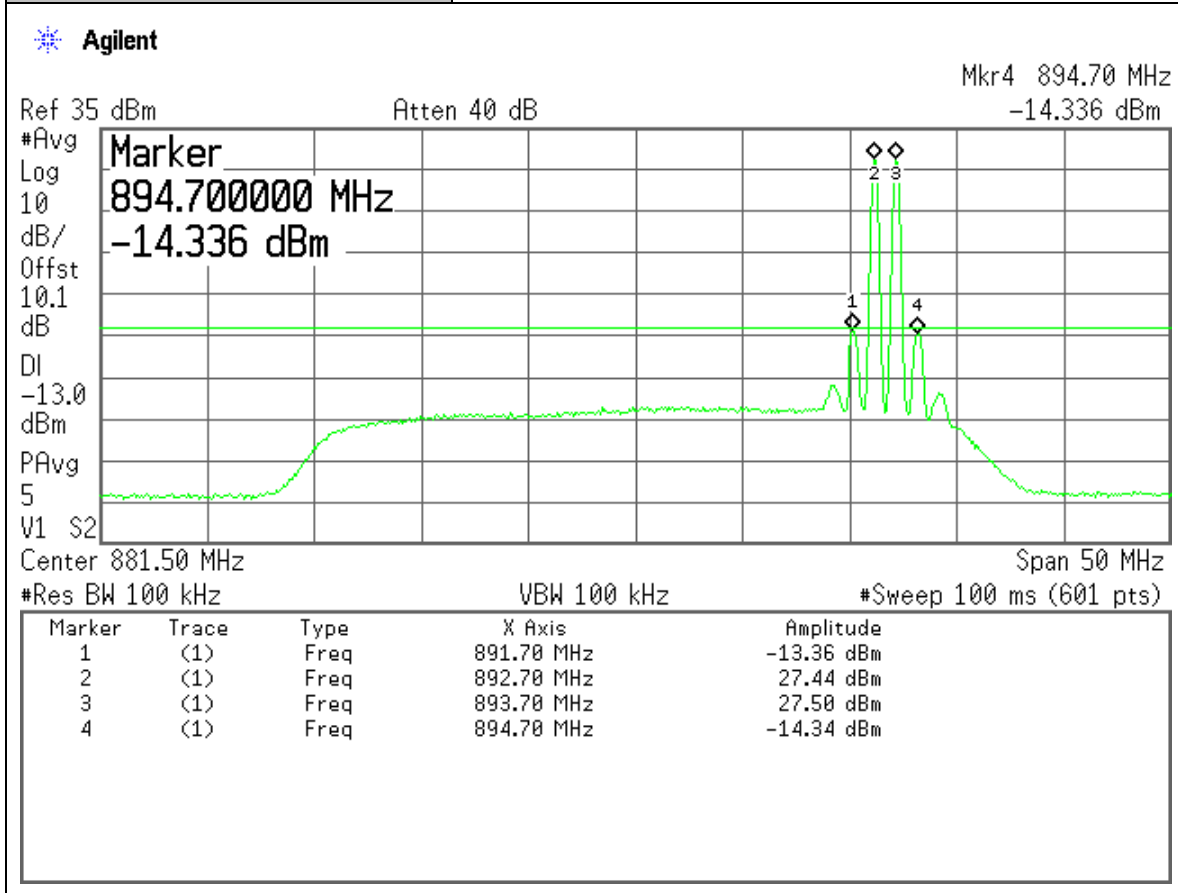
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	DL, Low-Chn, Intermodulation, Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



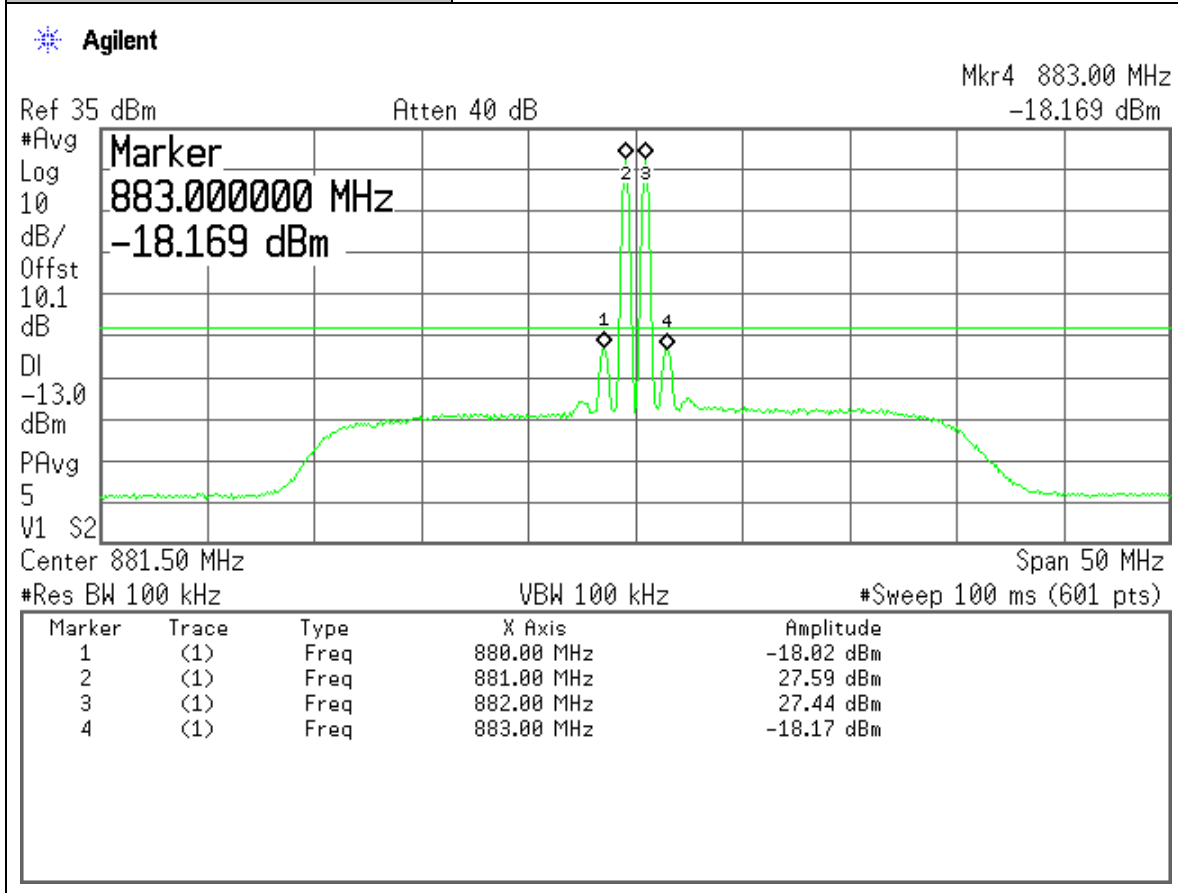
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Hi-Chn, Intermodulation , Upper Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



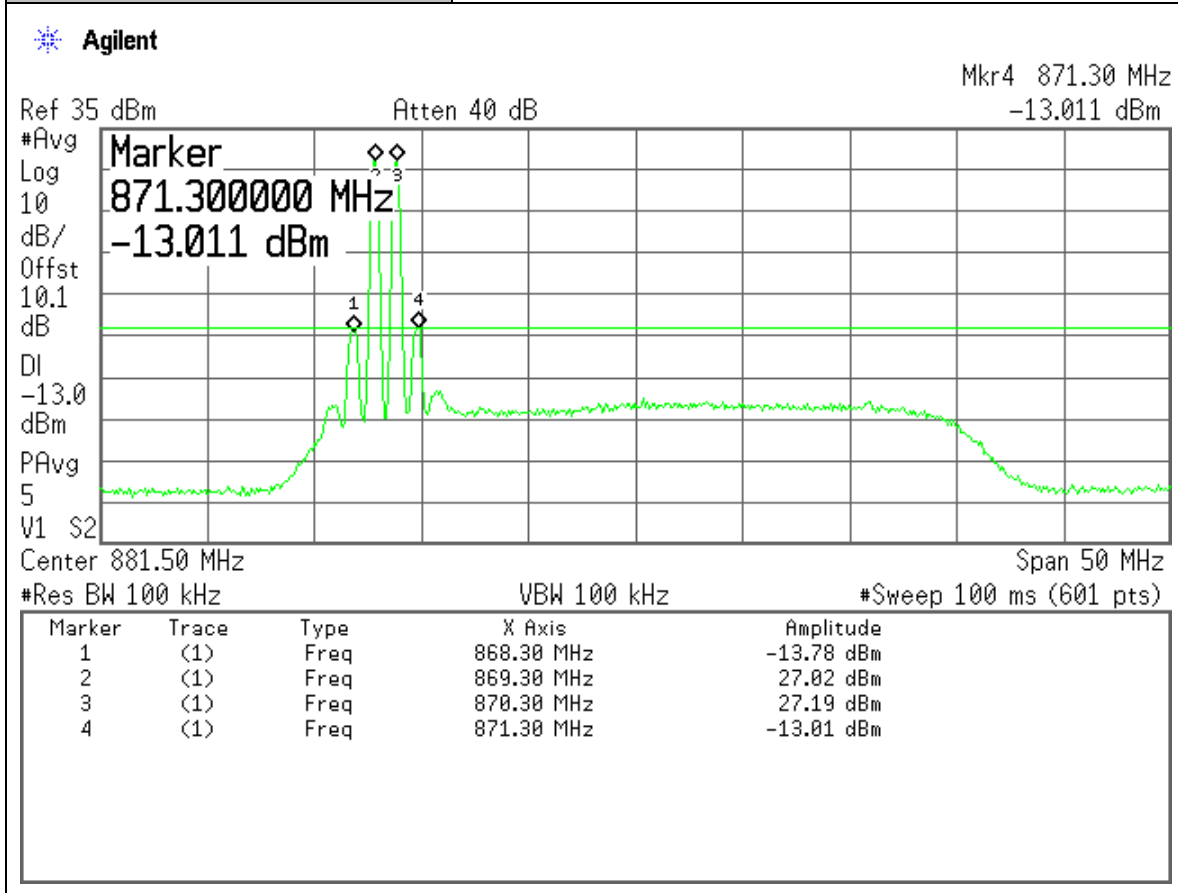
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



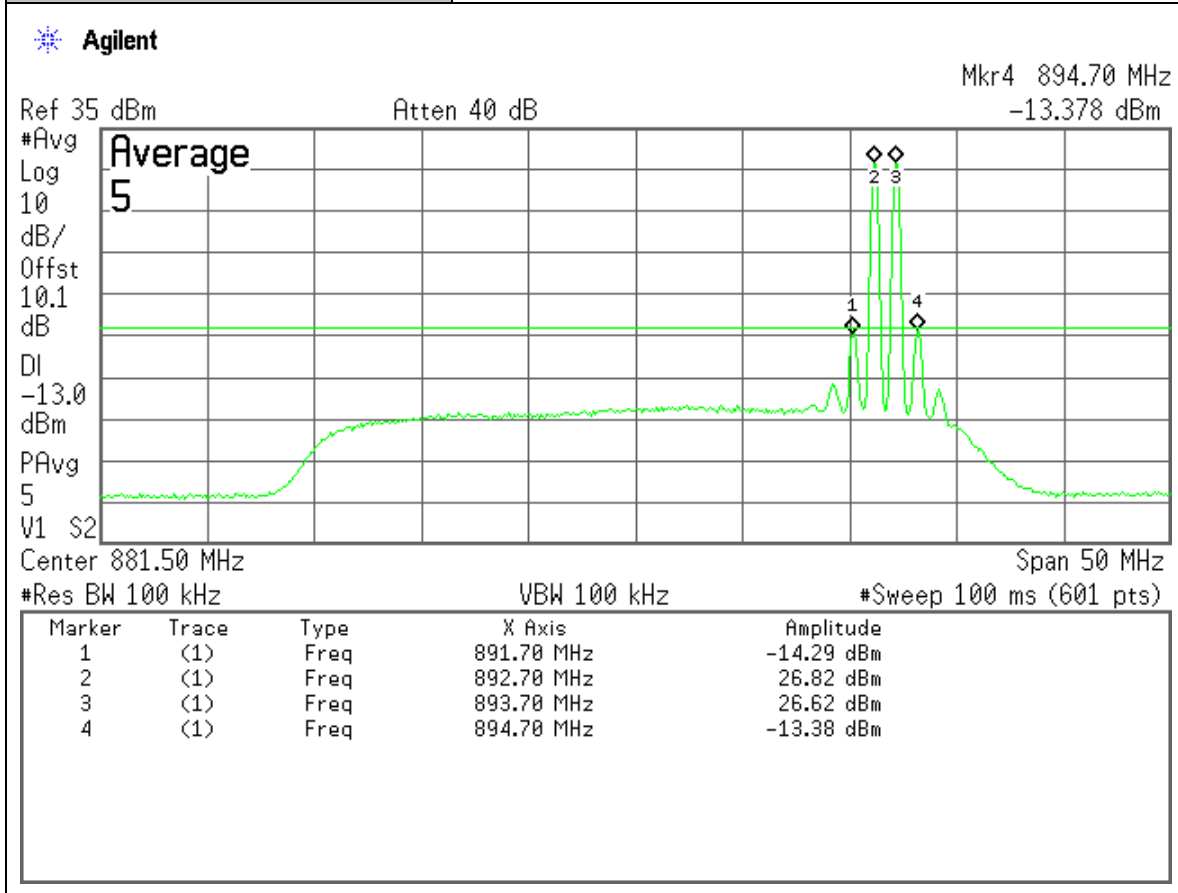
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	Downlink, Low-Chn, Intermodulation , Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



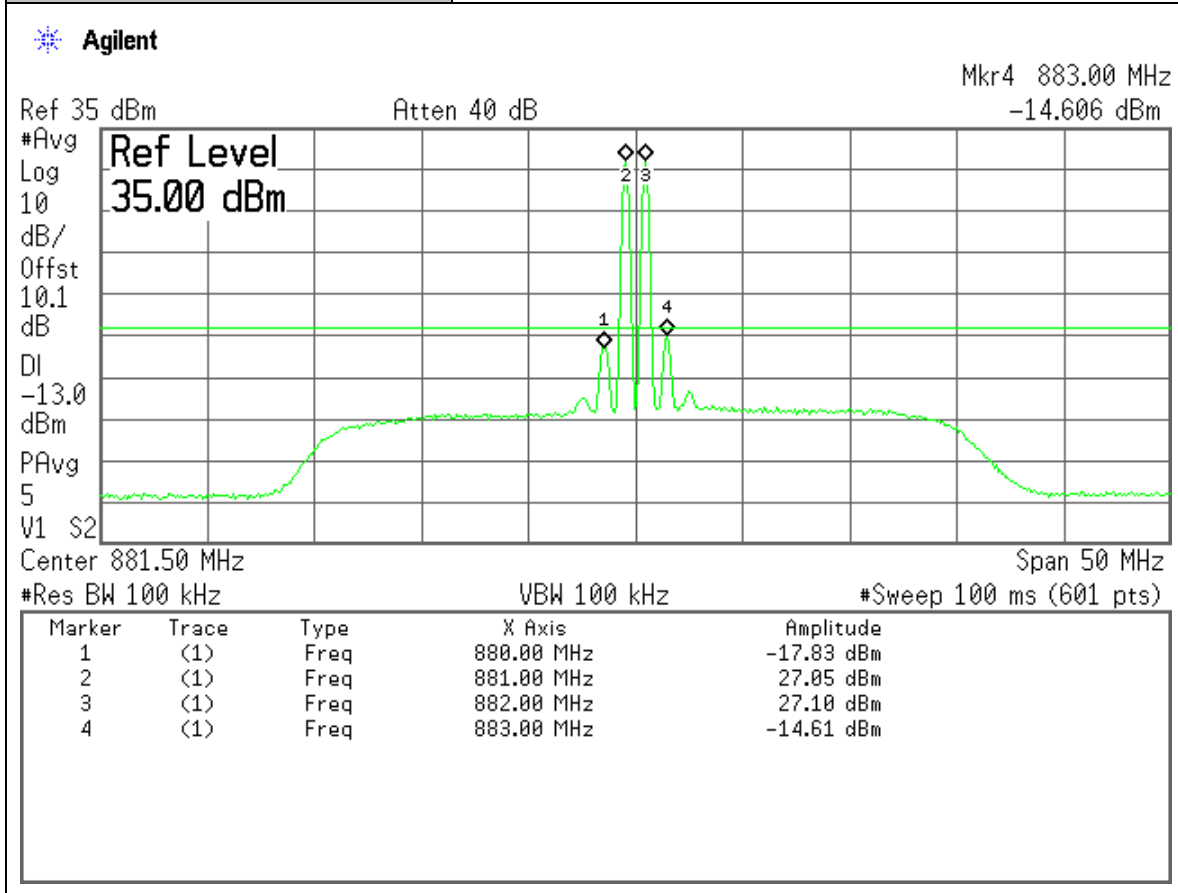
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Hi-Chn, Intermodulation , Upper Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



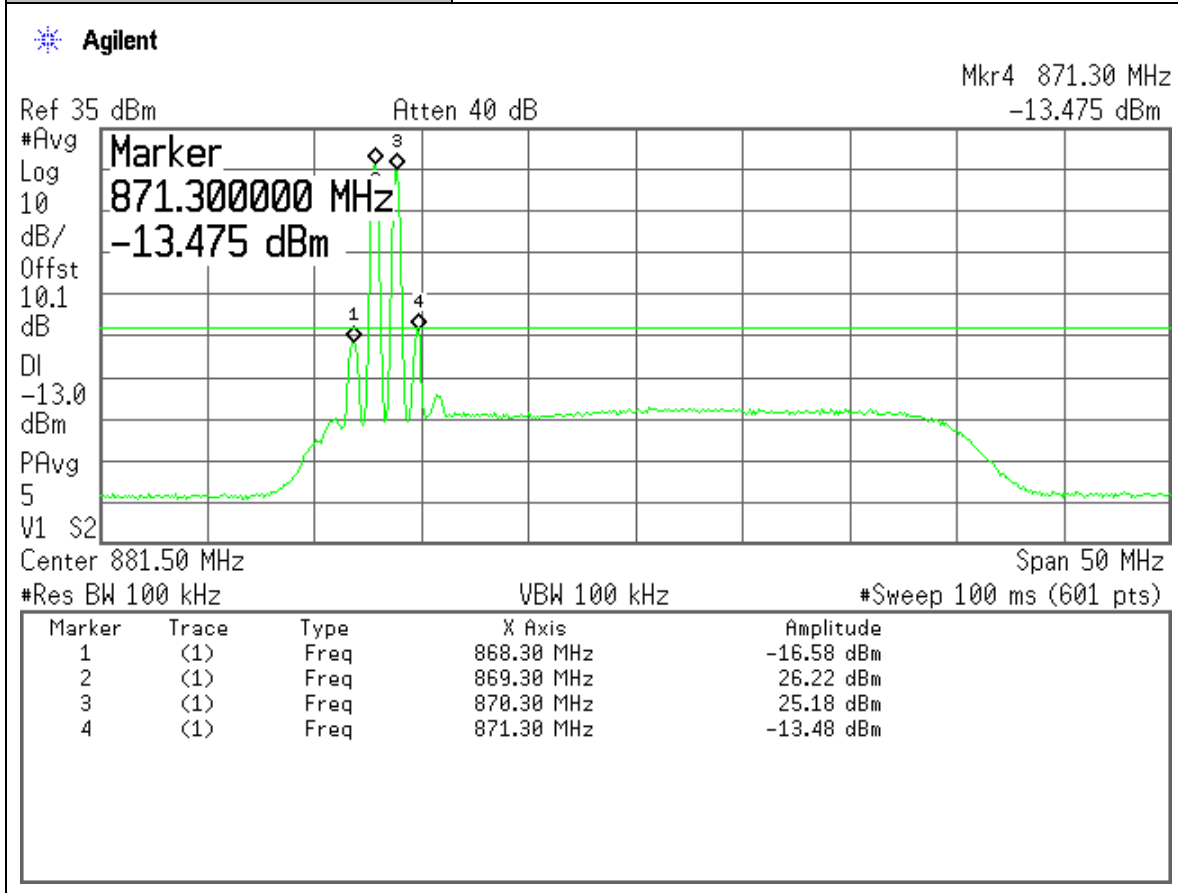
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



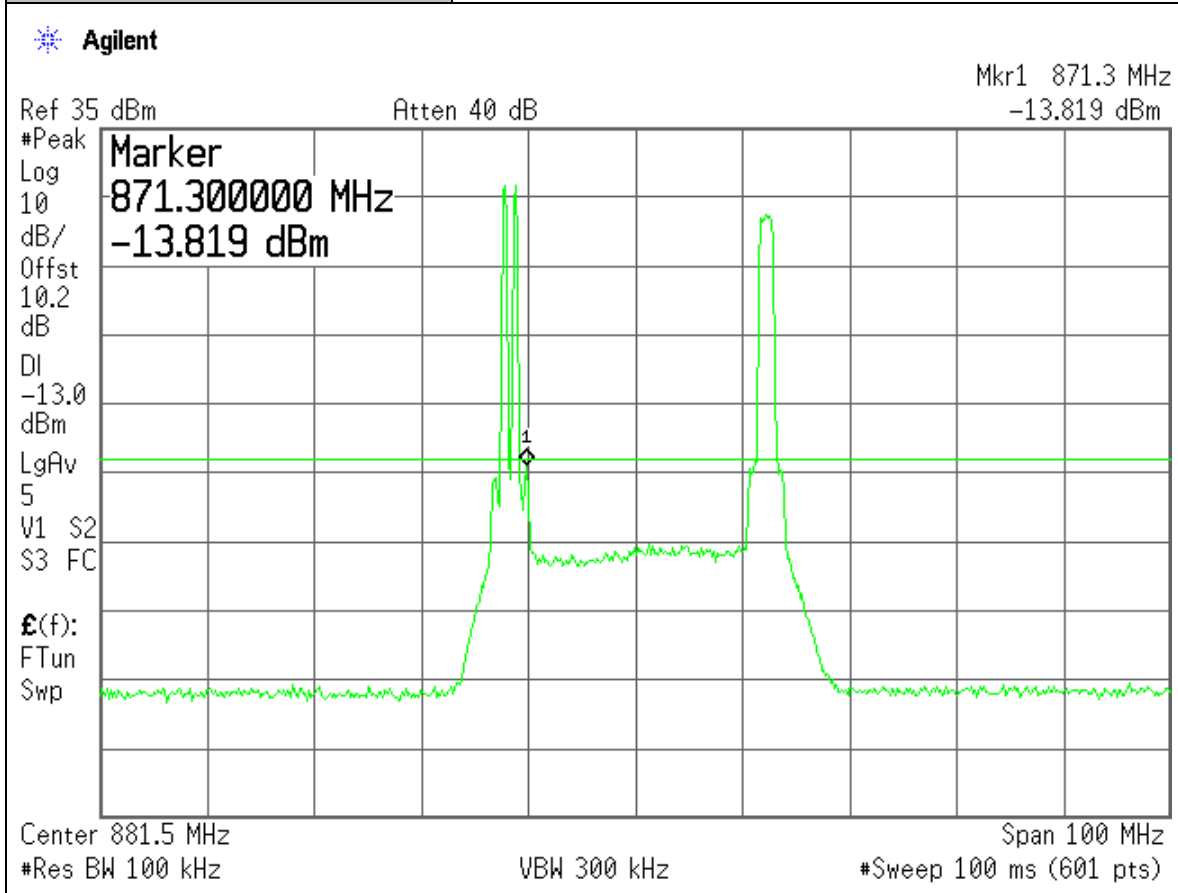
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	Downlink, Low-Chn, Intermodulation , Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



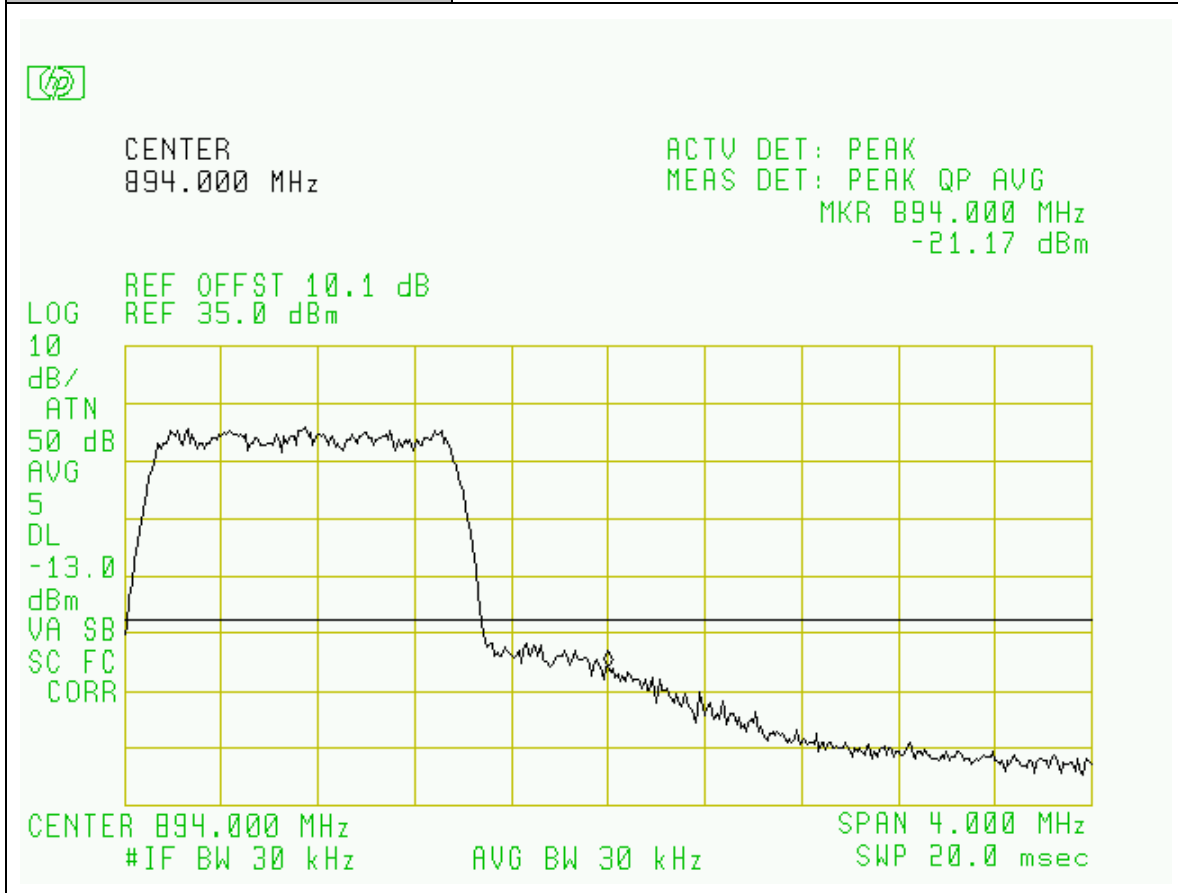
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA+GSM+EDGE Modulation
Plot Name:	Downlink, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



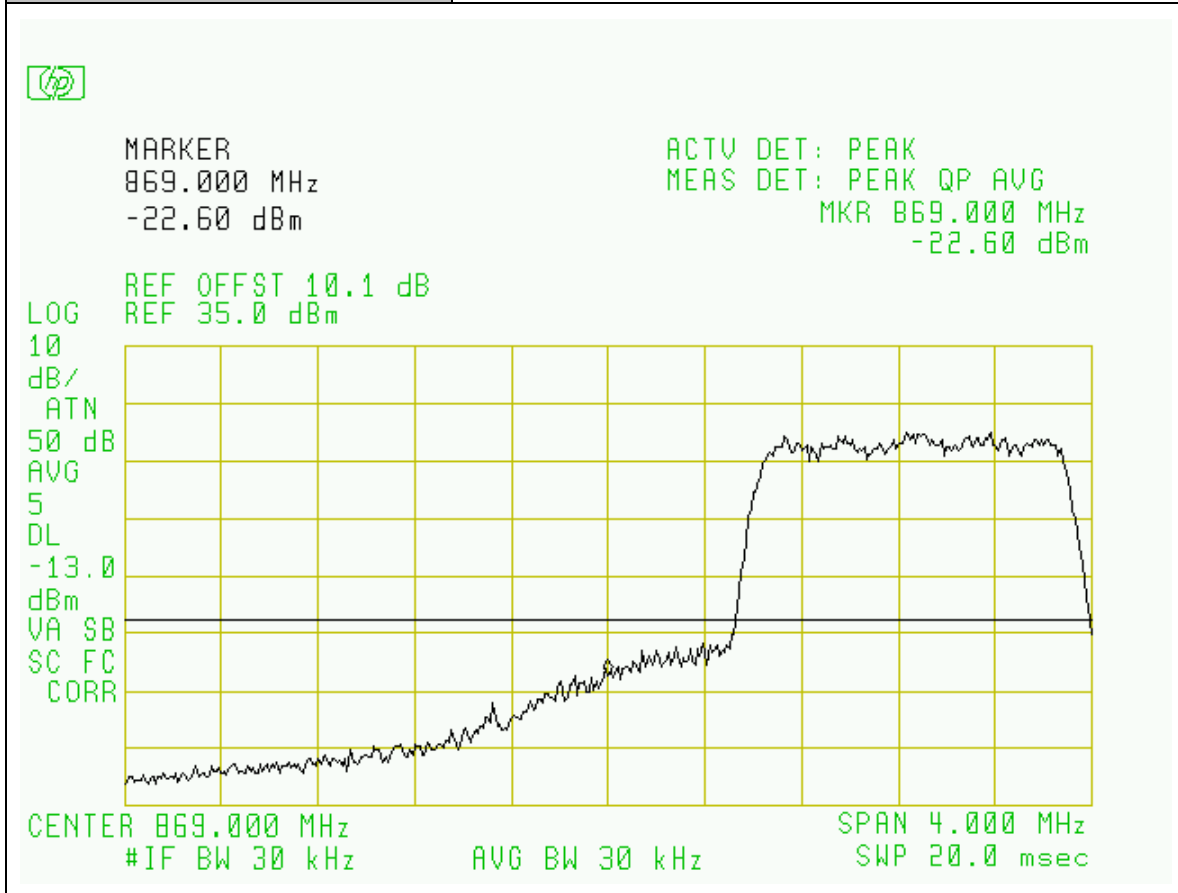
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



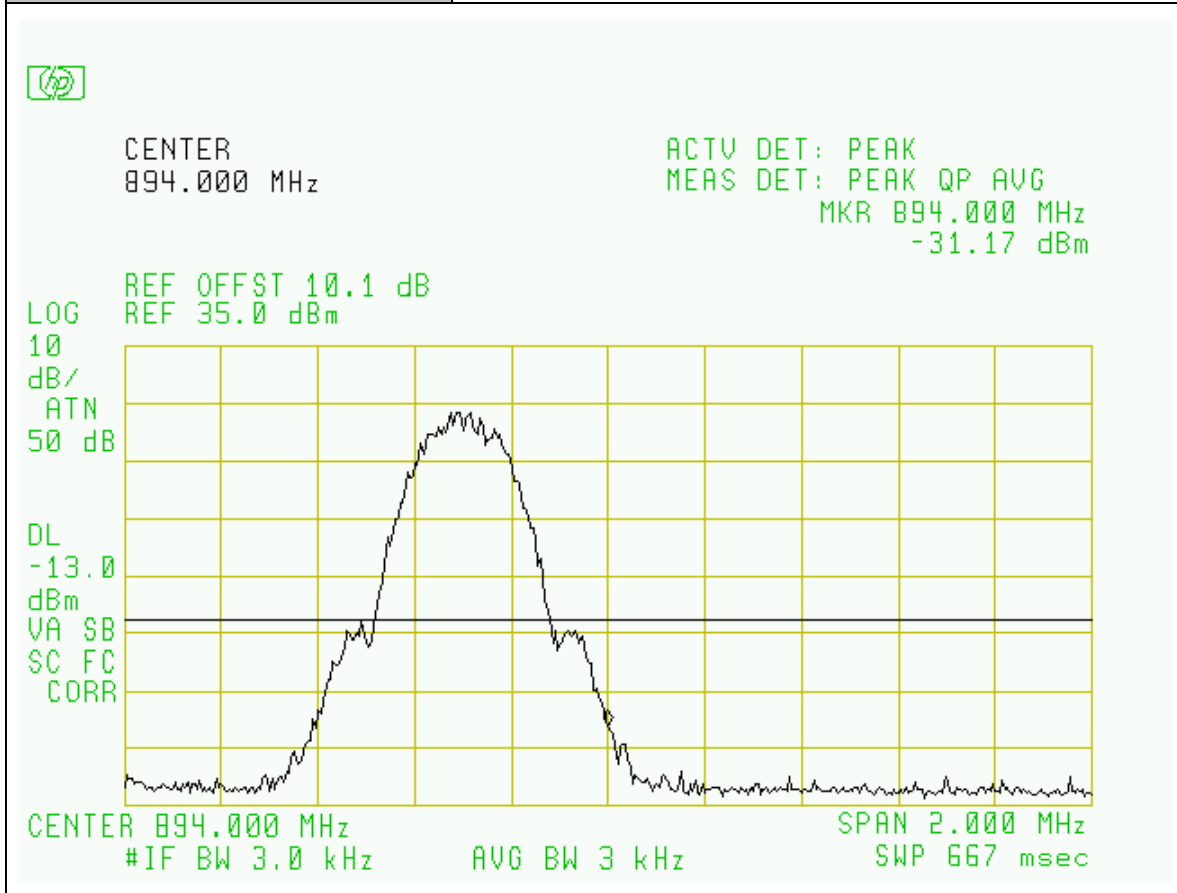
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / CDMA Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



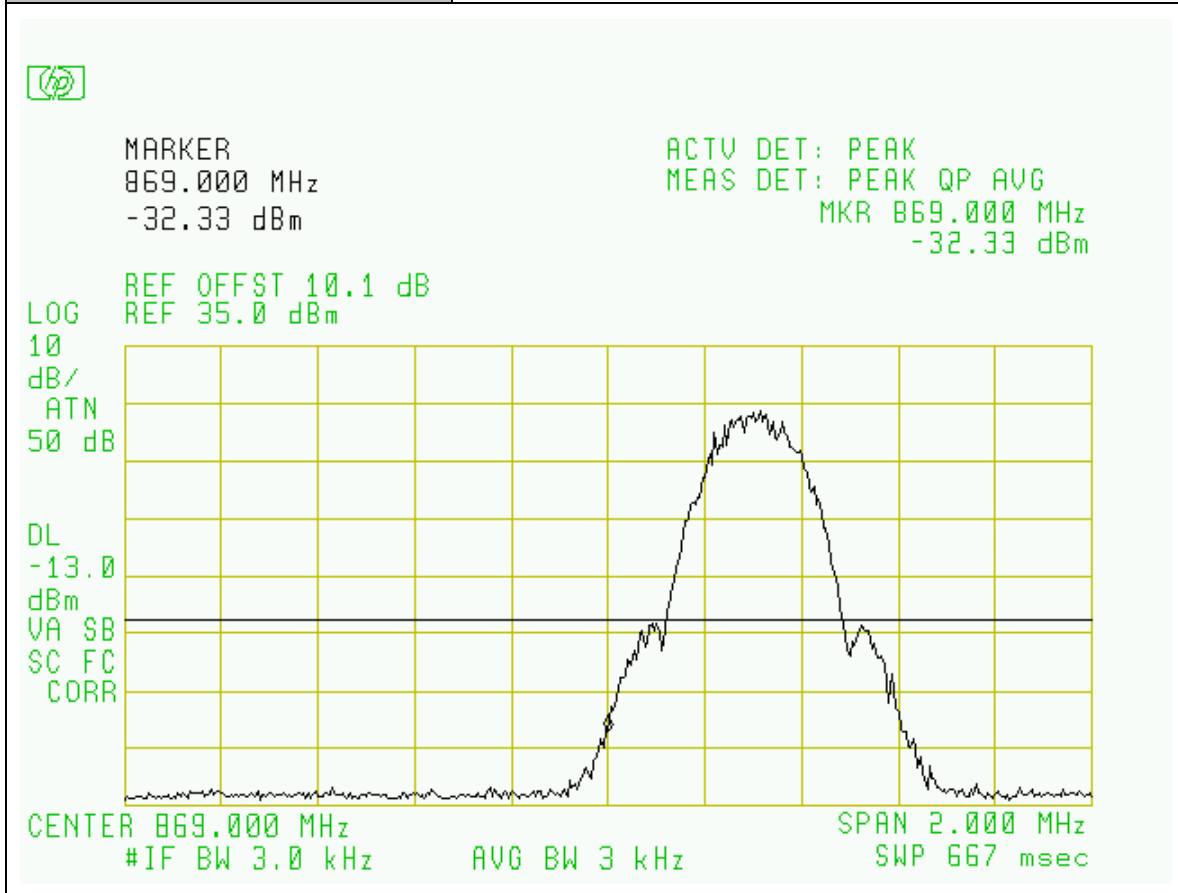
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



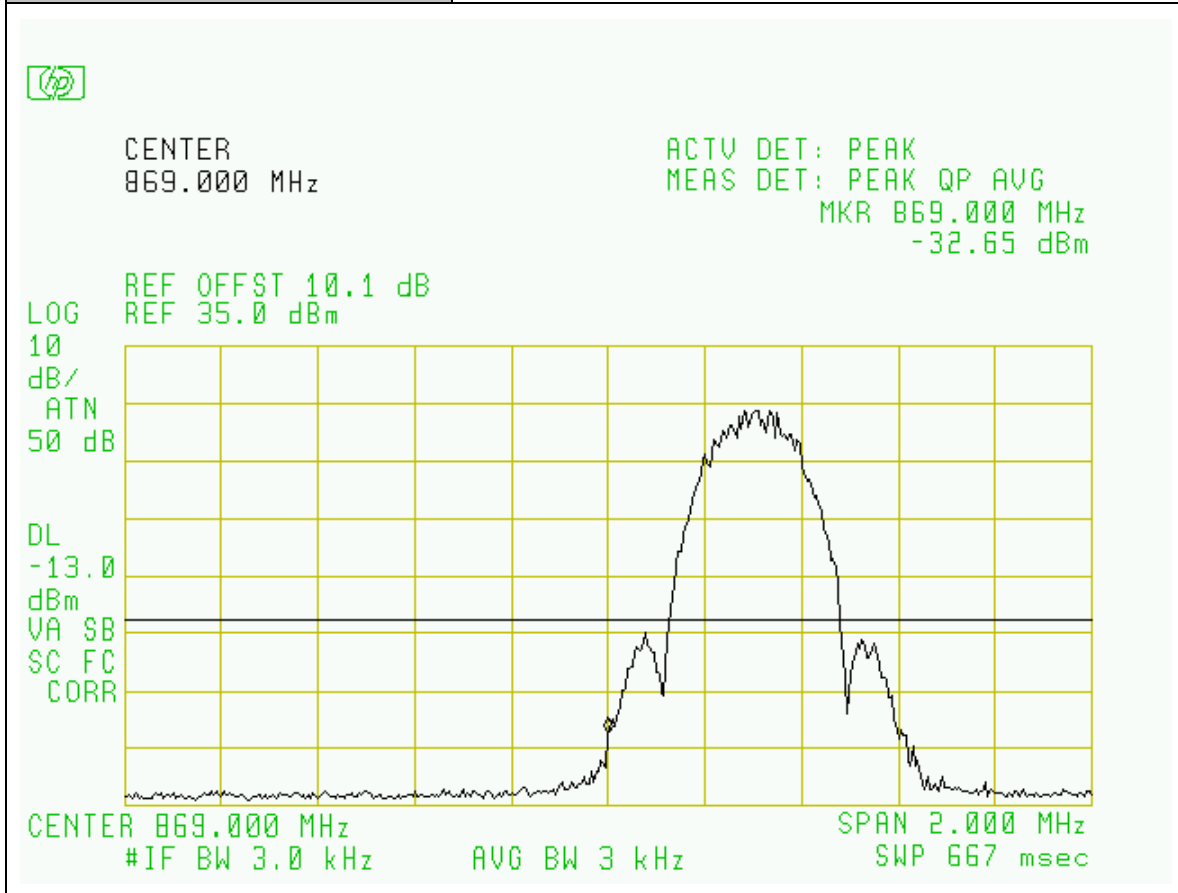
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / GSM Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



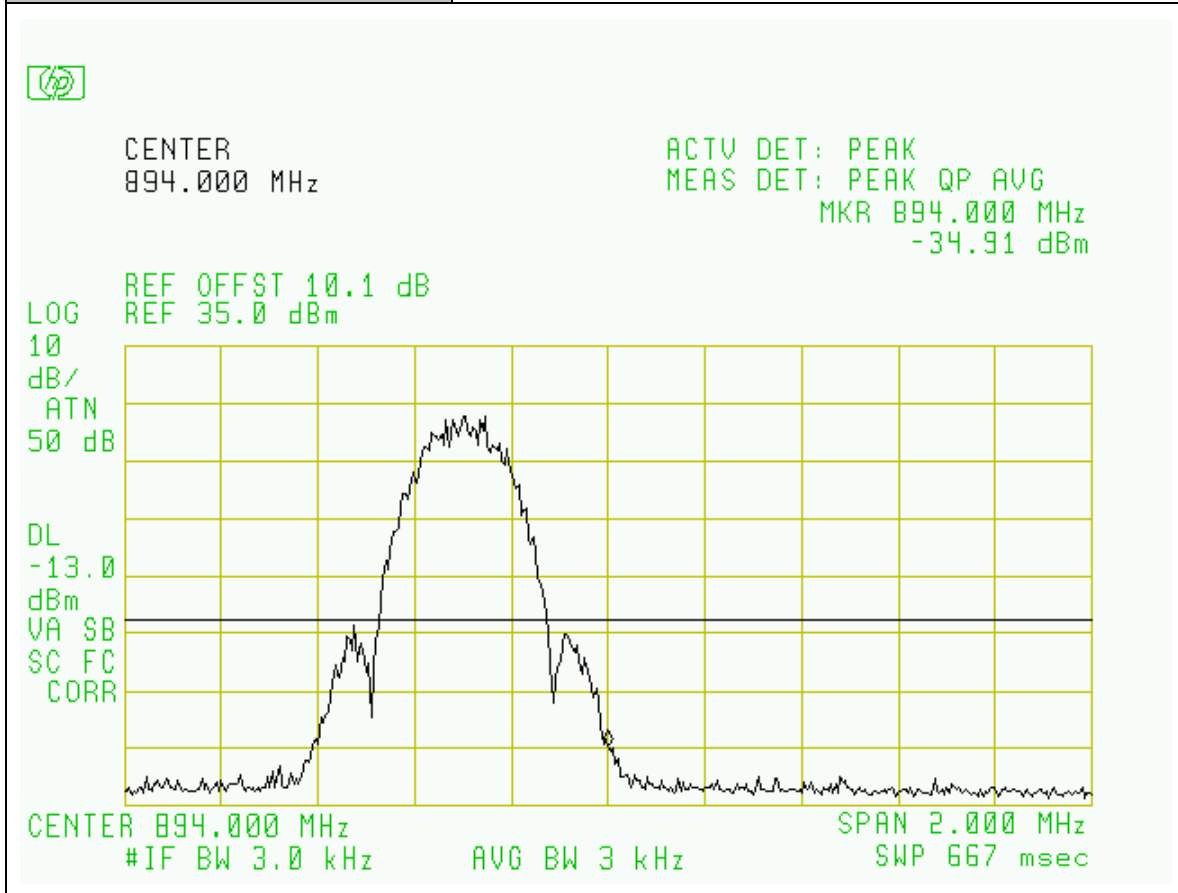
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



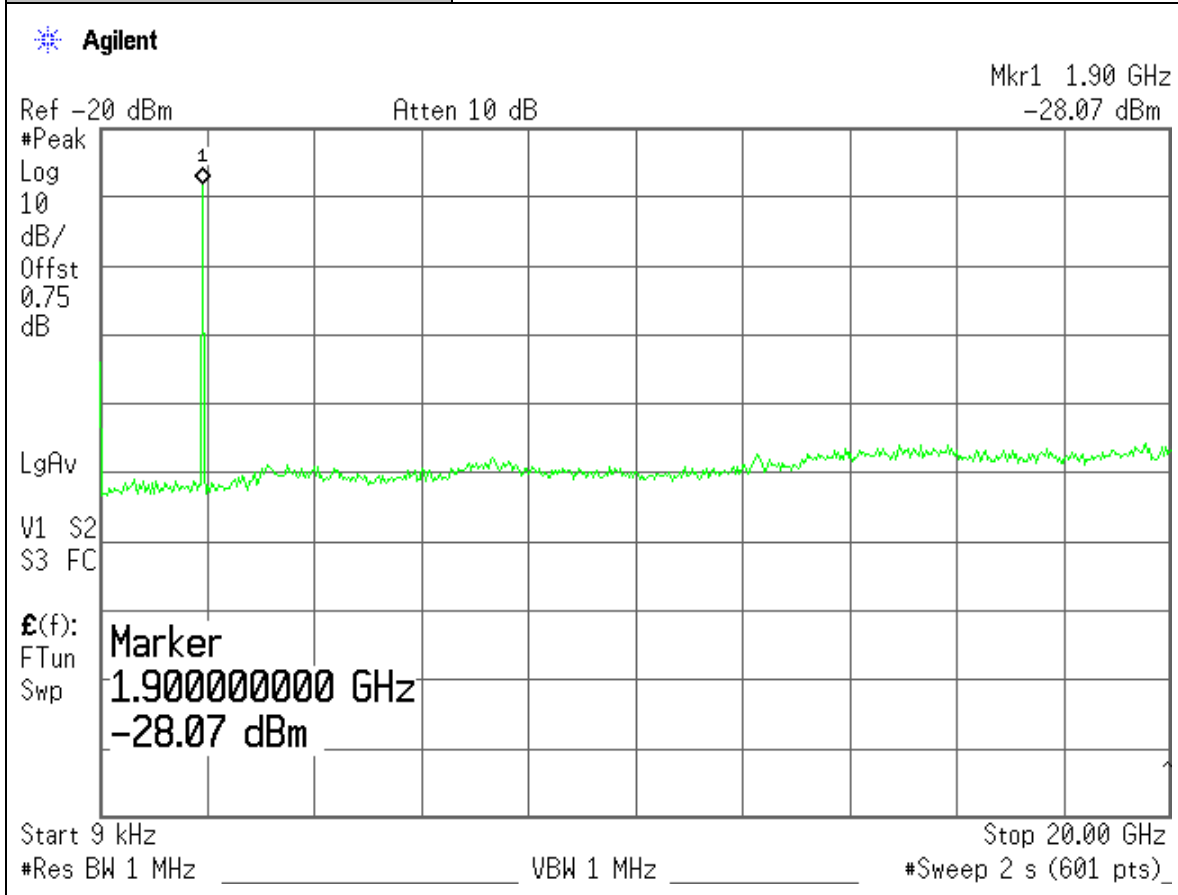
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: Cellular Bands / EDGE Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



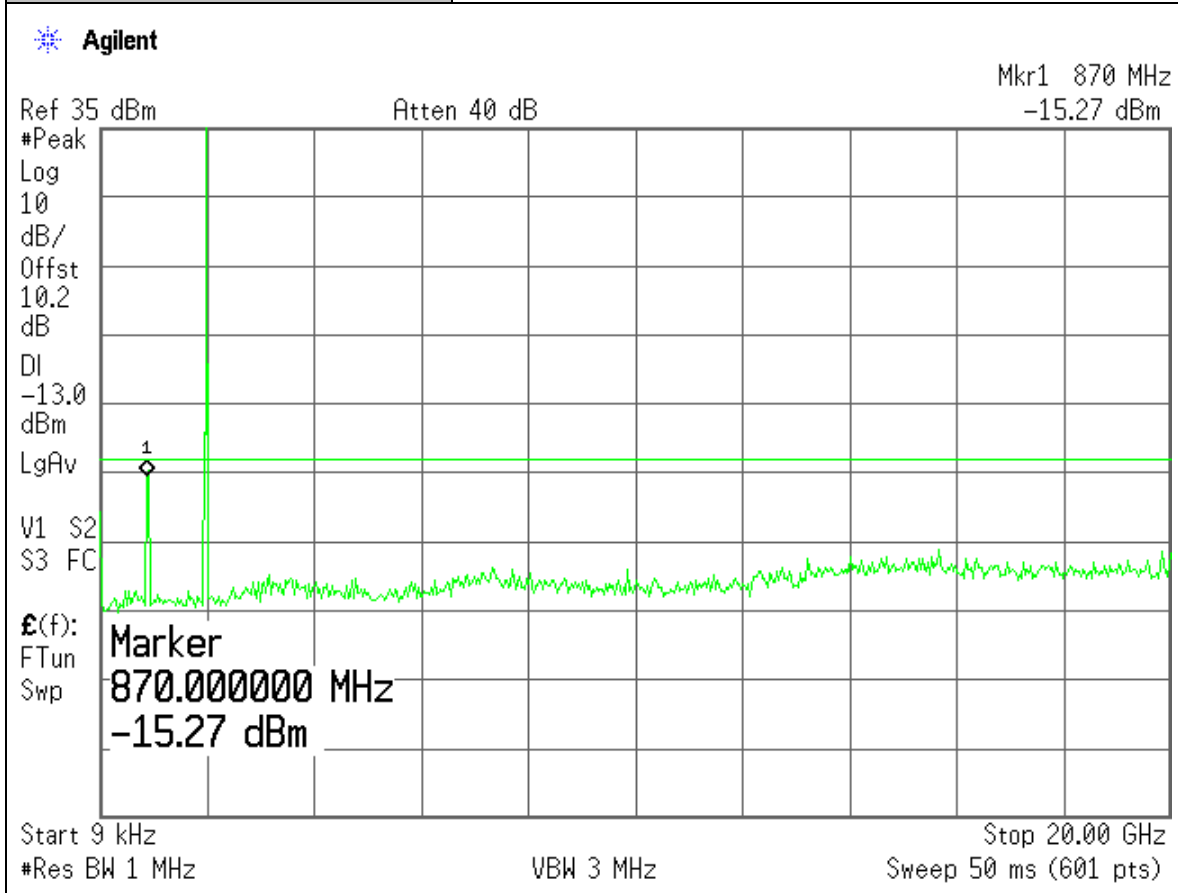
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



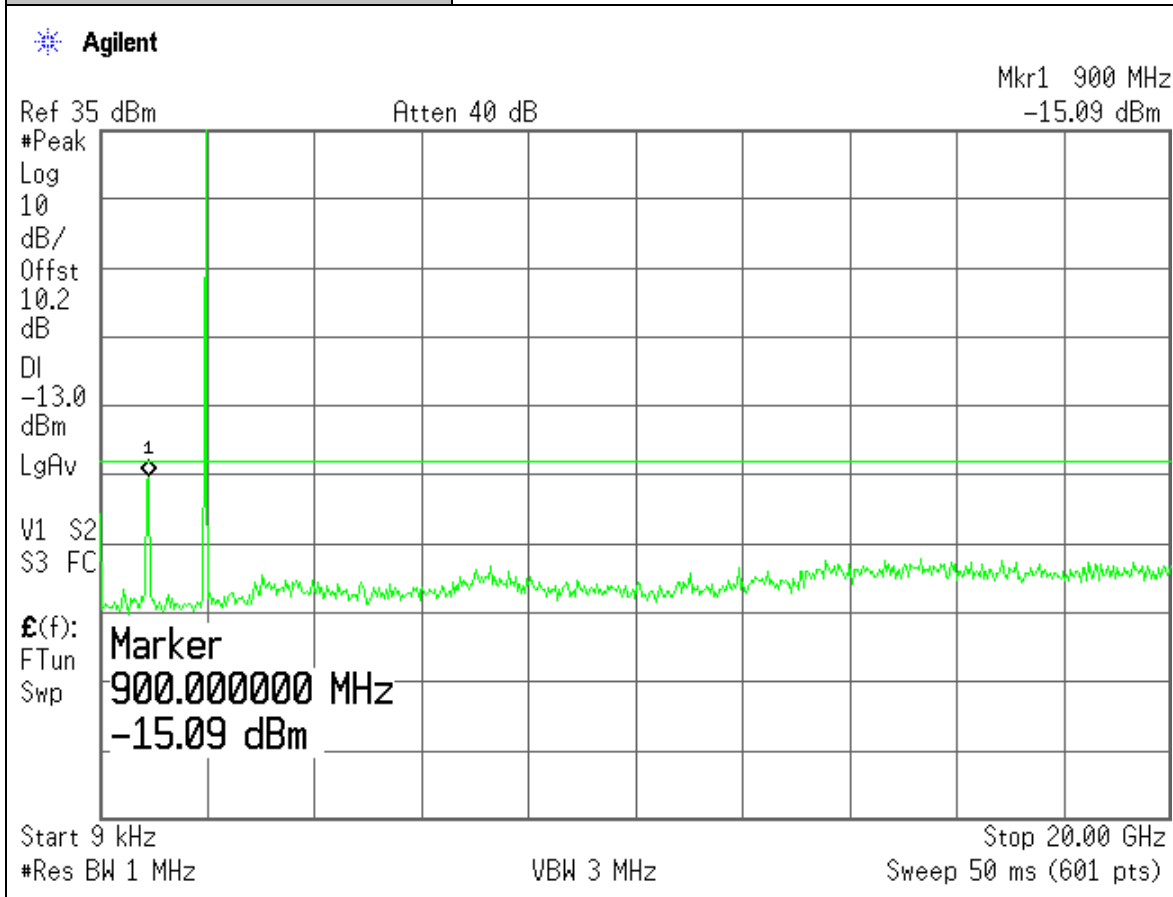
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



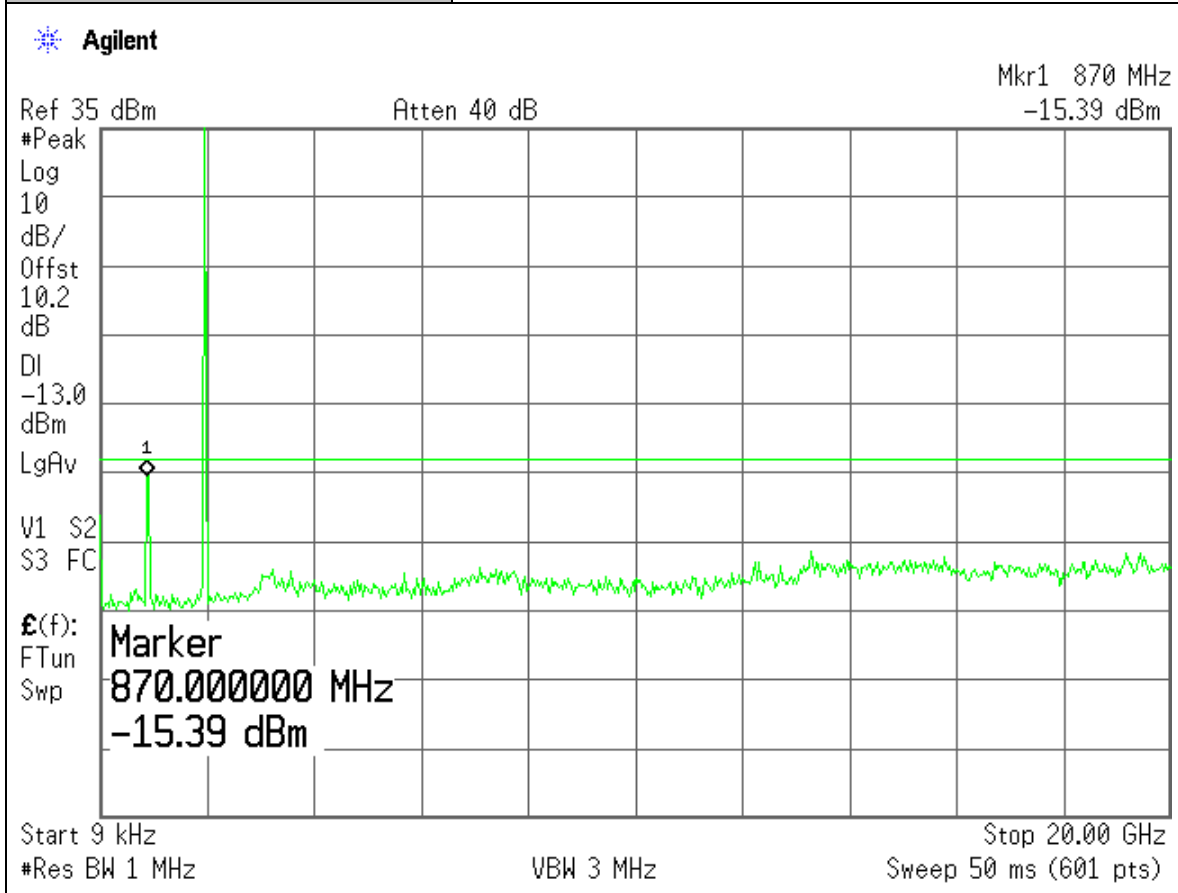
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



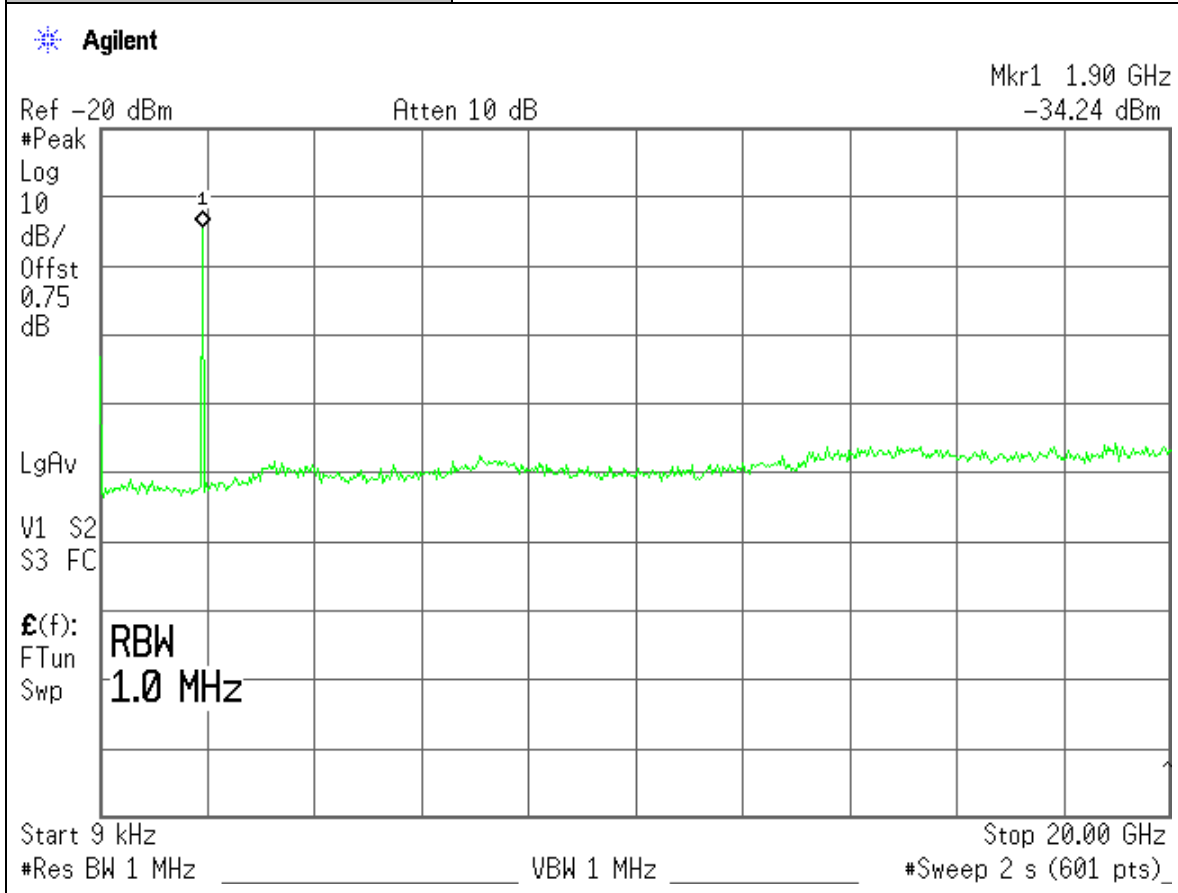
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



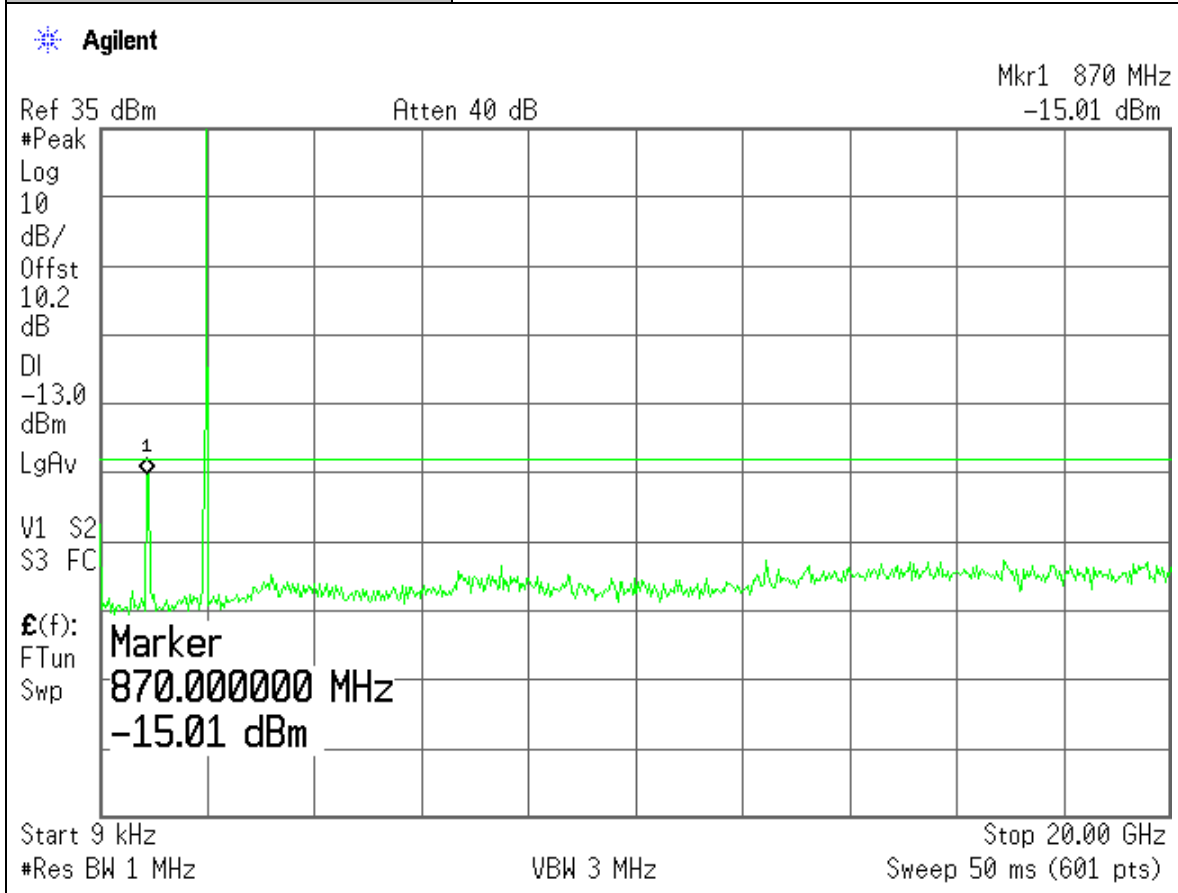
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



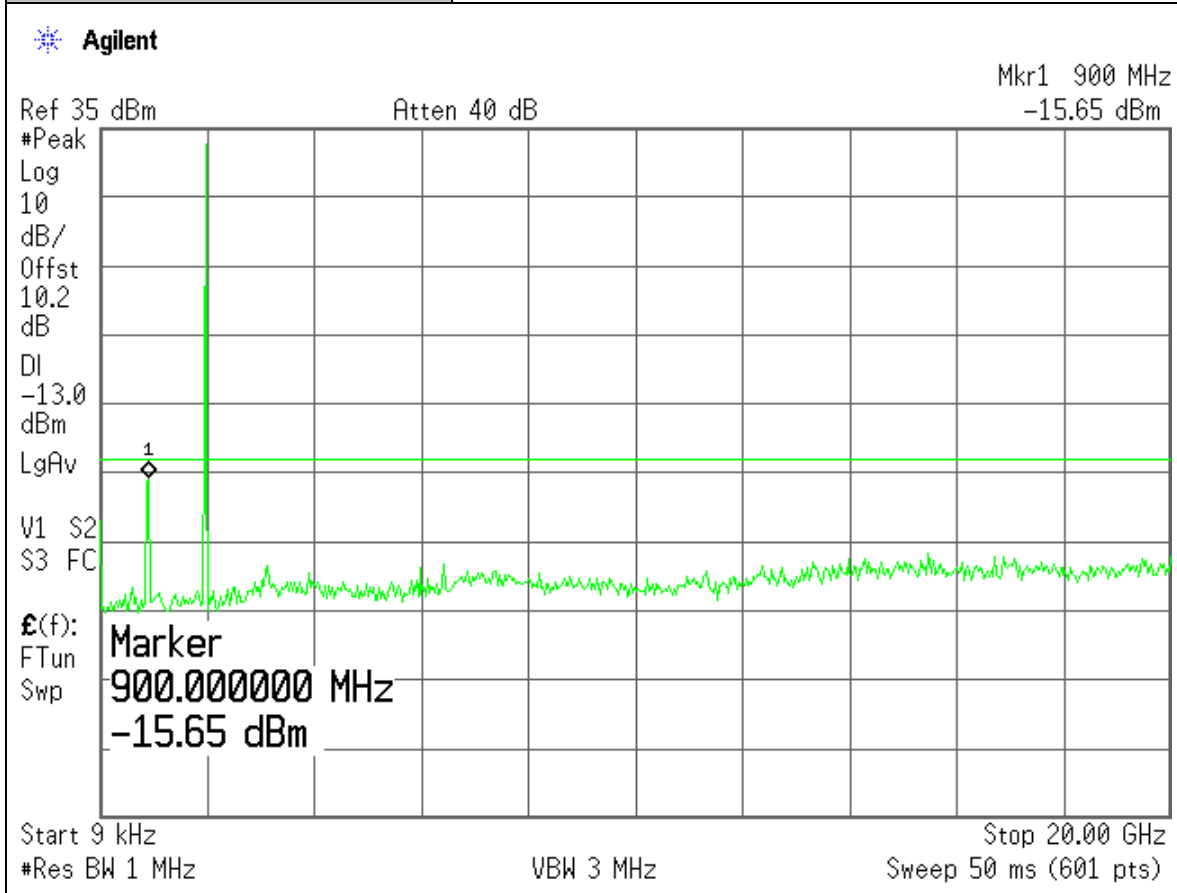
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



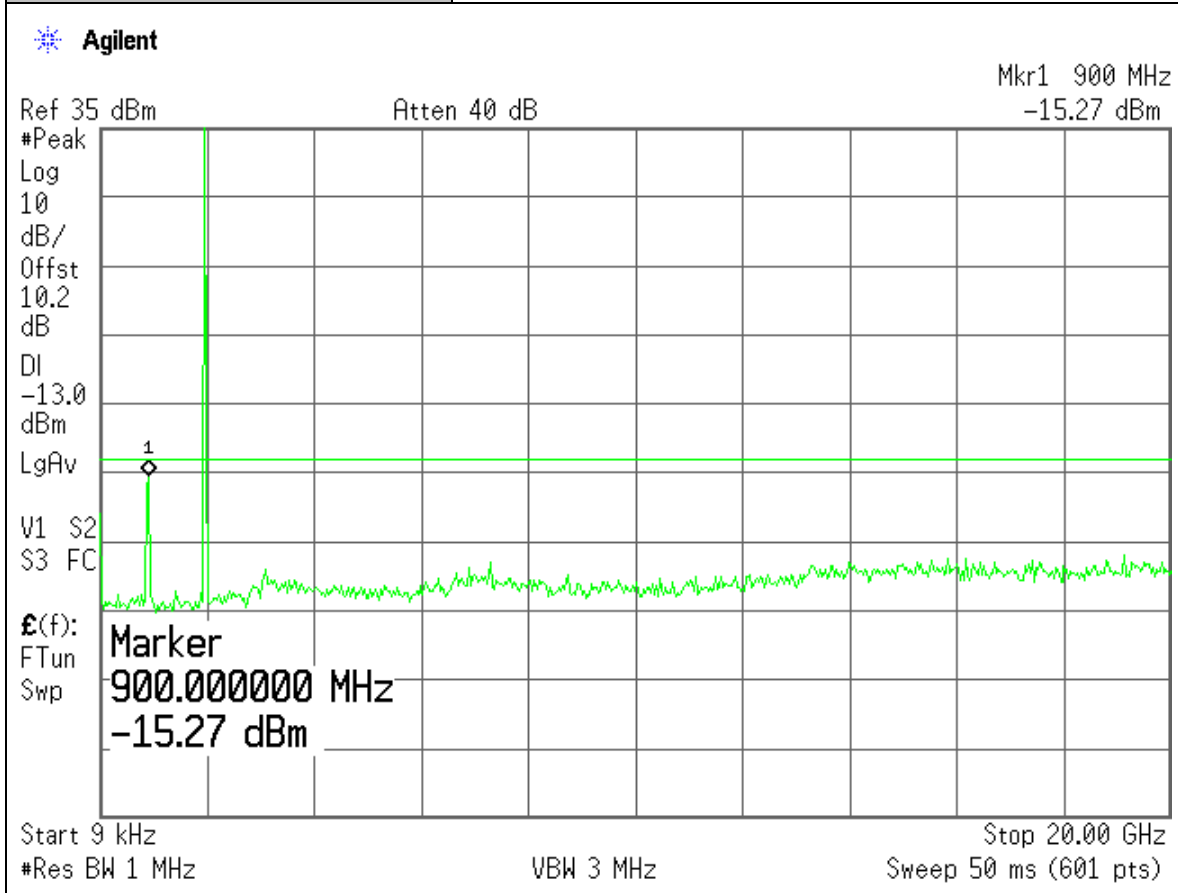
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



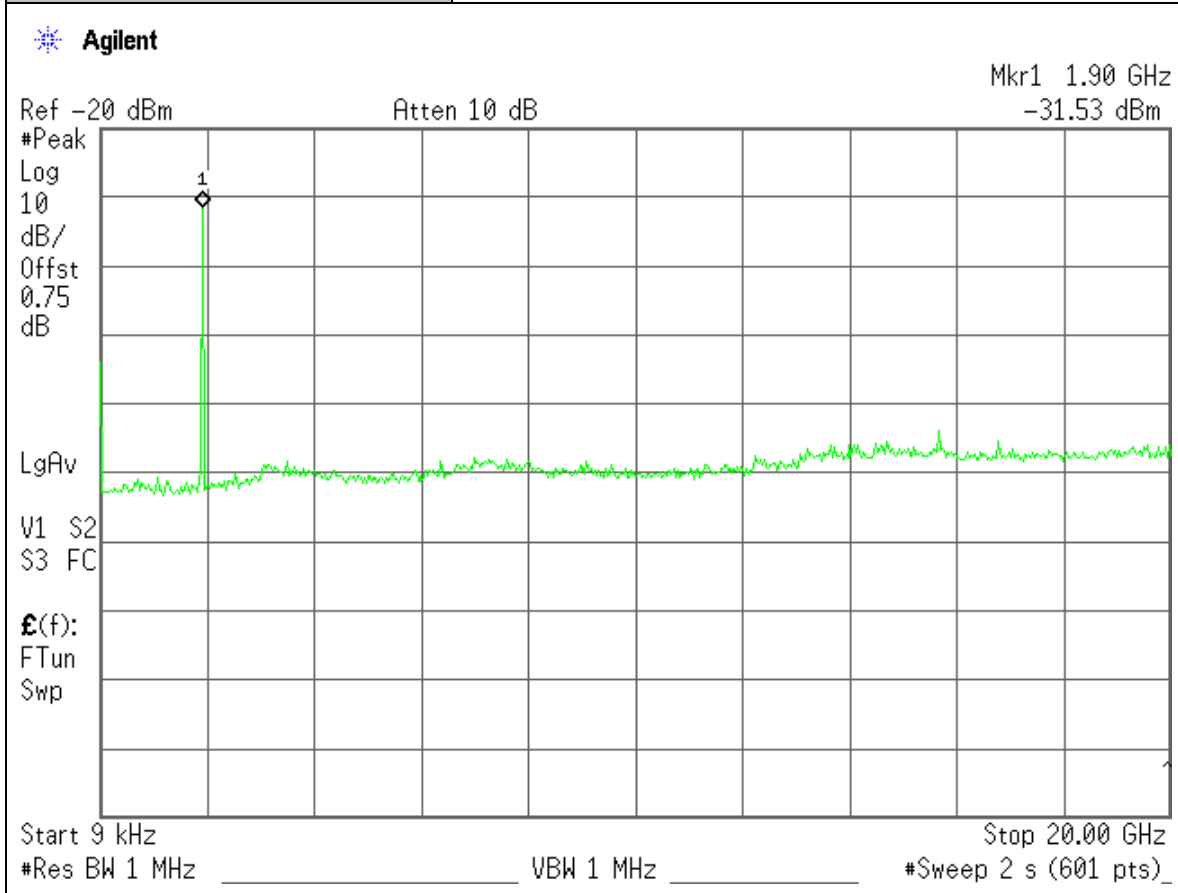
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



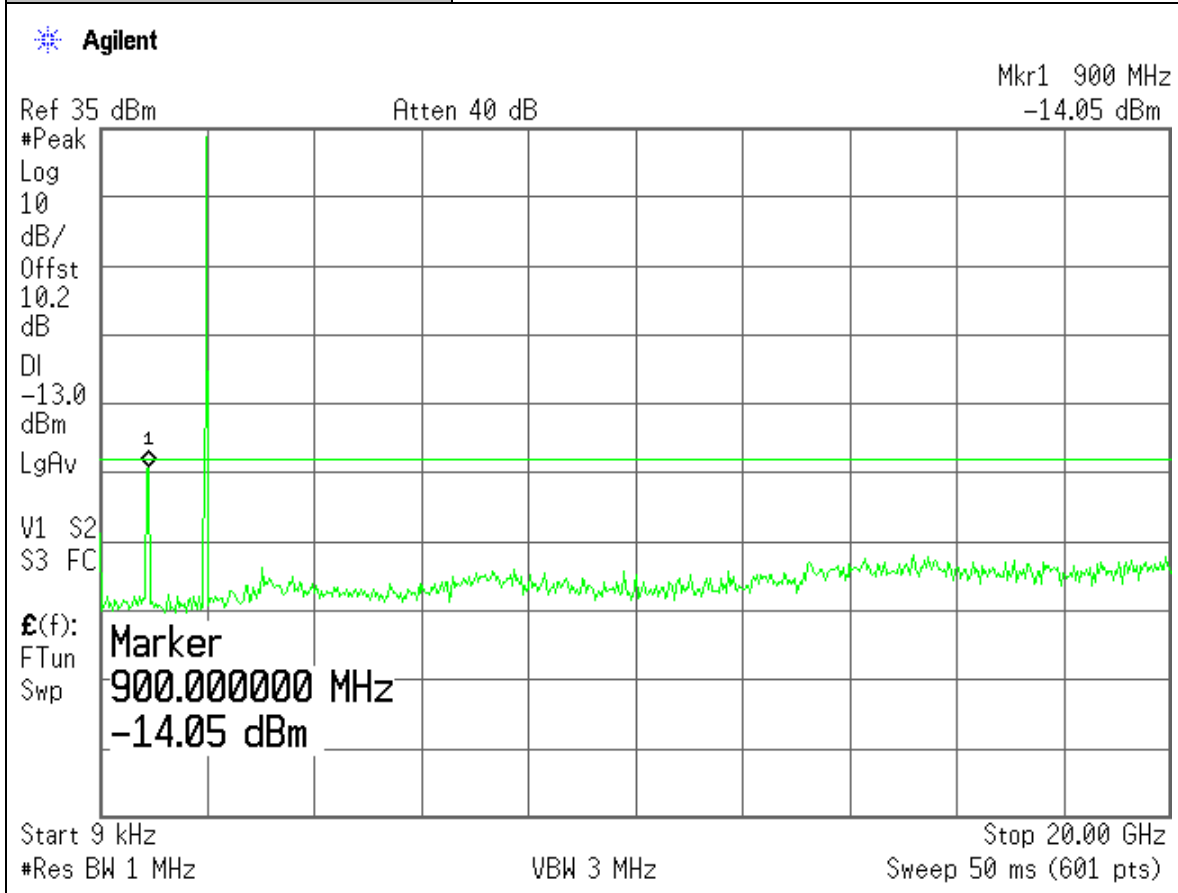
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Uplink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



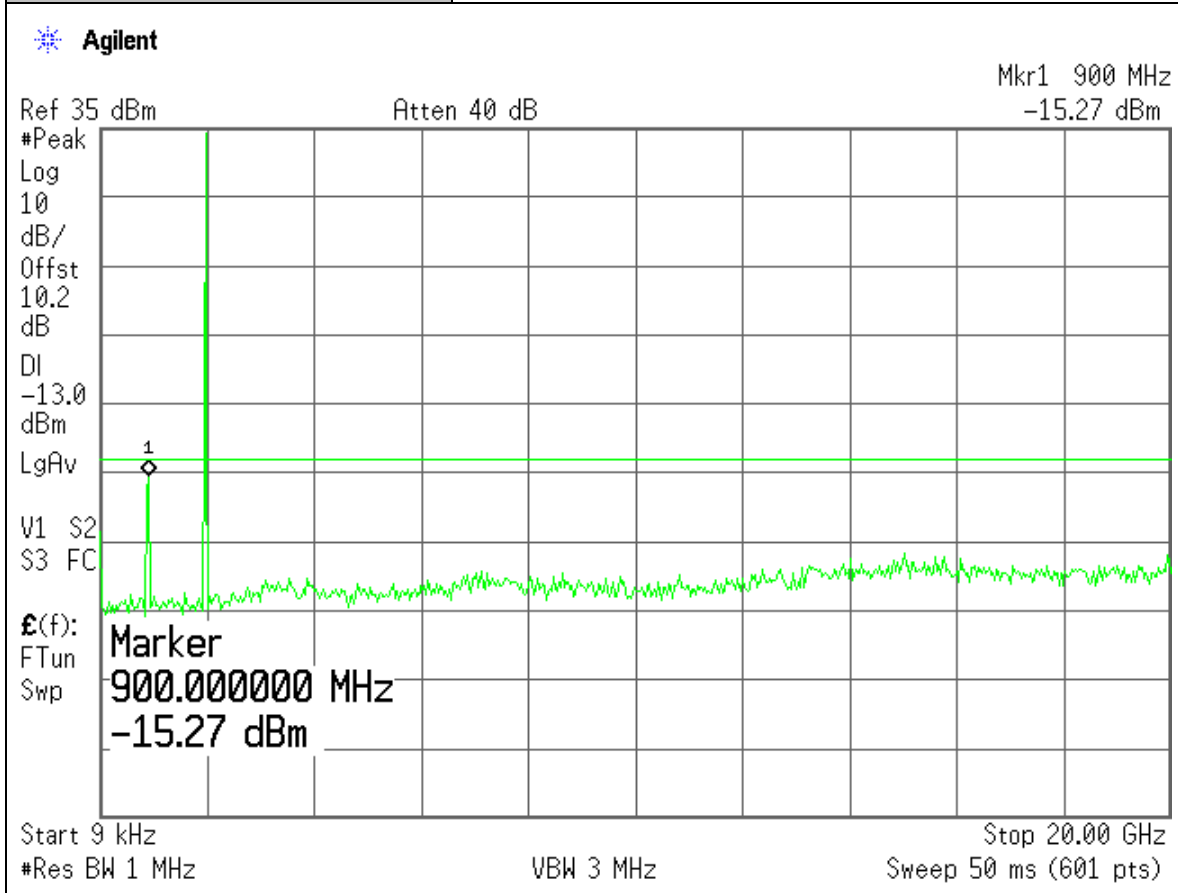
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Downlink, Hi-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



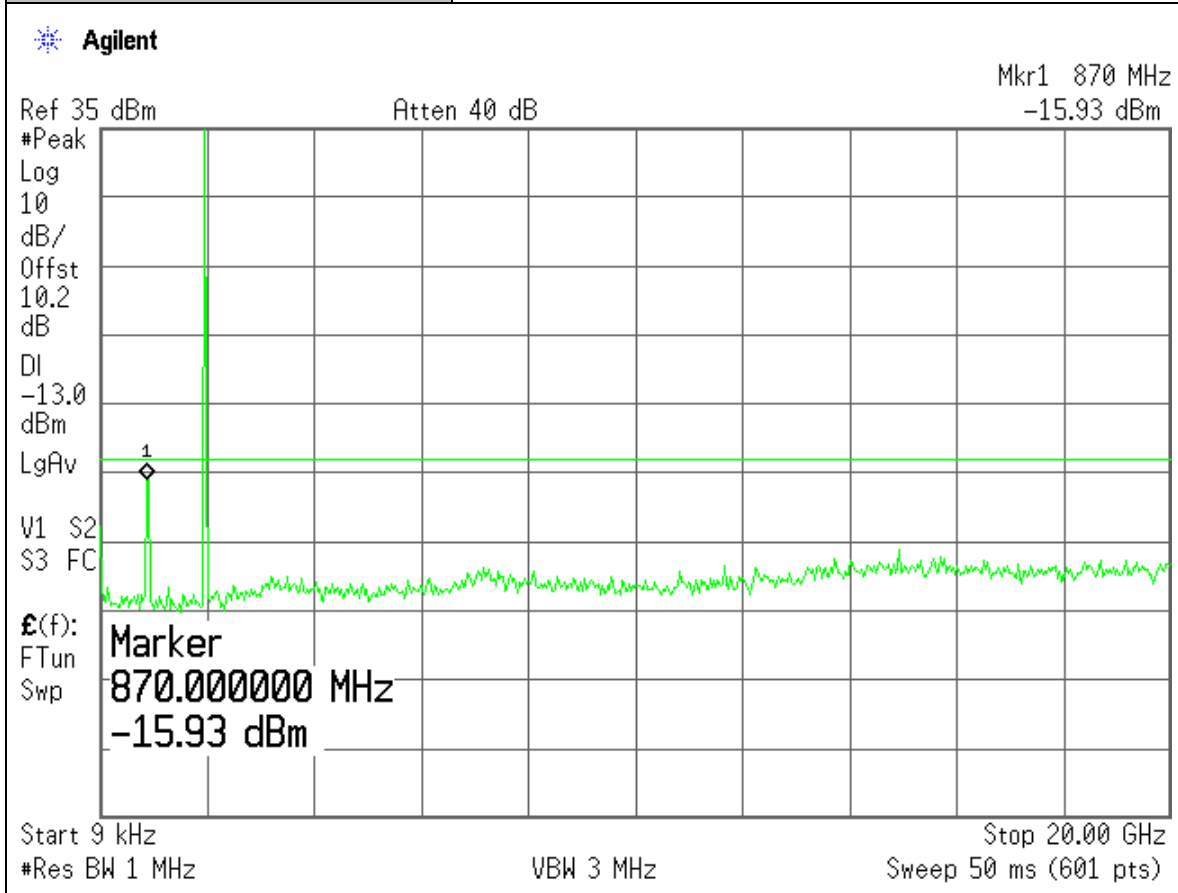
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Downlink, Mid-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



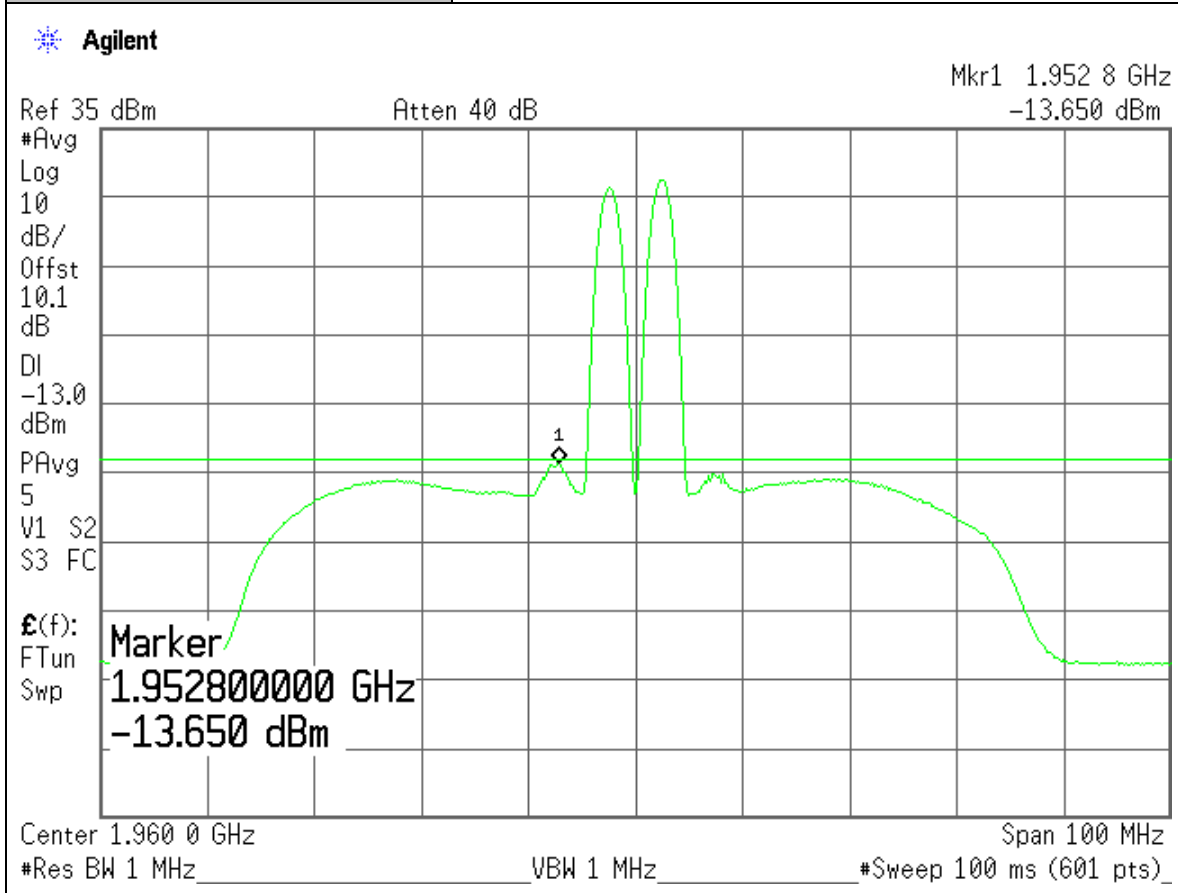
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Downlink, Low-Channel
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



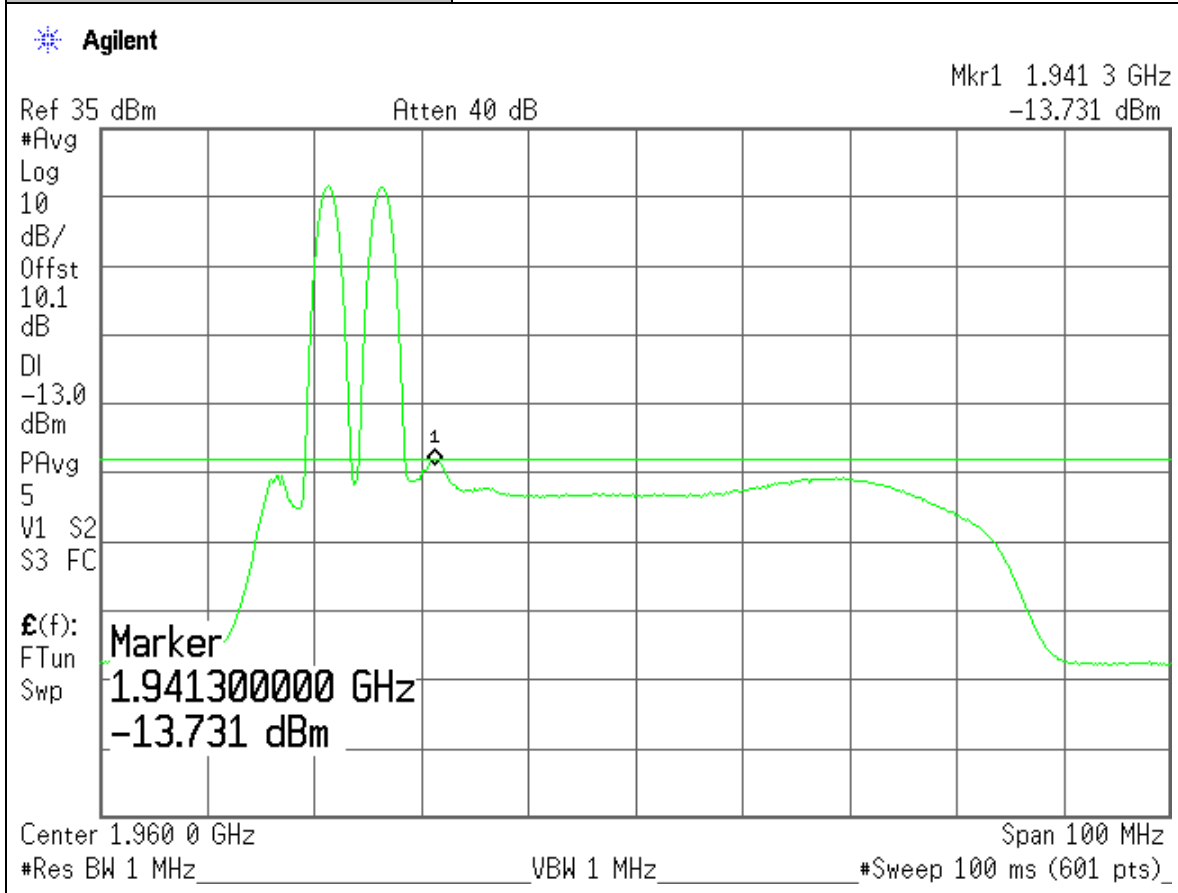
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	DL, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



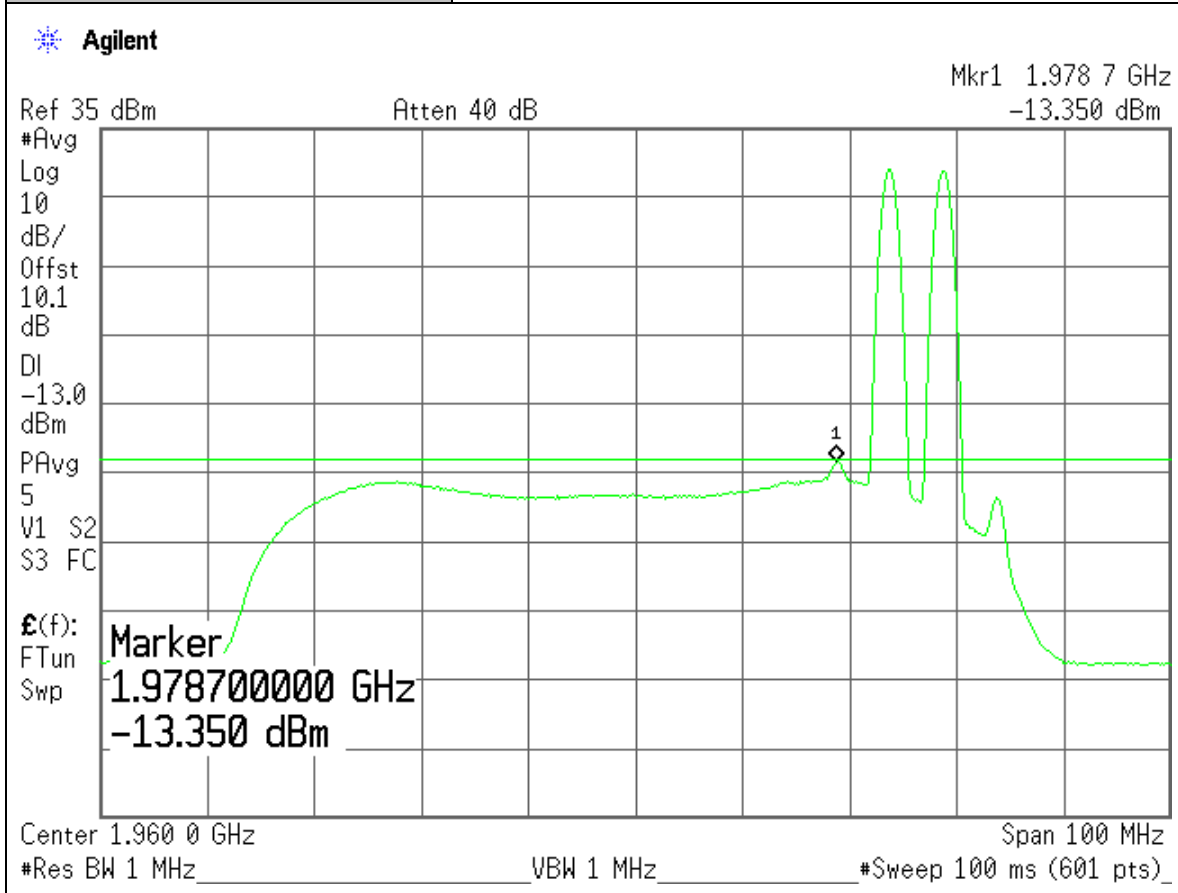
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	DL, Low-Chn, Intermodulation, Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



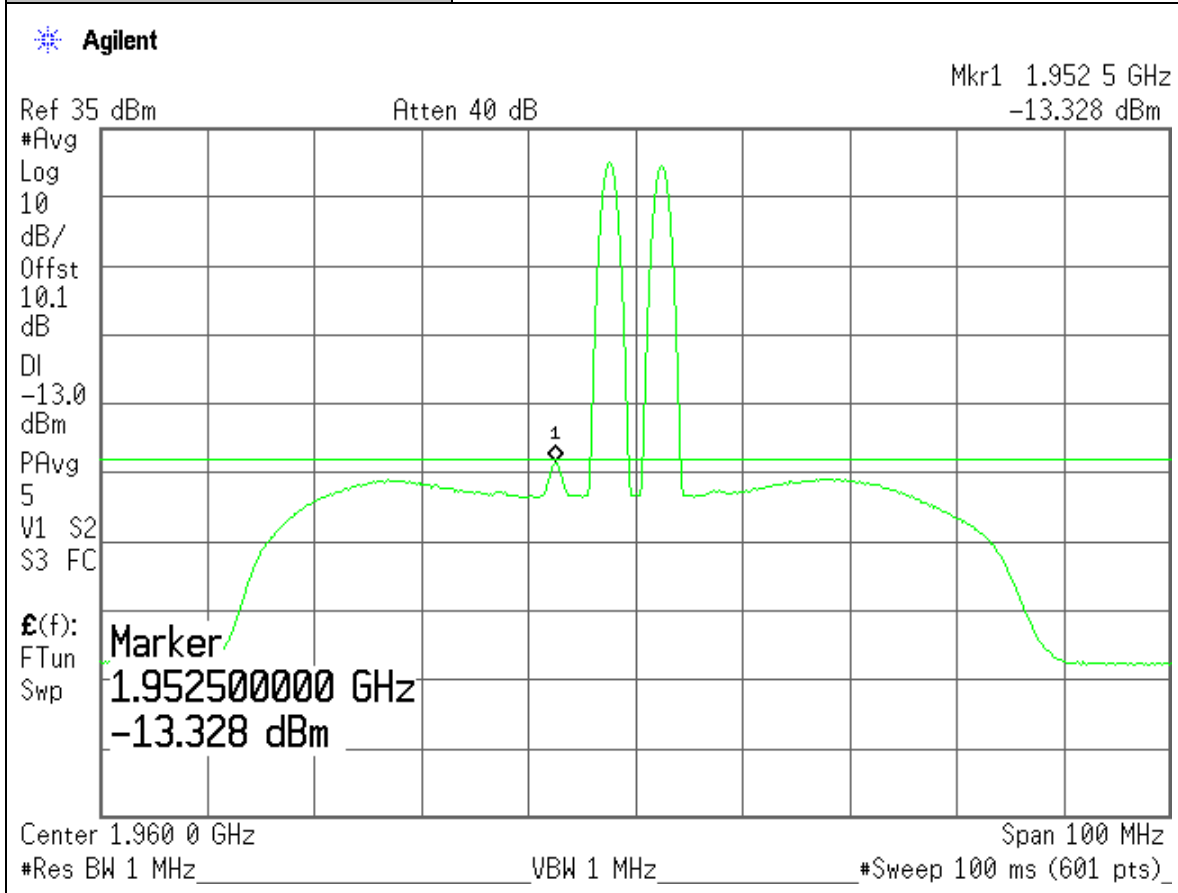
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Downlink, Hi-Chn, Intermodulation , Upper Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



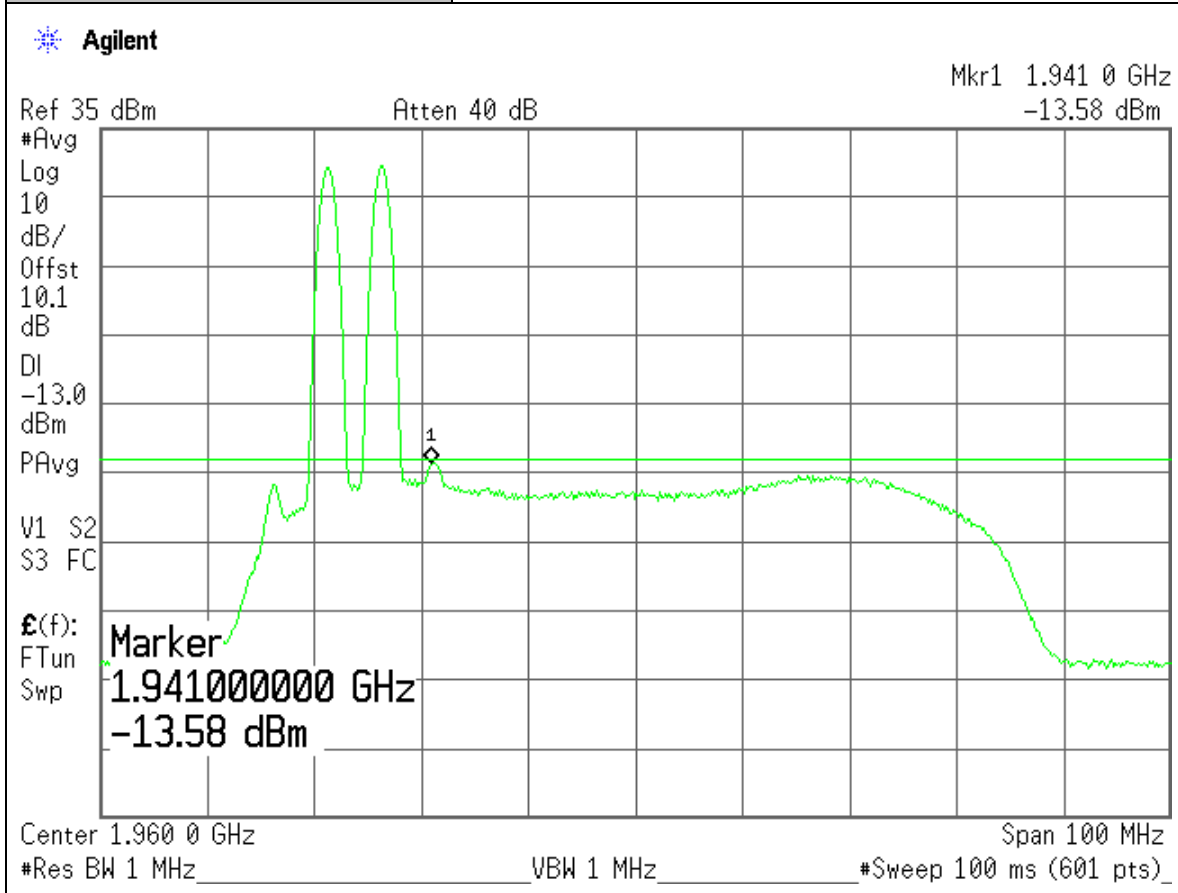
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	DL, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



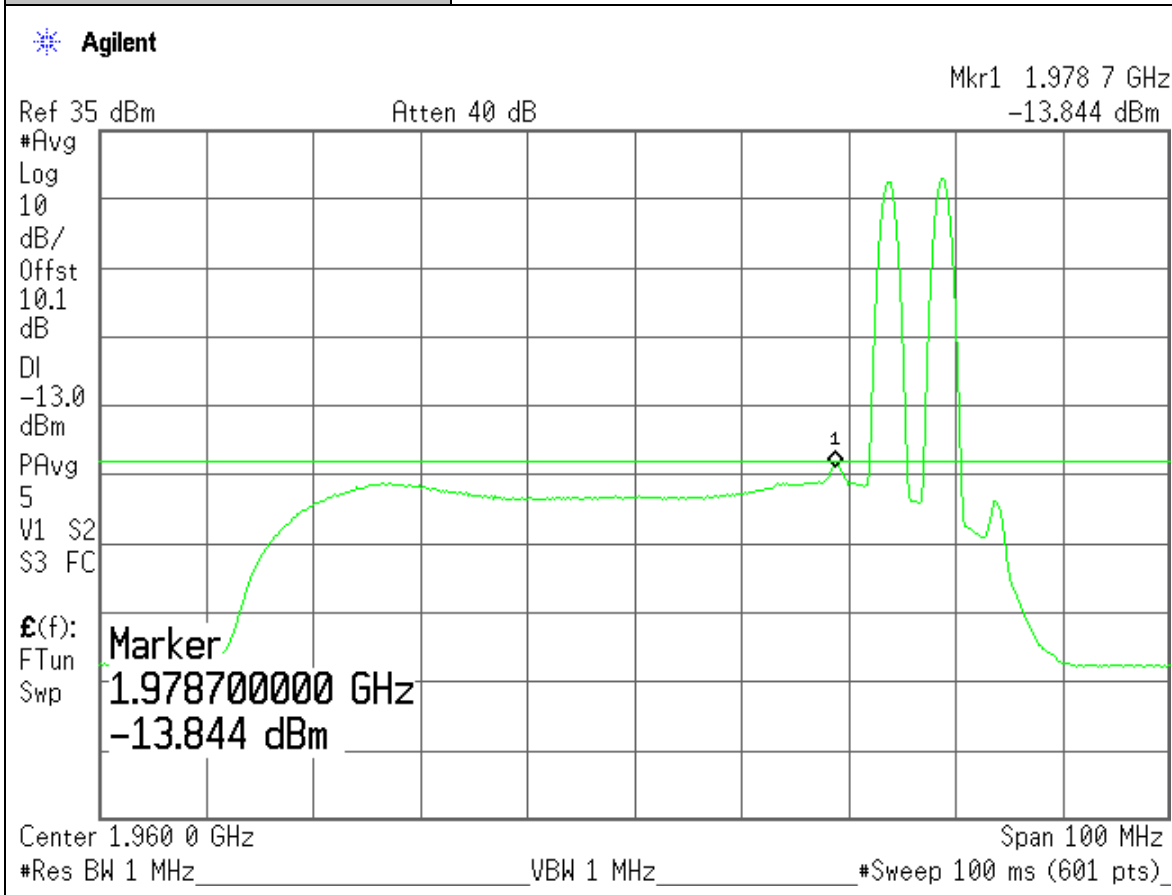
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	Downlink, Low-Chn, Intermodulation , Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



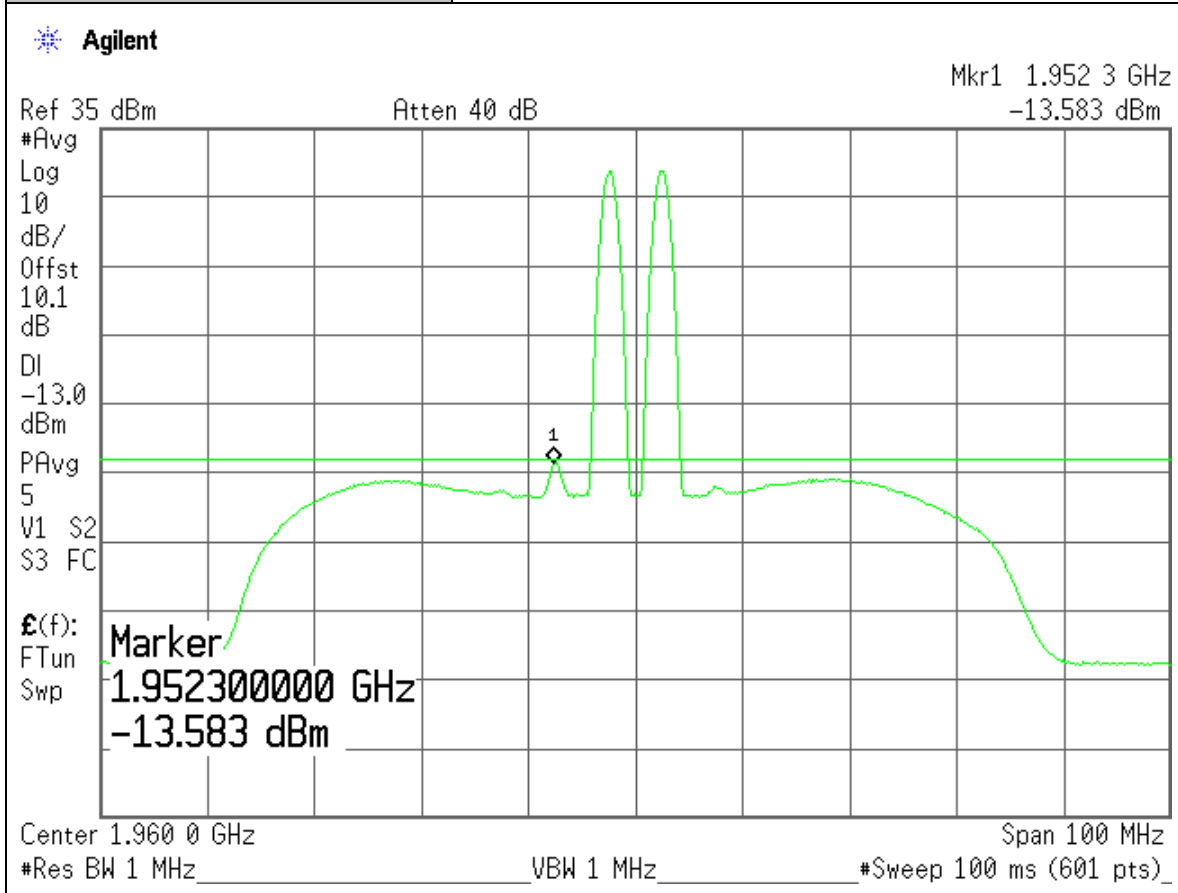
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Downlink, Hi-Chn, Intermodulation , Upper Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



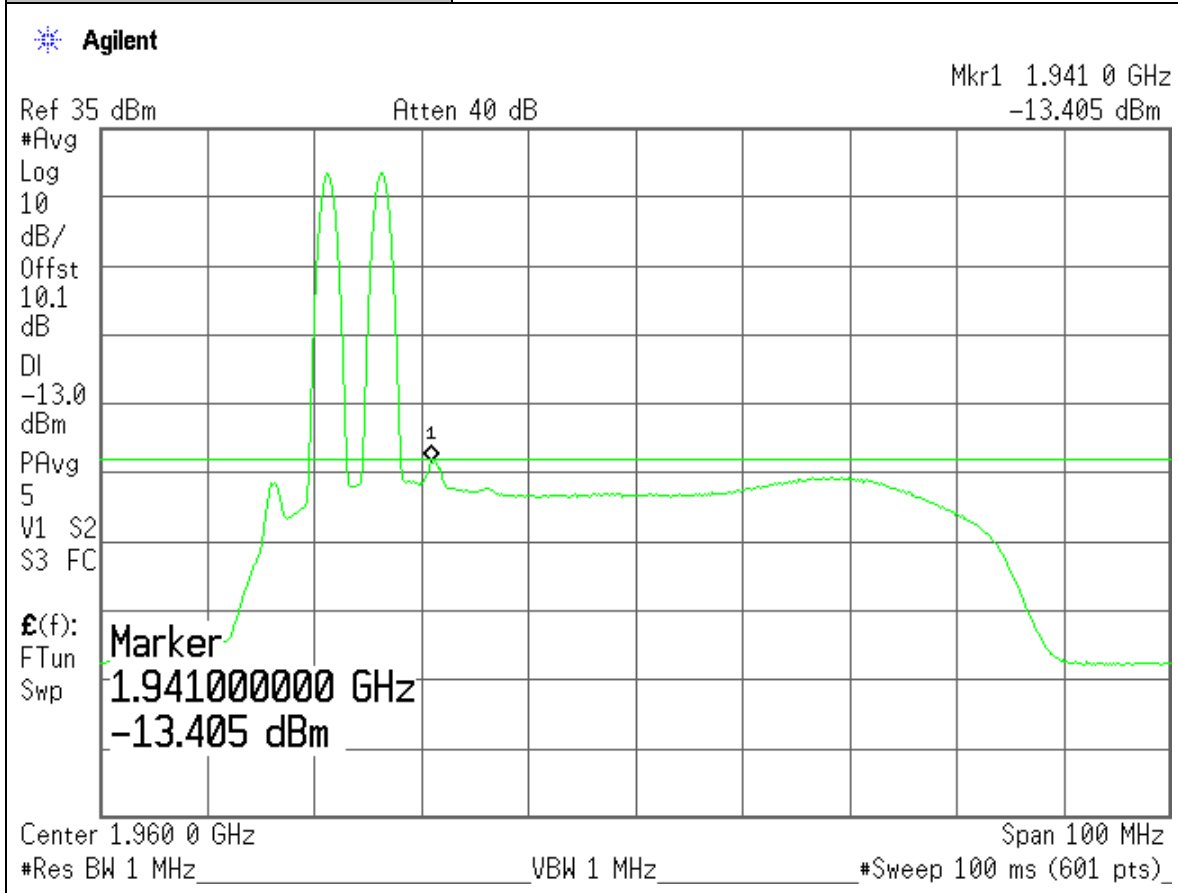
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	DL, Mid-Chn, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



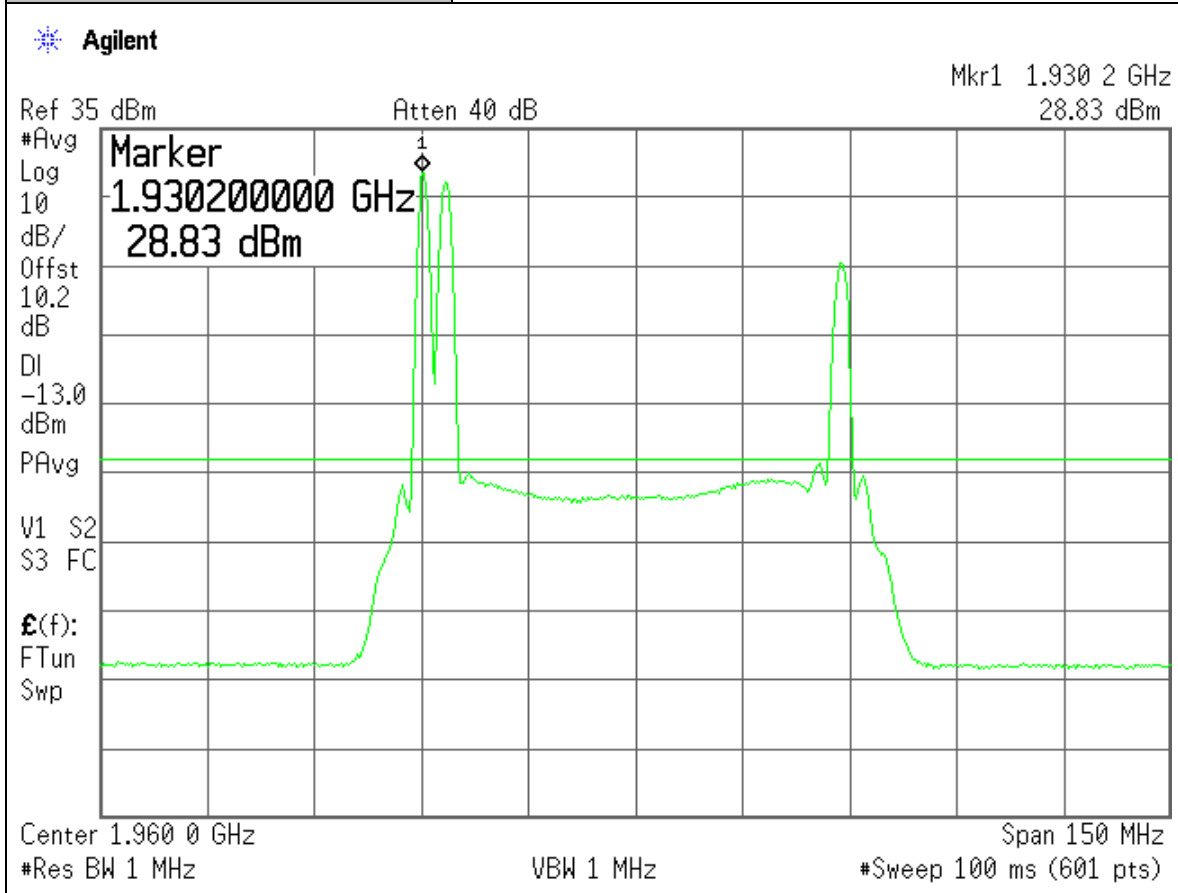
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	Downlink, Low-Chn, Intermodulation , Lower Bandedge
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



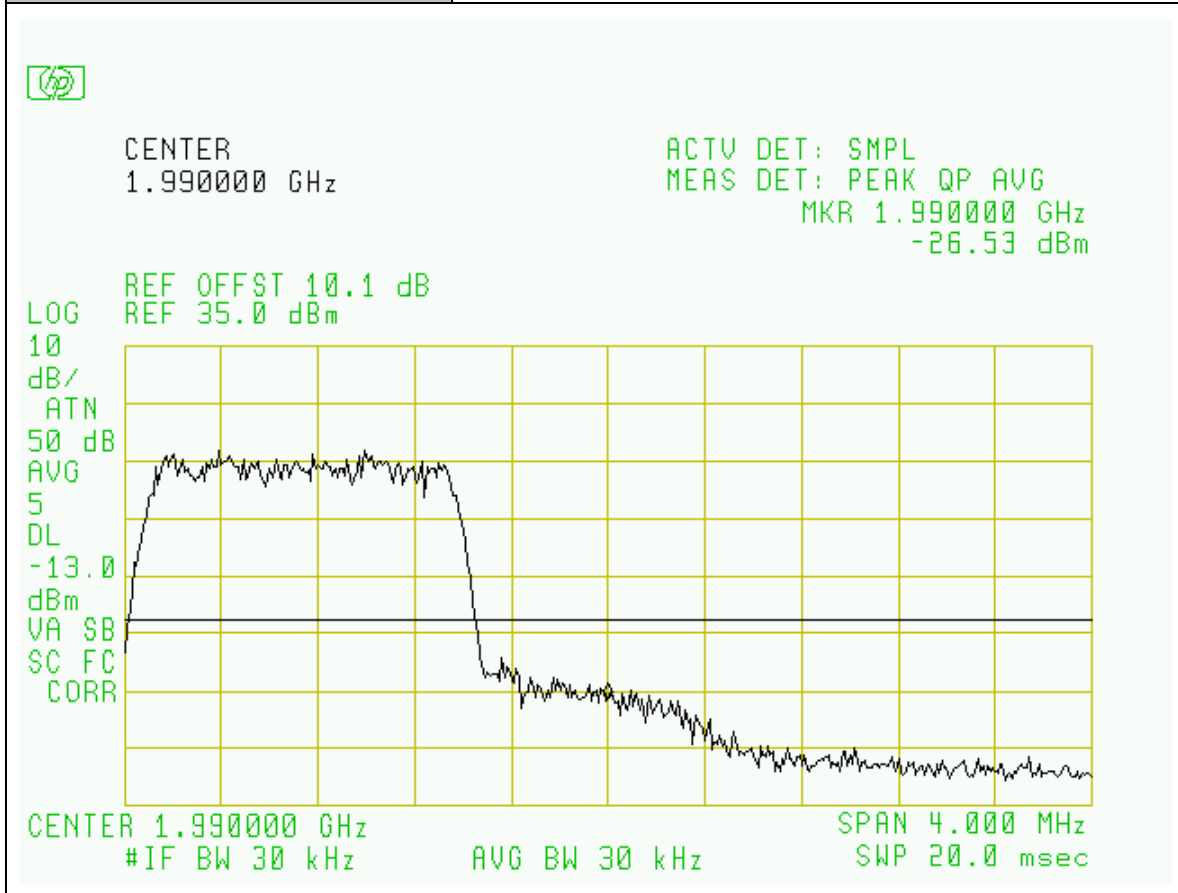
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Wei Li
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA+GSM+EDGE Modulation
Plot Name:	DL, Intermodulation
Configuration:	SG Input: -15dBm, Output Port: EUT BTS



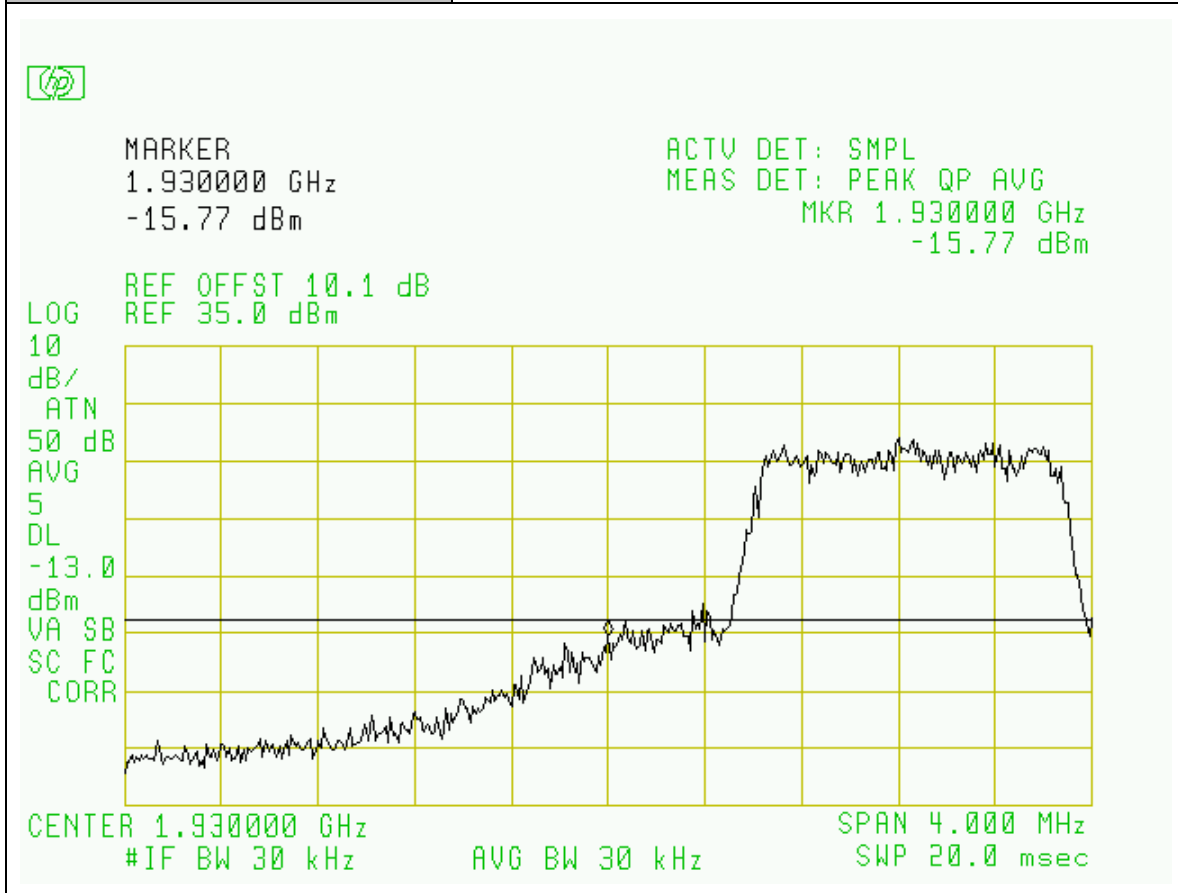
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



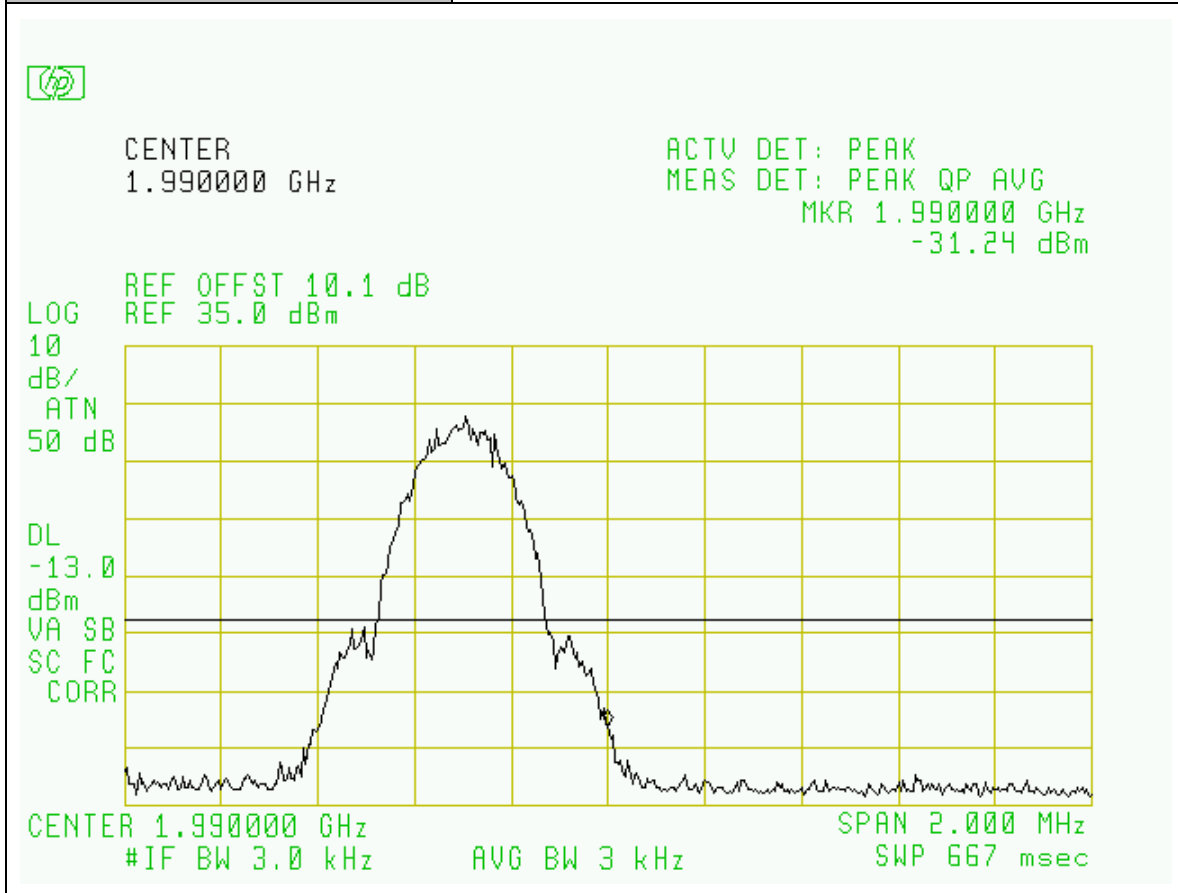
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / CDMA Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



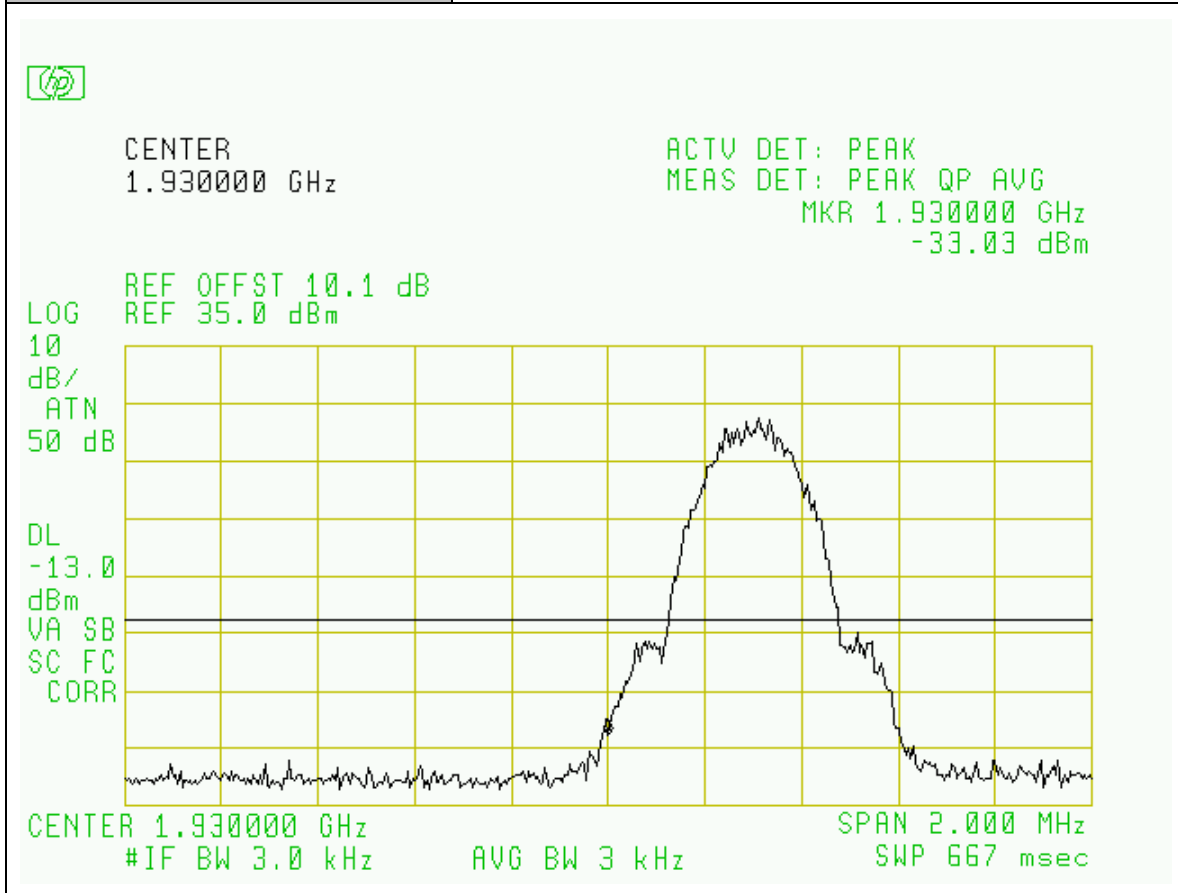
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



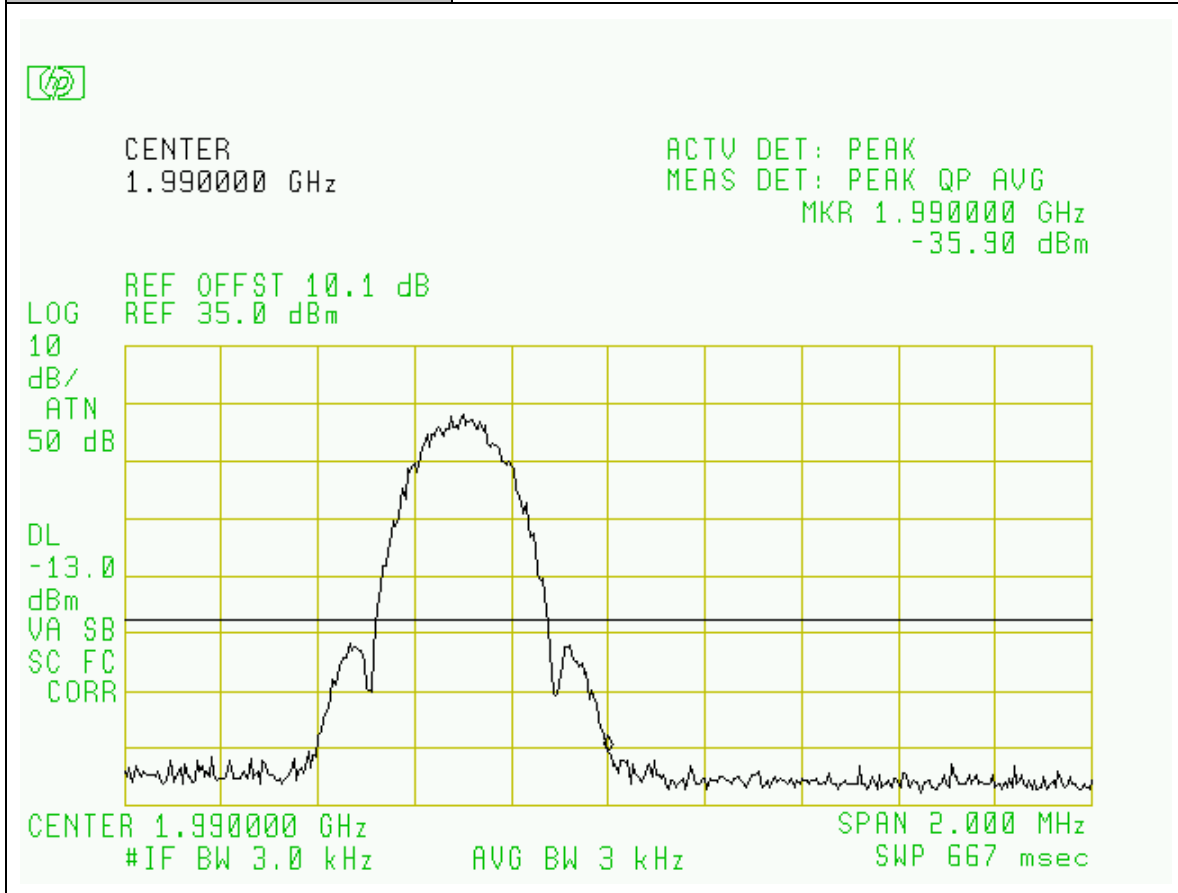
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / GSM Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



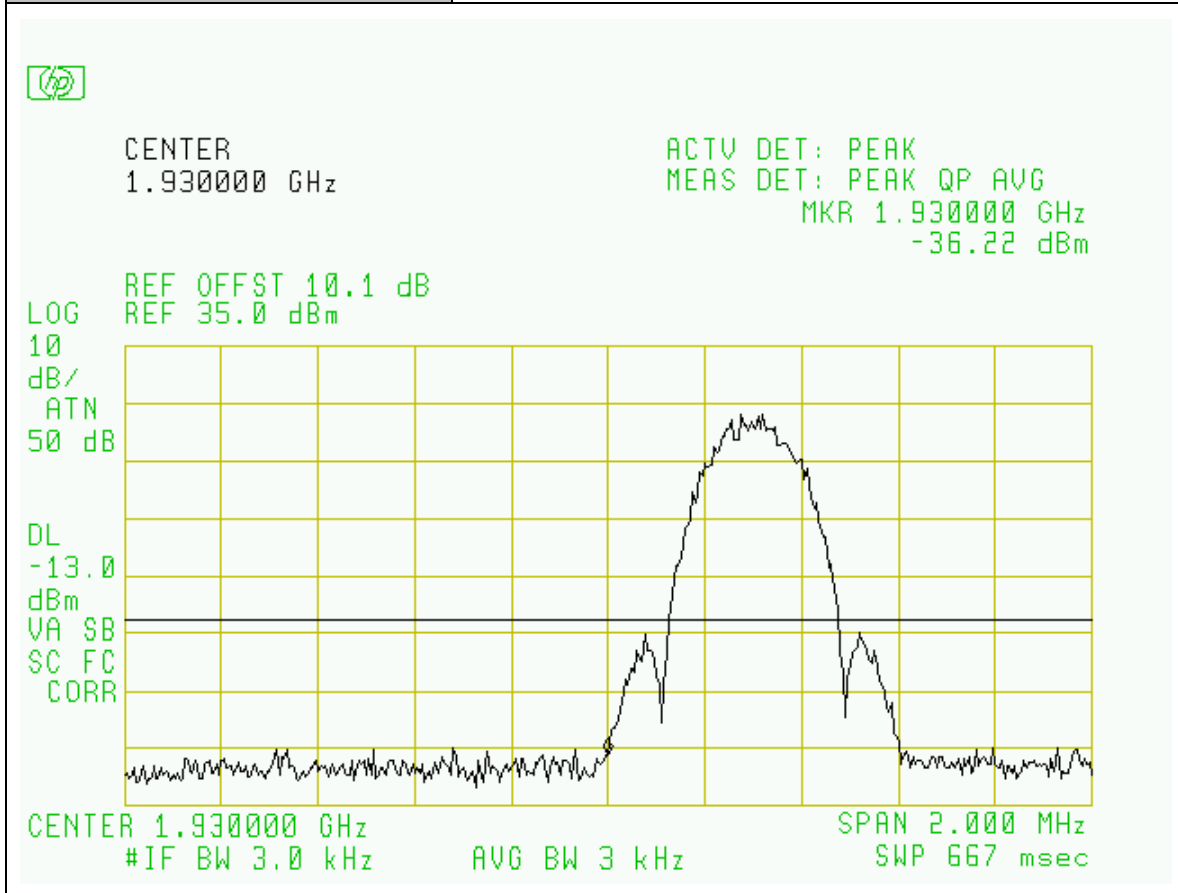
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	DL, Hi-Chn, Upper Band Edge+1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Tested By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Spurious Emissions at Antenna Terminals: PCS Bands / EDGE Modulation
Plot Name:	DL, Low-Chn, Lower Band Edge -1MHz
Configuration:	SG Input: -15dBm, Output Port: EUT MOBILE



Section 6. Field Strength of Spurious

Name of Test:	<i>Field Strength of Spurious</i>	Test Standard:	22.917 24.238
Tested By:	EDWARD LEE	Test Date:	04/15/2008-04/30/2008

Minimum Standard: Para. No. 22.917(e). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least $43 + 10 \log P$. This is equivalent to -13 dBm absolute power.
Para. No. 24.238(a). The magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under conditions specified in the instruction manual and/or alignment procedure, shall not less than $43+10 \log$ (mean output power in watts) dBc below the mean power output outside a licensee's frequency block (-13dBm).

Method of Measurement: TIA/EIA-603-B-2002, Section 2.2.12
The antenna substitution method was used to determine the equivalent radiated power at spurious frequencies. The spurious emissions were measured at a distance of 3 meters. The EUT was then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna was fed with a signal at the spurious frequency. The level of the signal was adjusted to repeat the previously measured level. The resulting ERP is the signal level fed to the reference antenna corrected for gain referenced to a dipole.

Test Result:

Complies

Test Data:

See Attached Table(s)

Configuration	Cellular
Band	Downlink
Channel	Low

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
1738.4	V	42.0	-75	1.2	7.0	-71.35	-13	-58.35
2607.6	V	44.0	-75	1.4	9.1	-69.45	-13	-56.45
3476.8*	V	39.2	-80	1.7	9.1	-74.75	-13	-61.75
4346.0*	V	40.0	-79	1.9	10.0	-73.05	-13	-60.05
5215.2*	V	40.5	-80	2.1	10.0	-74.25	-13	-61.25
6084.4*	V	41.1	-79	2.4	11.0	-72.55	-13	-59.55
6953.6*	V	41.0	-79	2.5	10.5	-73.15	-13	-60.15
7822.8*	V	41.3	-79	2.8	10.0	-73.95	-13	-60.95
8692.0*	V	41.9	-78	2.9	10.9	-72.15	-13	-59.15

NOTE:

* Measured noise floor

SA: Spectrum Analyzer**SG:** Signal Generator**CL:** SMA cable loss (6ft)**Worse case: Vertical****H=horizontal and V=vertical****ERP = SG reading - CL + Gain (dBi)-2.15****Margin = ERP - Limit**

Configuration	Cellular
Band	Downlink
Channel	Mid

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
1763.0	V	45.1	-71	1.2	7.1	-67.25	-13	-54.25
2644.5	V	44.7	-72	1.4	9.1	-66.45	-13	-53.45
3526.0*	V	40.0	-79	1.7	9.2	-73.65	-13	-60.65
4407.5*	V	38.5	-80	1.9	10.5	-73.55	-13	-60.55
5289.0*	V	38.9	-79	2.1	10.2	-73.05	-13	-60.05
6170.5*	V	40.6	-79	2.4	11.1	-72.45	-13	-59.45
7052.0*	V	40.7	-79	2.5	10.6	-73.05	-13	-60.05
7933.5*	V	41.0	-79	2.8	10.1	-73.85	-13	-60.85
8815.0*	V	41.7	-78	2.9	10.9	-72.15	-13	-59.15

NOTE:

* Measured noise floor

SA: Spectrum Analyzer**SG:** Signal Generator**CL:** SMA cable loss (6ft)**Worse case: Vertical****H=horizontal and V=vertical****ERP = SG reading - CL + Gain (dBi)-2.15****Margin = ERP - Limit**

Configuration	Cellular
Band	Downlink
Channel	High

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
1787.6	V	46.0	-70	1.2	7.3	-66.05	-13	-53.05
2681.4	V	43.1	-74	1.4	9.2	-67.35	-13	-54.35
3575.2*	V	39.8	-80	1.7	9.6	-74.25	-13	-61.25
4469.0*	V	38.1	-81	1.9	10.5	-74.55	-13	-61.55
5362.8*	V	38.5	-81	2.1	10.1	-75.15	-13	-62.15
6256.6*	V	40.2	-79	2.4	11.2	-72.35	-13	-59.35
7150.4*	V	40.6	-79	2.5	10.7	-72.95	-13	-59.95
8044.2*	V	41.0	-79	2.8	10.0	-73.95	-13	-60.95
8938.0*	V	41.7	-79	2.9	10.8	-73.25	-13	-60.25

NOTE:

* Measured noise floor

SA: Spectrum Analyzer**SG:** Signal Generator**CL:** SMA cable loss (6ft)**Worse case: Vertical****H=horizontal and V=vertical****ERP = SG reading - CL + Gain (dBi)-2.15****Margin = ERP - Limit**

Configuration	Cellular
Band	Uplink
Channel	Low+Mid+High

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
1648.4*	V	37.2	-81	1.2	7.0	-67.35	-13	-64.35
2472.6*	V	38.1	-81	1.3	9.0	-75.45	-13	-62.45
3296.8*	V	39.0	-79	1.6	9.5	-73.25	-13	-60.25
4121.0*	V	39.0	-81	1.8	9.7	-75.25	-13	-62.25
4945.2*	V	38.7	-81	2.0	9.7	-75.45	-13	-62.45
5769.4*	V	40.5	-79	2.3	10.5	-72.95	-13	-59.95
6593.6*	V	40.8	-79	2.4	11.4	-72.15	-13	-59.15
7417.8*	V	40.4	-79	2.7	11.2	-72.65	-13	-59.65
8242.0*	V	40.8	-79	2.8	10.0	-73.95	-13	-60.95
1717.5	V	46.2	-71	1.2	7.0	-67.35	-13	-54.35
2889.5	V	57.9	-62	1.5	9.1	-56.55	-13	-43.55
3435.0	V	58.8	-60	1.7	9.1	-54.75	-13	-41.75
3480.0	V	58.0	-60	1.7	9.1	-54.75	-13	-41.75
3530.6	V	60.8	-58	1.7	9.2	-52.65	-13	-39.65

NOTE: No significant spurious measured above the noise level.
*** Measured noise floor**
SA: Spectrum Analyzer
SG: Signal Generator
CL: SMA cable loss (6ft)

Worse case: Vertical
H=horizontal and V=vertical
ERP = SG reading - CL + Gain (dBi)-2.15
Margin = ERP - Limit

Configuration	PCS
Band	Downlink
Channel	Low

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
3860.4	V	51.4	-74	1.8	9.6	-58.2	-13	-45.2
5790.6	V	46.4	-73	2.4	10.8	-64.6	-13	-51.6
7736.8*	V	43.4	-76	2.8	10.6	-68.2	-13	-55.2
9671.0*	V	42.6	-77	3.1	10.9	-69.2	-13	-56.2
11605.2*	V	43.9	-78	3.4	12.1	-69.3	-13	-56.3
13539.4*	V	44.5	-78	3.9	12.1	-69.8	-13	-56.8
15473.6*	V	46.0	-77	4.2	14.9	-66.3	-13	-53.3
17407.8*	V	47.5	-72	4.5	10.6	-65.9	-13	-52.9
19342.0*	V	48.2	-71	4.8	8	-67.8	-13	-54.8

NOTE:

* Measured noise floor

SA: Spectrum Analyzer

SG: Signal Generator

CL: SMA cable loss (6ft)

Worse case: Vertical

H=horizontal and V=vertical

EIRP = SG reading - CL + Gain (dBi)

Margin = EIRP - Limit

Configuration	PCS
Band	Downlink
Channel	Mid

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
3920	V	52.0	-65	1.8	9.6	-57.2	-13	-44.2
5880	V	47.3	-71	2.4	10.8	-62.6	-13	-39.6
7840*	V	44.2	-76	2.8	10.6	-68.2	-13	-55.2
9800*	V	43.4	-77	3.1	10.9	-69.2	-13	-56.2
11760*	V	43.7	-78	3.4	12.1	-69.3	-13	-56.3
13720*	V	44.3	-78	3.9	12.1	-69.8	-13	-56.8
15680*	V	45.9	-77	4.2	14.9	-66.3	-13	-53.3
17640*	V	47.7	-72	4.5	10.6	-65.9	-13	-52.9
19600*	V	48.3	-71	4.8	8	-67.8	-13	-54.8

NOTE:

* Measured noise floor

SA: Spectrum Analyzer

SG: Signal Generator

CL: SMA cable loss (6ft)

Worse case: Vertical

H=horizontal and V=vertical

EIRP = SG reading - CL + Gain (dBi)

Margin = EIRP - Limit

Configuration	PCS
Band	Downlink
Channel	High

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
3979.6	V	50.0	-68	1.8	9.7	-60.1	-13	-47.1
5969.4	V	47.0	-73	2.4	10.9	-63.5	-13	-50.5
7959.2*	V	44.2	-75	2.8	10.2	-67.6	-13	-54.6
9949.0*	V	43.4	-77	3.1	10.9	-69.2	-13	-56.2
11938.8*	V	43.8	-78	3.4	12.0	-69.4	-13	-56.4
13928.6*	V	44.7	-78	3.9	11.8	-70.1	-13	-57.1
15918.4*	V	46.2	-77	4.2	15.5	-65.7	-13	-52.7
17908.2*	V	47.3	-72	4.5	9.8	-66.7	-13	-53.7
19898.0*	V	47.9	-71	4.8	7.8	-68	-13	-55

NOTE:

* Measured noise floor

SA: Spectrum Analyzer**SG:** Signal Generator**CL:** SMA cable loss (6ft)**Worse case: Vertical****H=horizontal and V=vertical****EIRP = SG reading - CL + Gain (dBi)****Margin = EIRP - Limit**

Configuration	PCS
Band	Uplink
Channel	Low+Mid+High

Freq. (MHz)	H,V	SA Reading (dBuV)	SG Reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
3700.4*	V	40.1	-79	1.7	9.6	-71.1	-13	-58.1
5550.6*	V	41.3	-79	2.3	10.6	-71.7	-13	-57.7
7400.8*	V	44.6	-74	2.8	11.3	-65.5	-13	-52.5
9251.0*	V	42.9	-78	3.0	11.2	-69.8	-13	-56.8
11101.2*	V	43.8	-78	3.3	12.0	-69.3	-13	-56.3
12951.4*	V	44.6	-78	3.8	11.9	-69.9	-13	-56.9
14801.6*	V	46.2	-78	4.1	12.2	-69.9	-13	-56.9
16651.8*	V	47.5	-77	4.4	15.2	-66.2	-13	-53.2
18502.0*	V	47.8	-72	4.7	9.0	-67.7	-13	-54.7
1717.5	V	46.2	-71	1.2	7.0	-65.2	-13	-52.2
2889.5	V	57.9	-62	1.5	9.1	-54.4	-13	-41.4
3435.0	V	58.8	-60	1.7	9.1	-52.6	-13	-39.6
3480.0	V	58.0	-60	1.7	9.1	-52.6	-13	-39.6
3530.6	V	60.8	-58	1.7	9.2	-50.5	-13	-37.5

NOTE:

* Measured noise floor

SA: Spectrum Analyzer

SG: Signal Generator

CL: SMA cable loss (6ft)

Worse case: Vertical

H=horizontal and V=vertical

EIRP = SG reading - CL + Gain (dBi)

Margin = EIRP - Limit

Section 7. Frequency Stability

Name of Test:	<i>Frequency Stability</i>	Test Standard:	<i>2.1055 22.355&24.235</i>
Tested By:	WEI LI	Test Date:	04/15/2008-04/30/2008

Minimum Standard: Para. No. 22.355. The transmitter carrier frequency shall remain within the tolerances given in Table C-1.

TABLE C-1.—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES

Frequency range (MHz)	Base, fixed (ppm)	Mobile ≤3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

Para No. 24.235. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Method of Measurement: Frequency Stability With Voltage Variation:
The E.U.T. is placed in an environmental chamber and allowed to stabilize at +20 degrees Celsius for at least 15 minutes. Set SA resolution bandwidth low enough (30Hz) to obtain the desired frequency resolution. (Using frequency counter method: The frequency counter and signal generator are phase locked with the same 10 MHz reference frequency by connecting the 10 MHz ref. out of the counter to the 10MHz ref, in of the signal generator). With the voltage input to the E.U.T. set to 85% S.T.V., the frequency is measured in 30 second intervals for a period of 5 minutes. This procedure is repeated at 100% S.T.V. and 115% S.T.V.

Frequency Stability With Temperature Variation:
The input voltage to the E.U.T. is set to S.T.V. and the temperature of the environmental chamber is varied in 10 degree steps from -30 degrees C to +50 degrees C. The E.U.T. is allowed to stabilize at each temperature and the frequency is measured in 30 second intervals for a period of 5 minutes.

Test Result:

Complies

Test Data:

See Attached Table(s)

Not Applicable

Section 8. Out of Band Rejection

Name of Test:	<i>Out of Band Rejection</i>	Test Standard:	
Tested By:	Edward Lee	Test Date:	04/15/2008-04/30/2008

Minimum Standard: The passband gain shall not exceed the nominal gain by more than 1.0 dB. The 20 dB bandwidth shall not exceed the nominal bandwidth that is stated by the manufacturer. Outside of the 20 dB bandwidth, the gain shall not exceed the gain at the 20 dB point.

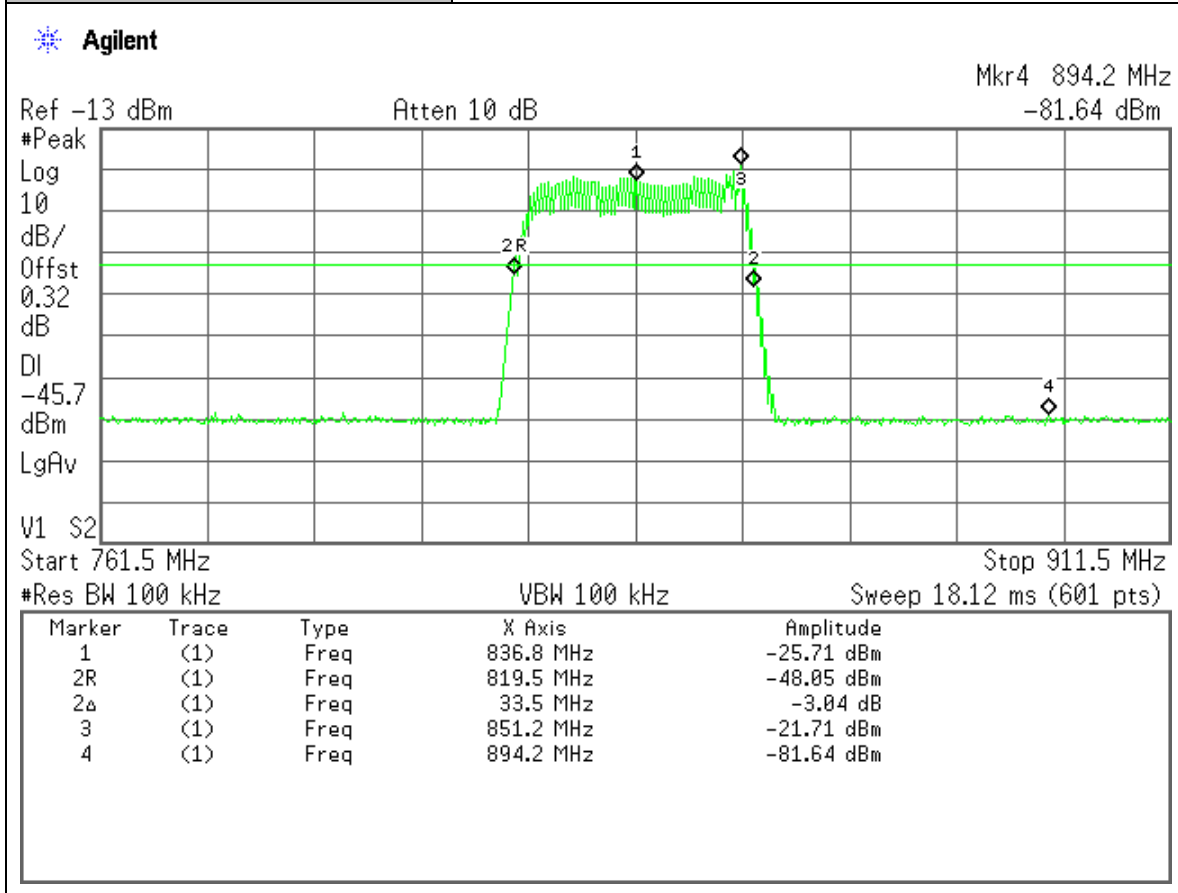
Method of Measurement: Adjust the internal gain control of the equipment under test to the nominal gain for which equipment certification is sought. With the aid of a signal generator and spectrum analyzer, measure the 20 dB bandwidth of the amplifier (i.e. at the point where the gain has fallen by 20 dB). Measure the gain-versus-frequency response of the amplifier from the midband frequency f_0 of the passband up to at least $f_0 \pm 250\%$ of the 20 dB bandwidth.

Test Result:**Complies****Test Data:**

See Attached Table(s)

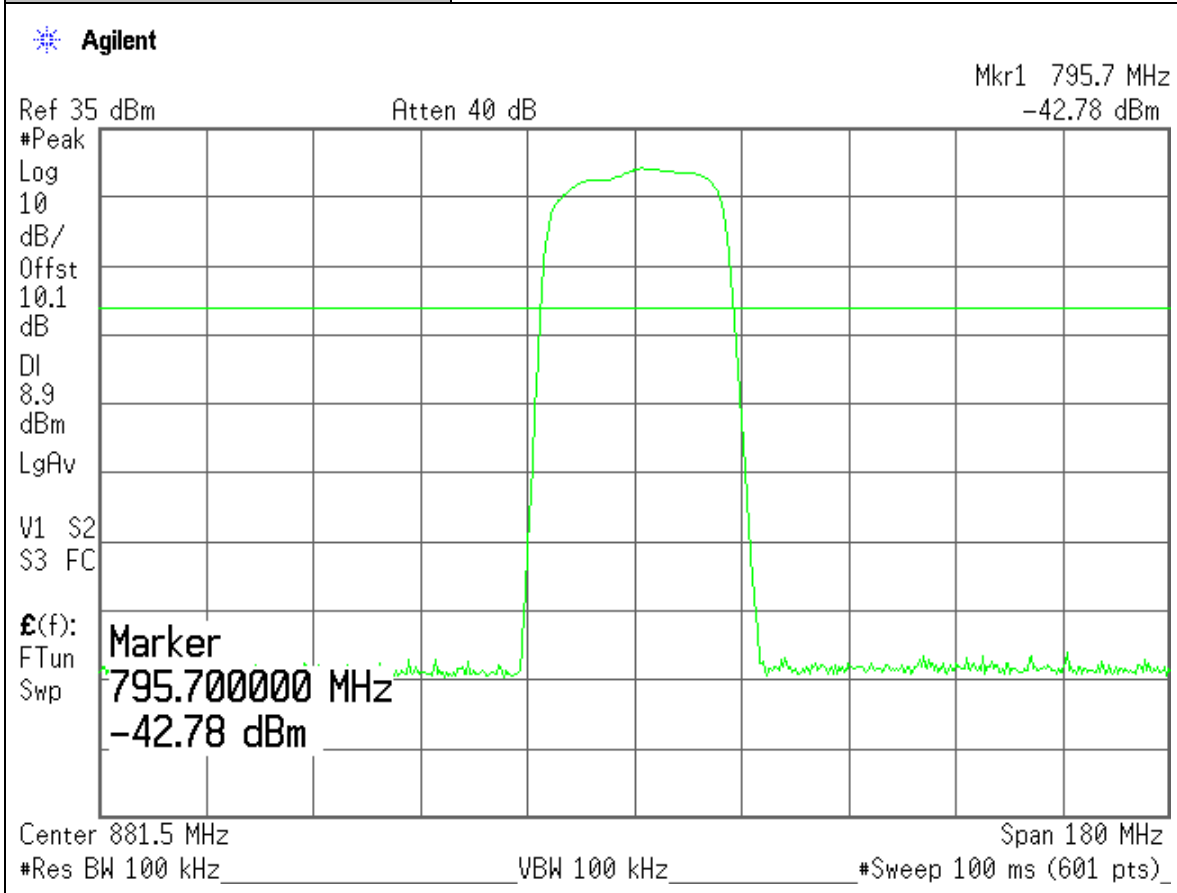
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Test By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Pass Band Gain & 20dB Bandwidth
Plot Name:	800 Cellular Uplink Full Band-250% Span
Configuration:	Server Antenna Connector was connected to SG. Input: -50dBm



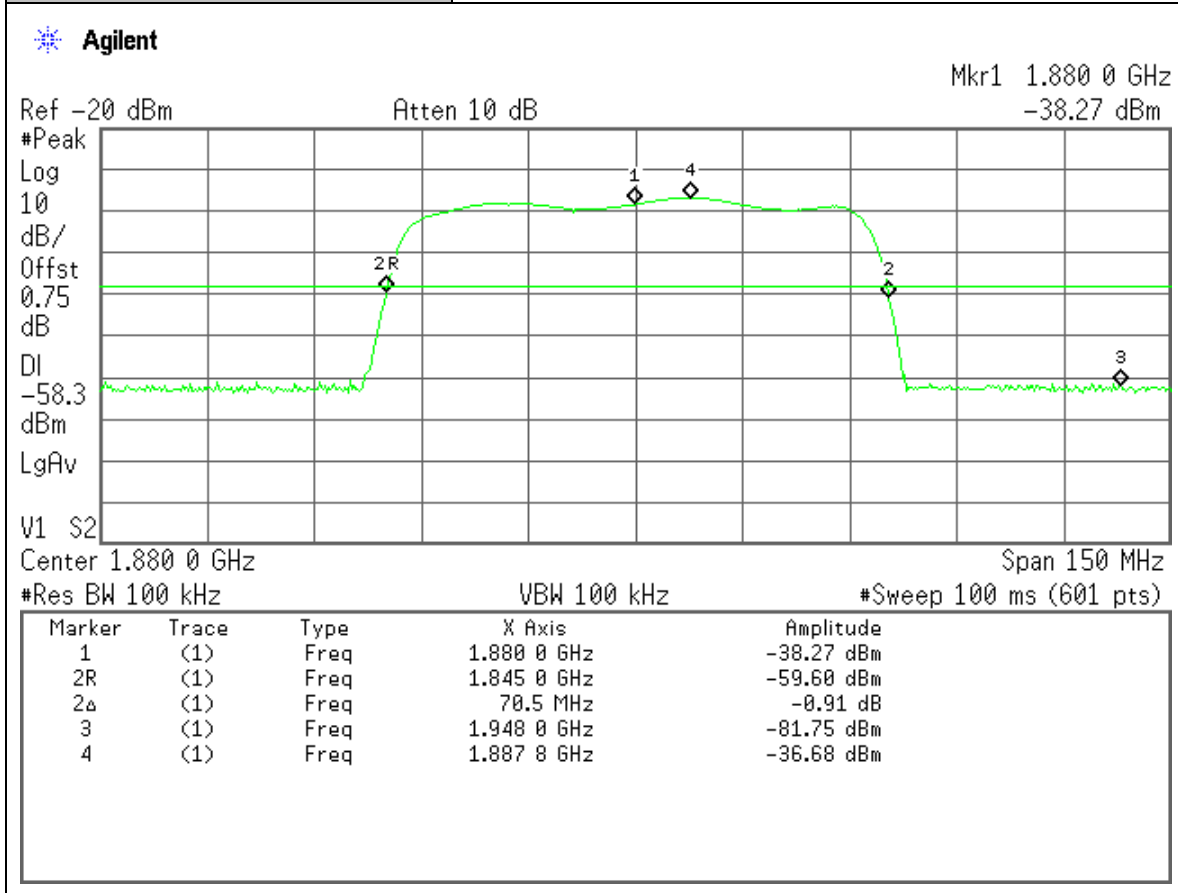
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Test By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Pass Band Gain & 20dB Bandwidth
Plot Name:	800 Cellular Downlink Full Band-250% Span
Configuration:	Donor Antenna Connector was connected to SG. Input: -15dBm



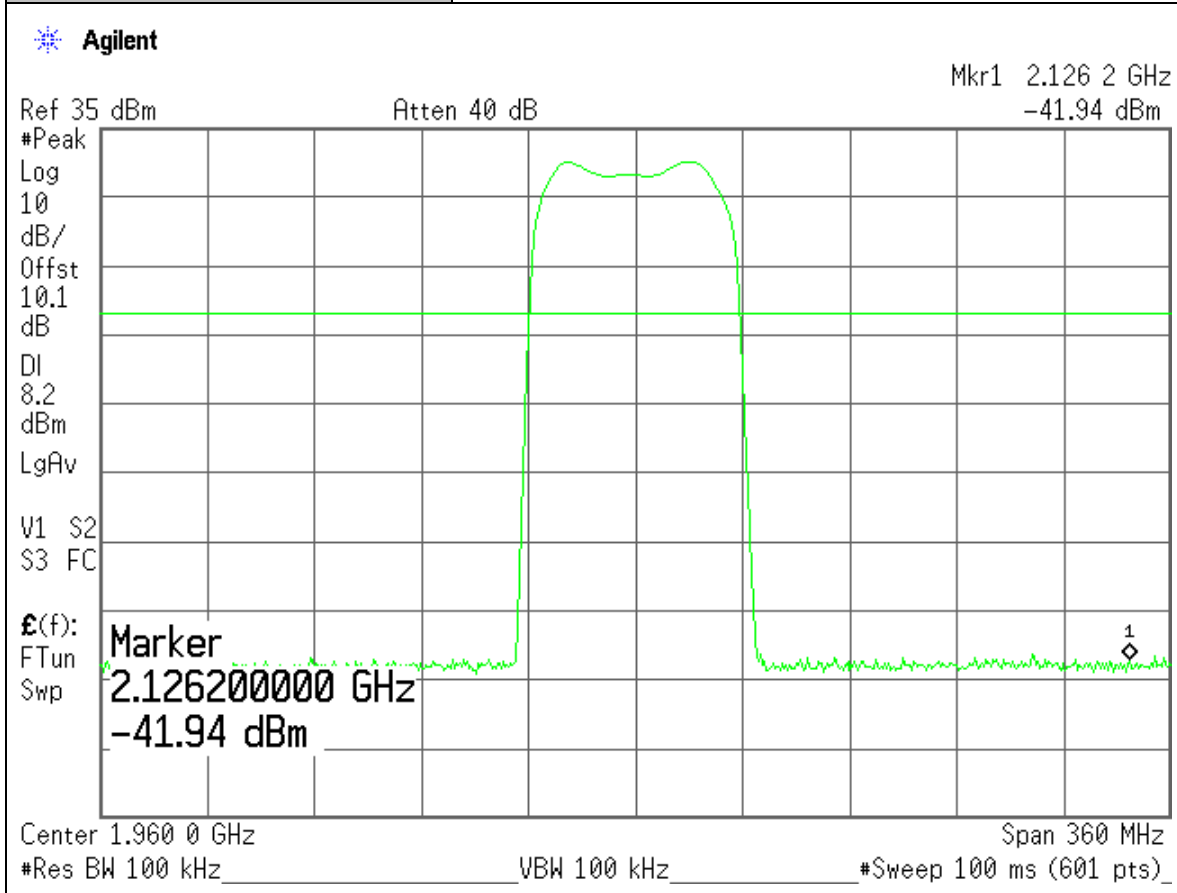
Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Test By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Pass Band Gain & 20dB Bandwidth
Plot Name:	1900 PCS Uplink Full Band-250% Span
Configuration:	Server Antenna Connector was connected to SG. Input: -45dBm



Project Number:	0048-080415-01
EUT:	Shyam BTS Link-208 Repeater
SN:	MORCDH002+RORCDH002
Test By:	Edward Lee
Temperature:	70° F
Humidity:	30%

Section:	Pass Band Gain & 20dB Bandwidth
Plot Name:	1900 PCS Downlink Full Band-250% Span
Configuration:	Donor Antenna Connector was connected to SG. Input: -15dBm



Section 9. Test Equipment List

Manufacture	Model	Serial No.	Description	Cal Due dd/mm/yy
HP	HP8546A	3448A00290	EMI Receiver	15/09/08
HP	E4432B	US38220355	250K-3GHz Signal Generator	15/07/08
EMCO	3104C	9307-4396	20-300MHz Biconical Antenna	15/09/08
EMCO	3146	9008-2860	200-1000MHz Log-Periodic Antenna	09/02/09
Fischer Custom	LIPARTS NO.-2	900-4-0008	Line Impedance Stabilization Networks	15/09/08
Fischer Custom	LIPARTS NO.-2	900-4-0009	Line Impedance Stabilization Networks	23/08/08
EMCO	6502	2665	10KHz-30MHz Active Loop Antenna	27/02/09
EMCO	3115	4945	Double Ridge Guide Horn Antenna	13/09/08
R&S	ESPI	100018	EMI Receiver	16/07/08
HP	8569B	2607A02802	1GHz-22GHz Spectrum Analyzer	10/02/09
Delta Design	5900C	0-67-26	Temperature Chamber	24/03/09
HP	E8254A	US42110367	Signal Generator	23/03/09
Electro-Metrics	RGA-15	8-95	Double Ridge Guide Horn Antenna	10/02/09
EMCO	3116	4943	Double Ridge Guide Horn Antenna	11/01/09
Scientific-Atlanta	12A-18	441	Wave Guide Horn Antenna	04/08/08
HP	4419A	US37292112	RF Power Meter w/ Sensor Probe	20/07/08
Chamber	GD-32-33	LN2	Temperature Chamber	28/07/08
HP	6032A	3323A-09526	System Power Supply	01/07/08
Agilent	E4438C	US41460731	ESG Vector Signal Generator	01/07/08
Agilent	E4438C	US41460771	ESG Vector Signal Generator	01/07/08
Agilent	E4438C	US41460400	ESG Vector Signal Generator	01/07/08
Agilent	E4440A	US40420700	3Hz-26.5GHz Spectrum Analyzer	12/05/09
Lorch Microwave	5NF- 800/1000-S	AC3	Notch Filter	
Lorch Microwave	5NF- 1800/2200-S	AE10	Notch Filter	
RES-NET	RFA500NFF 30	0108	30dB in-line Power Attenuator	