



**Test Report:** 4W07822


**Applicant:** Dekolink Wireless Ltd.  
16 Bazel St.  
Qiryat-Arieh Petah-Tikva,  
Israel, 49510

**Equipment Under Test:  
(EUT)** MW-BDA-PCS-F-50W90  
MW-BDA-PCS-D-50W90  
CDMA Repeater

**FCC ID:** OIWBDAPCSF50W90

**In Accordance With:** **FCC Part 24, Subpart E**

**Tested By:** Nemko Canada Inc.  
303 River Road, R.R. 5  
Ottawa, Ontario K1V 1H2

**Authorized By:**   
Glen, Westwell, Wireless Technologist

**Date:** 27 February 2004

**Total Number of Pages:** 48

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## **Section 1. Summary of Test Results**

### **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 24, Subpart E.

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".



TESTED BY: \_\_\_\_\_  
Kevin Carr, EMC/EMI/Wireless Specialist

DATE: 20 February 2004

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This report applies only to the items tested.

**Summary Of Test Data**

<b>Name Of Test</b>	<b>Para. No.</b>	<b>Result</b>
RF Power Output	2.1046	Complied
Occupied Bandwidth	2.1049	Complied
Spurious Emissions at Antenna Terminals	2.1051	Complied
Field Strength of Spurious Emissions	2.1053	Complied
Frequency Stability	2.1055	N/A(1)

**Test Conditions:** N/A(1) - No frequency conversion capabilities.

Note: - All tests were conducted with the AGC enabled, and verified with AGC off

**Indoor**                      Temperature: 24°C  
                                    Humidity: 11%

**Outdoor**                    Temperature: 10°C  
                                    Humidity: 45%

## **Section 2. General Equipment Specification**

**Manufacturer:** Dekolink Wireless Ltd.

**Model No.:** MW-BDA-PCS-F-50W90

**Serial No.:** 0311D9013

**Date Received In Laboratory:** Nov. 28, 2003

**Nemko Identification No.:** 1 of 3W07145 receiving report

**Supply Input Voltage:** 120VAC 60 Hz

**Frequency Range:**  
Uplink: 1890-1895MHz  
Downlink: 1970-1975MHz

**RF Output (Rated):**  
Uplink: 27.0dBm, 0.5W  
Downlink: 40.0dBm, 10 W

**RF Output (Measured):**  
Uplink: 27.0 dBm, 0.5W  
Downlink: 40.0dBm, 10W

**Emission Designator:**  
TDMA DXW  
GSM GXW  
CDMA F9W

**General Equipment Specification, Cont.**

<b>Manufacturer:</b>	Dekolink Wireless Ltd.
<b>Model No.:</b>	MW-BDA-PCS-D-50W90
<b>Serial No.:</b>	0303D9002
<b>Date Received In Laboratory:</b>	23 Dec. 2003
<b>Nemko Identification No.:</b>	1 of 4W07822 receiving report
<b>Supply Input Voltage:</b>	120VAC, 60Hz
<b>Frequency Range:</b>	Uplink: 1865-1870MHz Downlink: 1945-1950MHz
<b>RF Output (Rated):</b>	Uplink: 27.0dBm, 0.5W Downlink: 40.0dBm, 10 W
<b>RF Output (Measured):</b>	Uplink: 27.0 dBm, 0.5W Downlink: 40.0dBm, 10W
<b>Emission Designator:</b>	TDMA DXW GSM GXW CDMA F9W

**Section 3. RF Power Output**

Para. No.: 2.1046

**Test Performed By: Kevin Carr****Date of Test: 18 Feb. 2004****Minimum Standard:** Para. No.: 24.232.**Test Results:** Complied

**Measurement Data:** See attached chart, The maximum RF output power is within +/- 1 dB of the manufacturer's rating, The RF output power is de-rated according to the number of channels via AGC and is equal to  $P_{max} - 10\log N$ .

$P_{max}$  = Max. RF output power  
 $N$  = Number of Channels

D-Block	Channel	Rated	Measured	Delta
		dBm	dBm	dB
	Low	27.0	27.0	0.0
UL	Mid	27.0	27.0	0.0
	High	27.0	27.0	0.0
	Low	40.0	40.8	0.8
DL	Mid	40.0	40.8	0.8
	High	40.0	40.8	0.8

F-Block	Channel	Rated	Measured	Delta
		dBm	dBm	dB
	Low	27.0	27.0	0.0
UL	Mid	27.0	27.0	0.0
	High	27.0	27.0	0.0
	Low	40.0	40.5	0.5
DL	Mid	40.0	40.5	0.5
	High	40.0	40.5	0.5

## **Section 4.        Occupied Bandwidth**

**Para. No.: 2.1049**

<b>Test Performed By: Kevin Carr</b>	<b>Date of Test: 17 Jan. 2004</b>
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**Minimum Standard:**        Para. No.: 24.238.

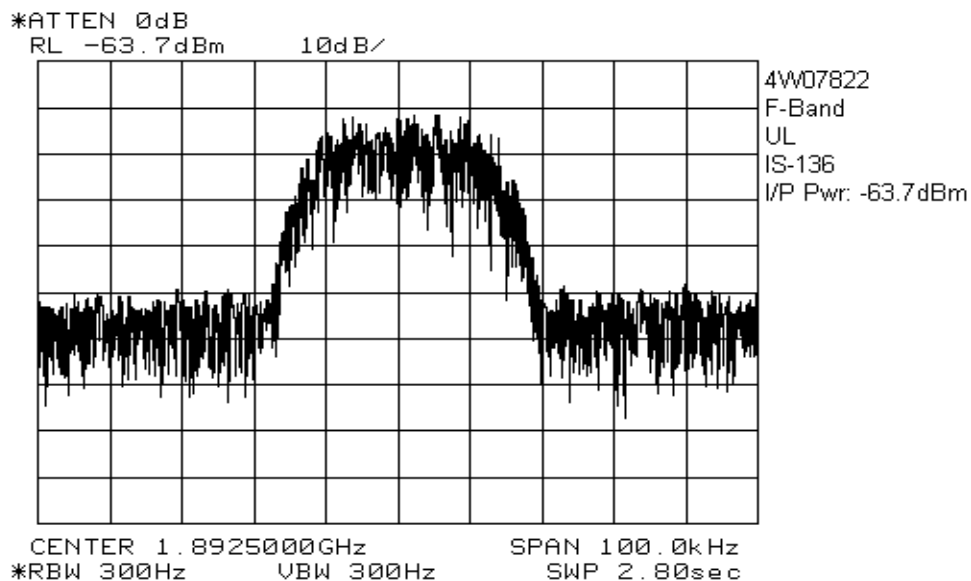
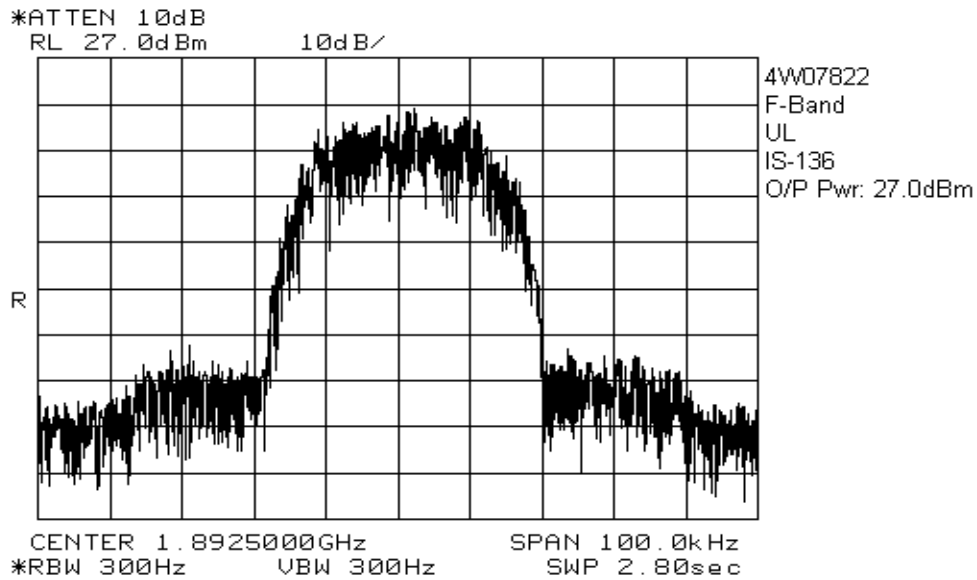
**Test Results:**                Complied.

**Test Data:**                    See attached graph(s).

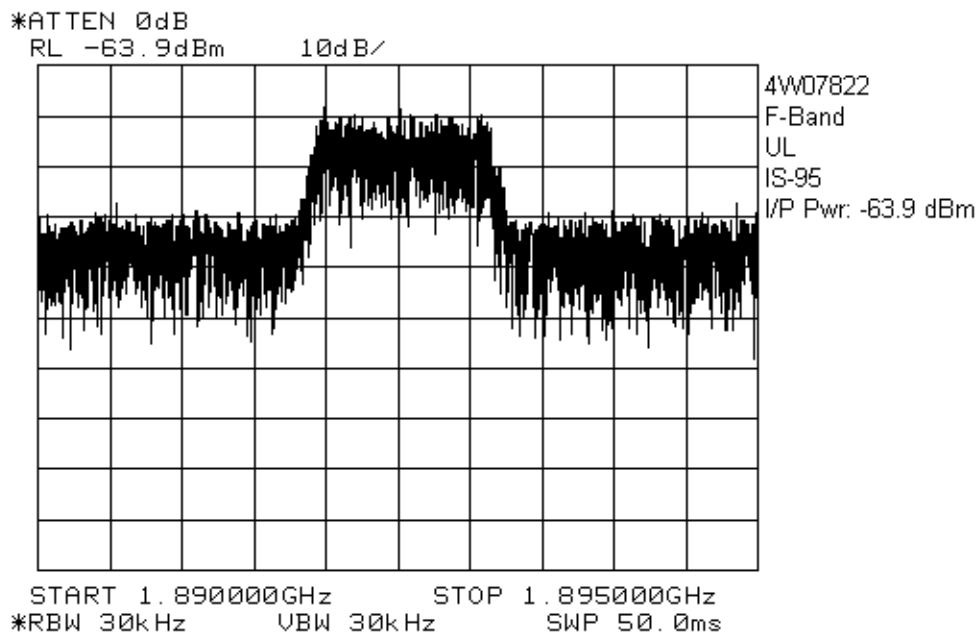
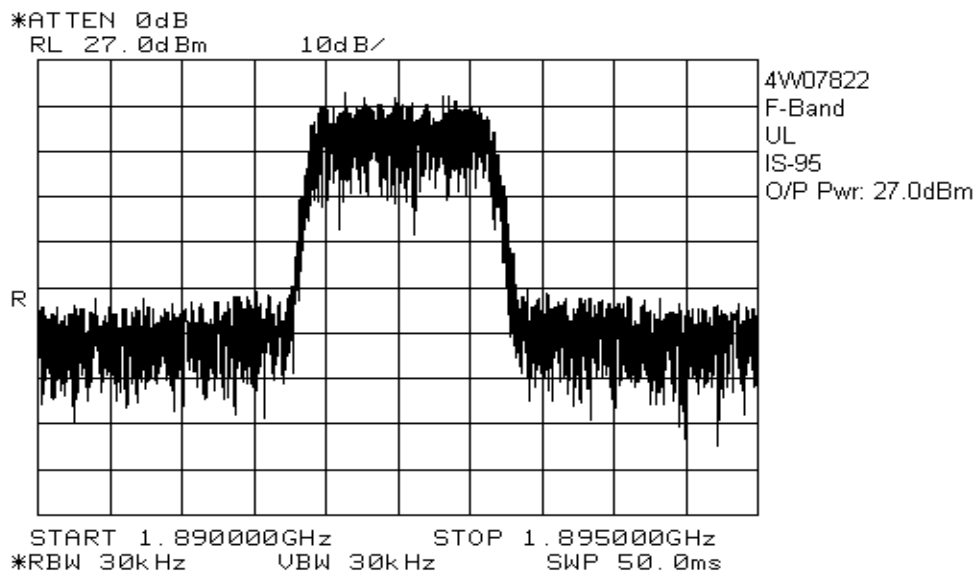


**MW-BDA-PCS-F-50W90**

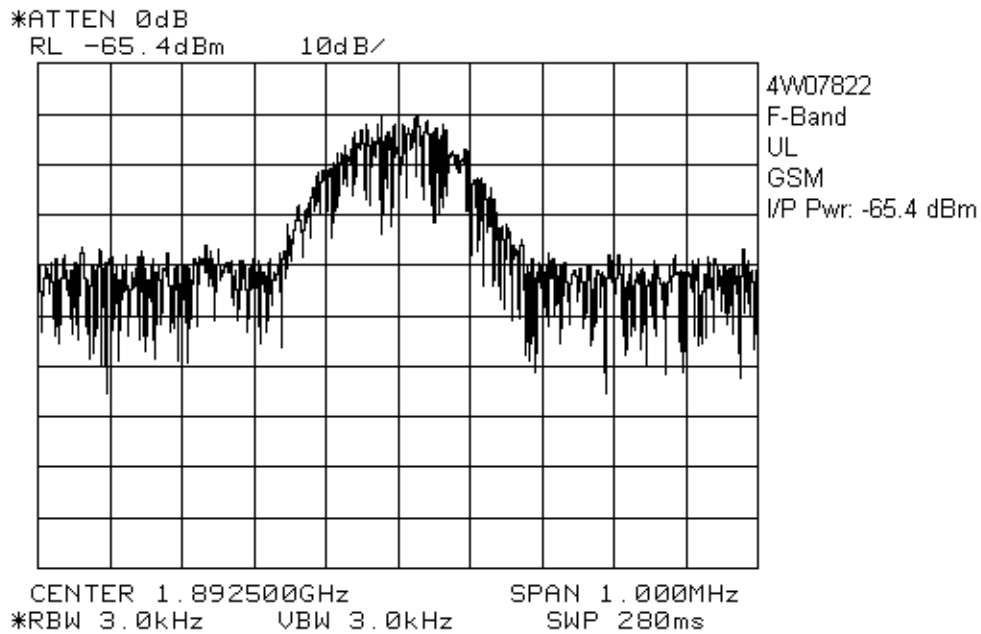
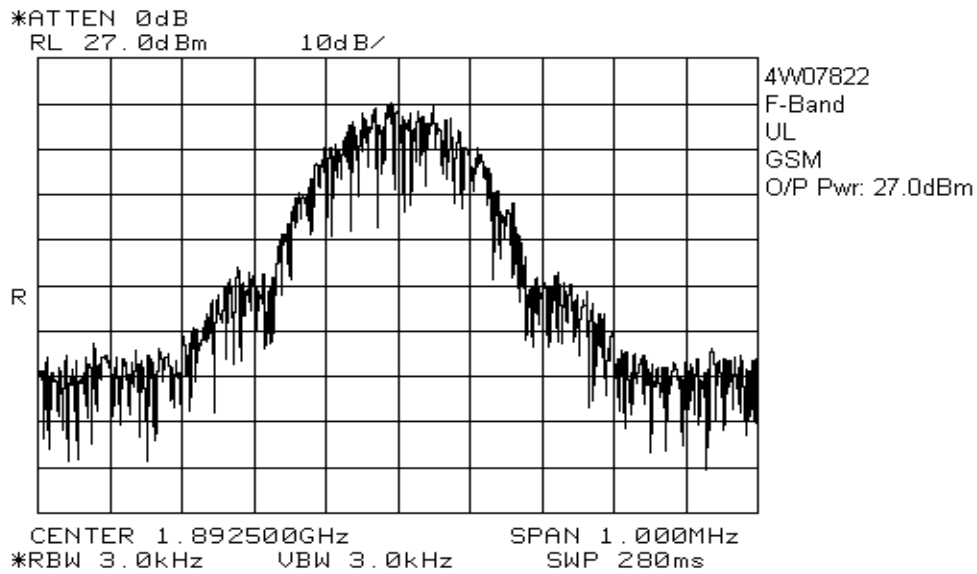
Uplink, IS-136



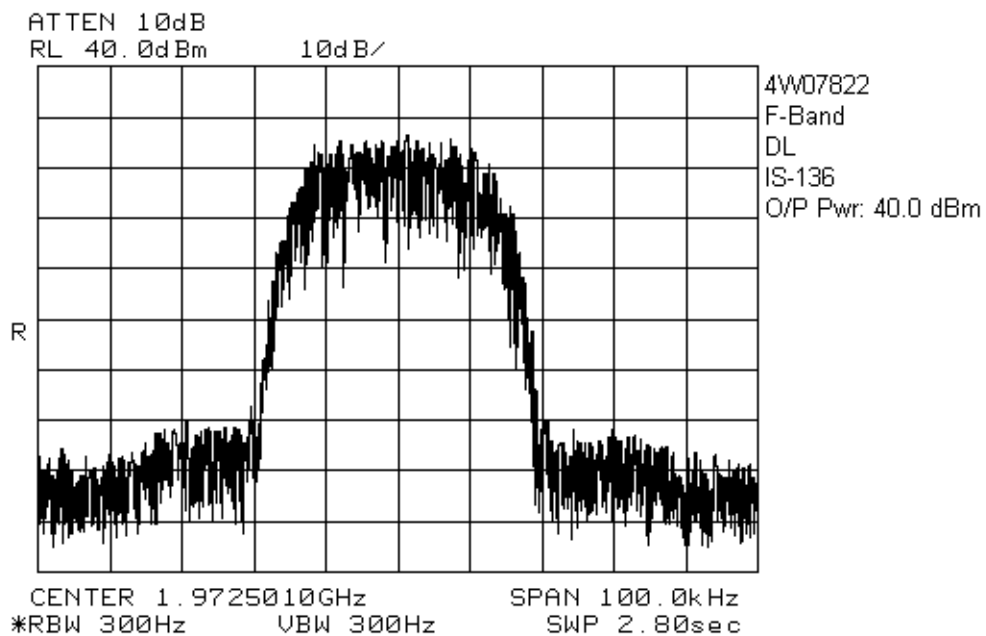
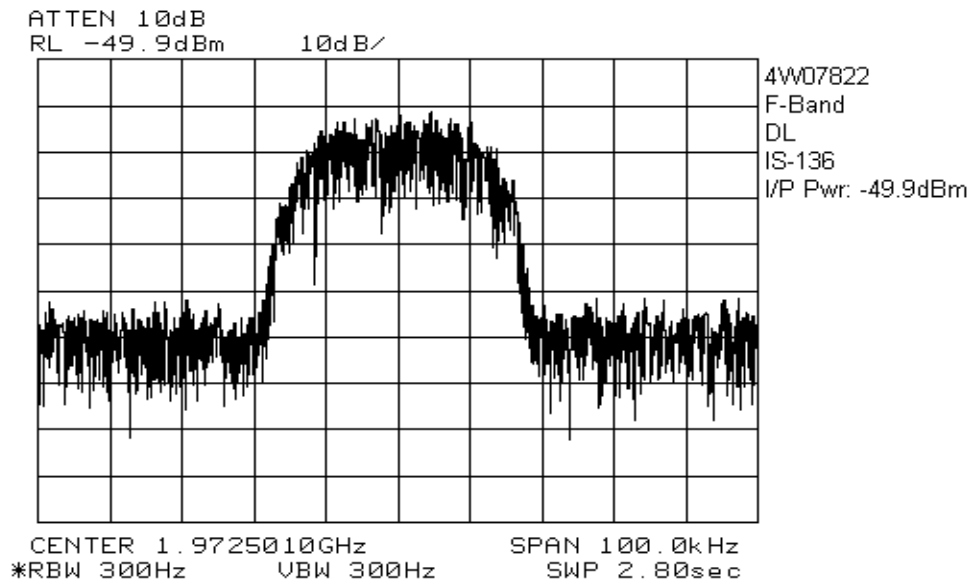
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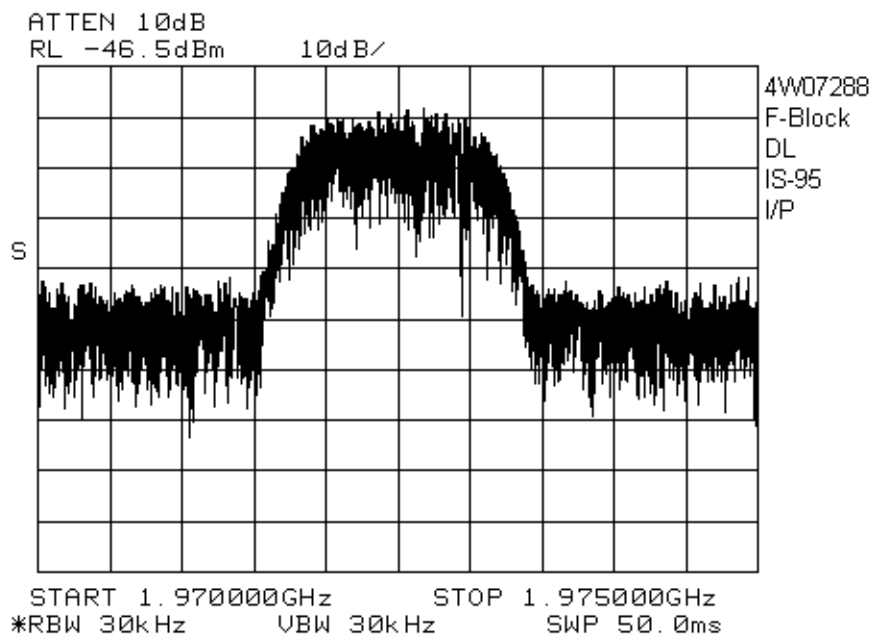
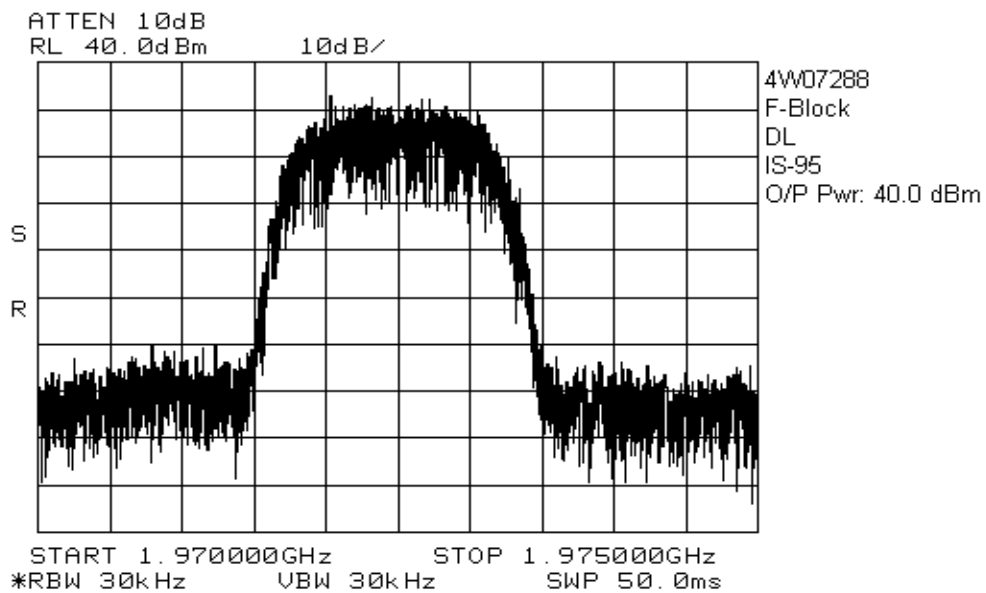
Uplink, GSM



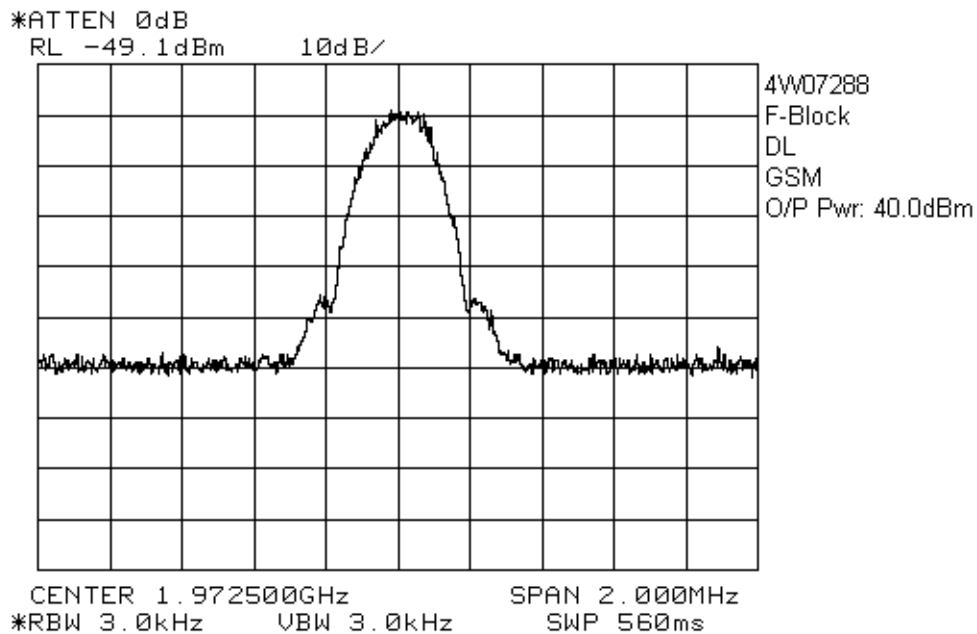
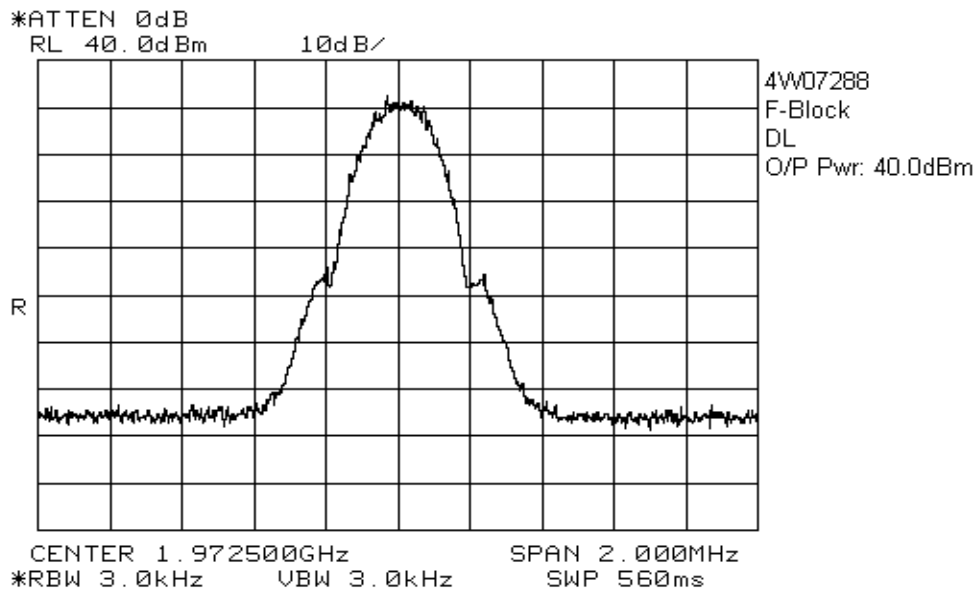
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Downlink, IS-95

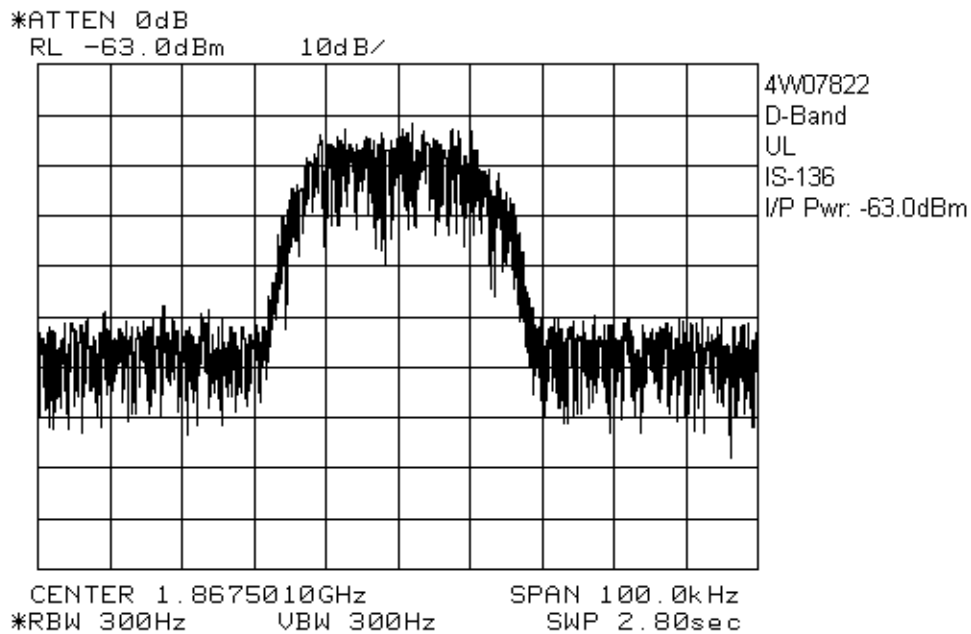
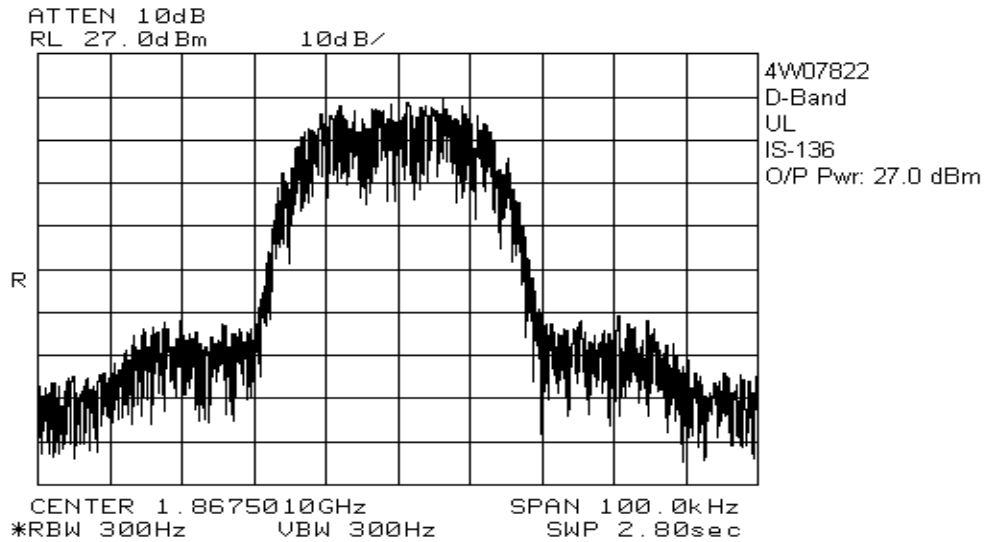


Downlink, GSM

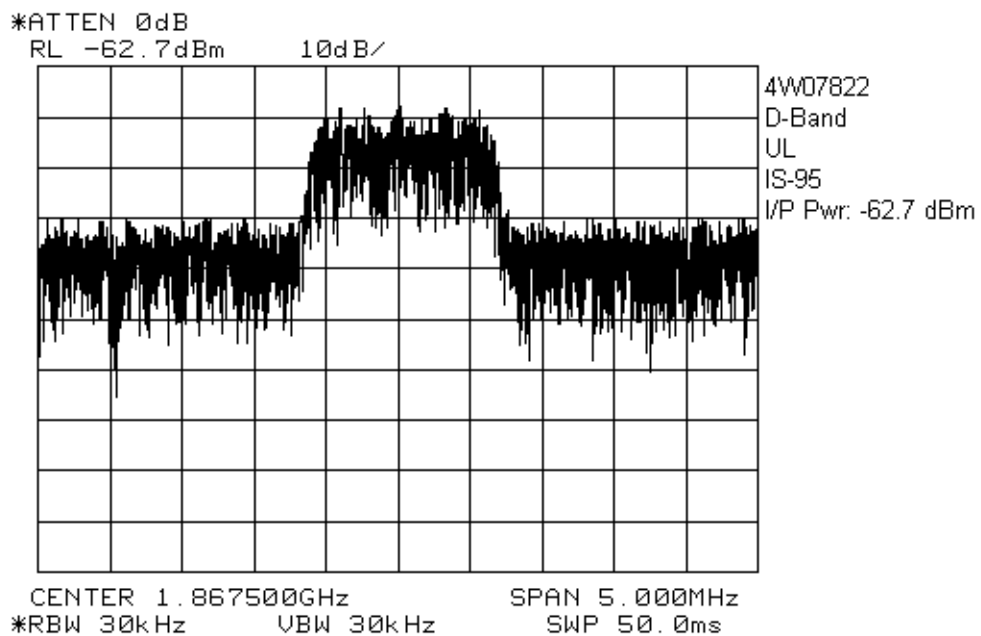
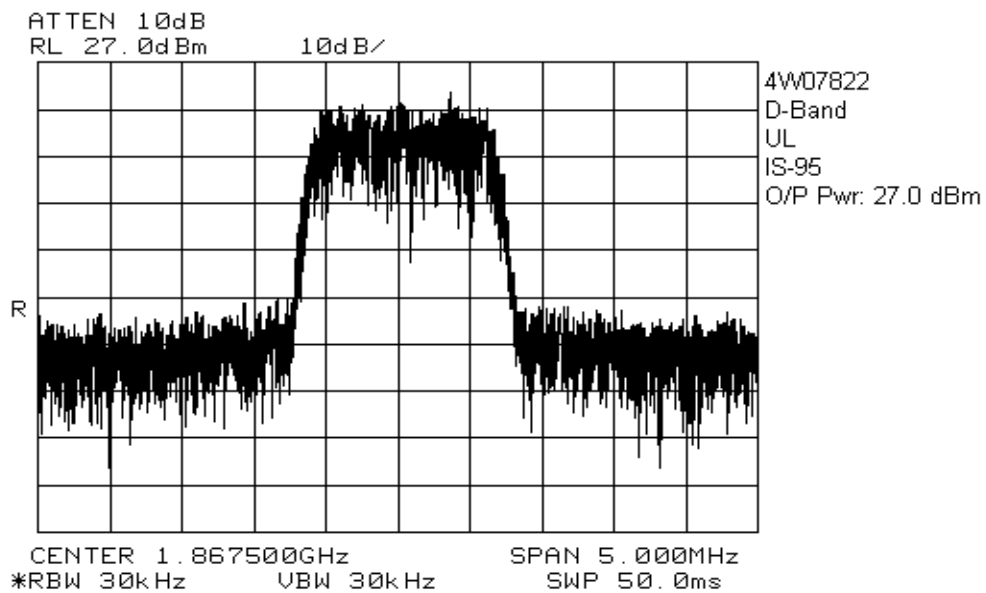


**MW-BDA-PCS-D-50W90 CDMA Repeater**

Uplink, IS-136

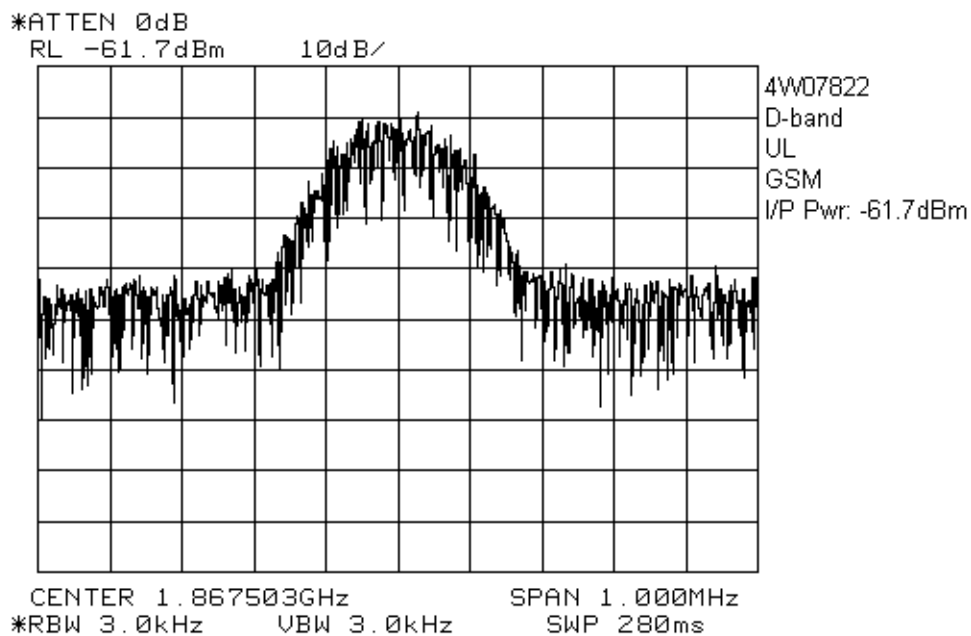
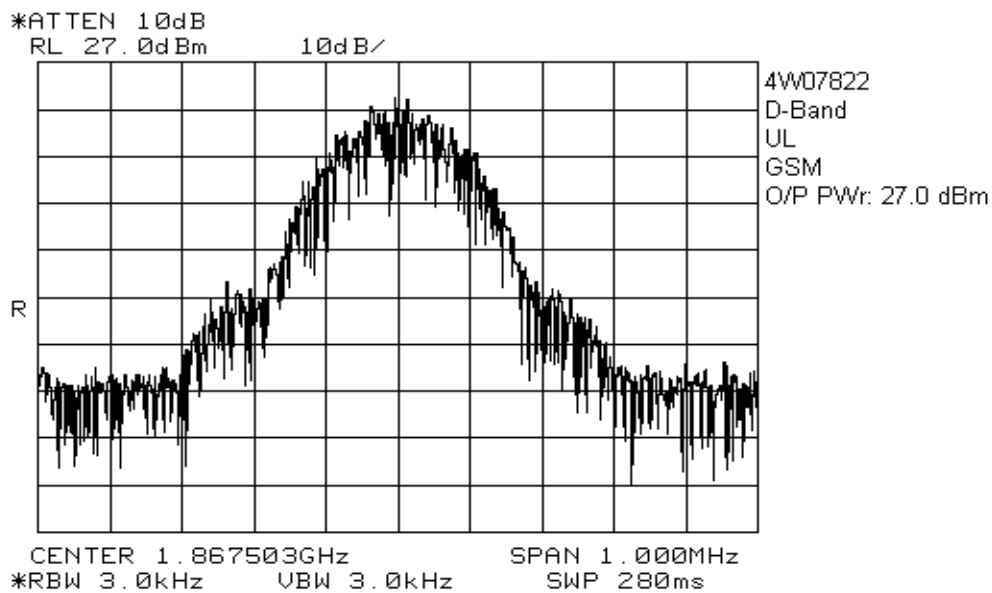


Uplink, IS-95

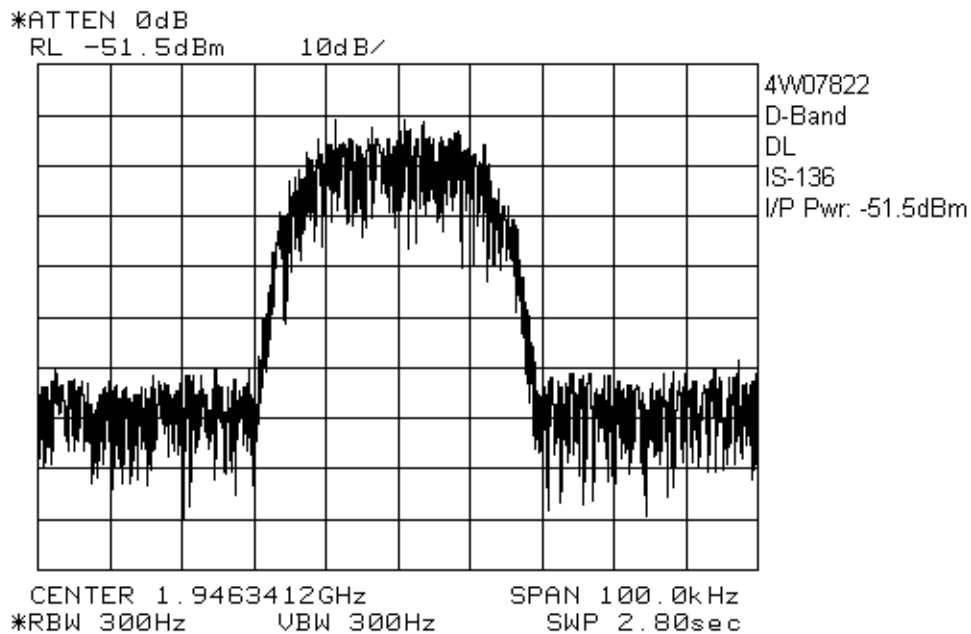
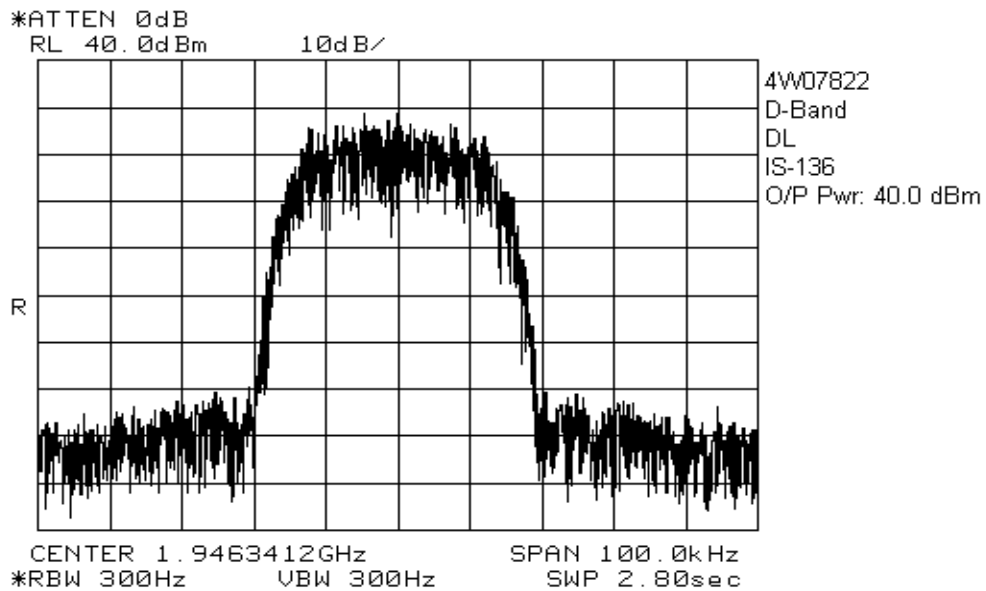




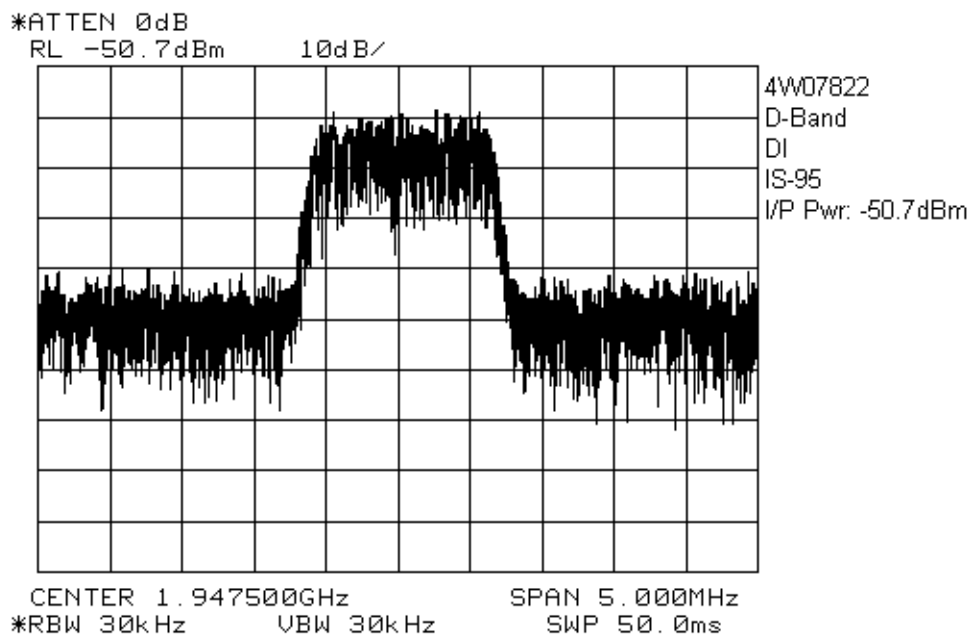
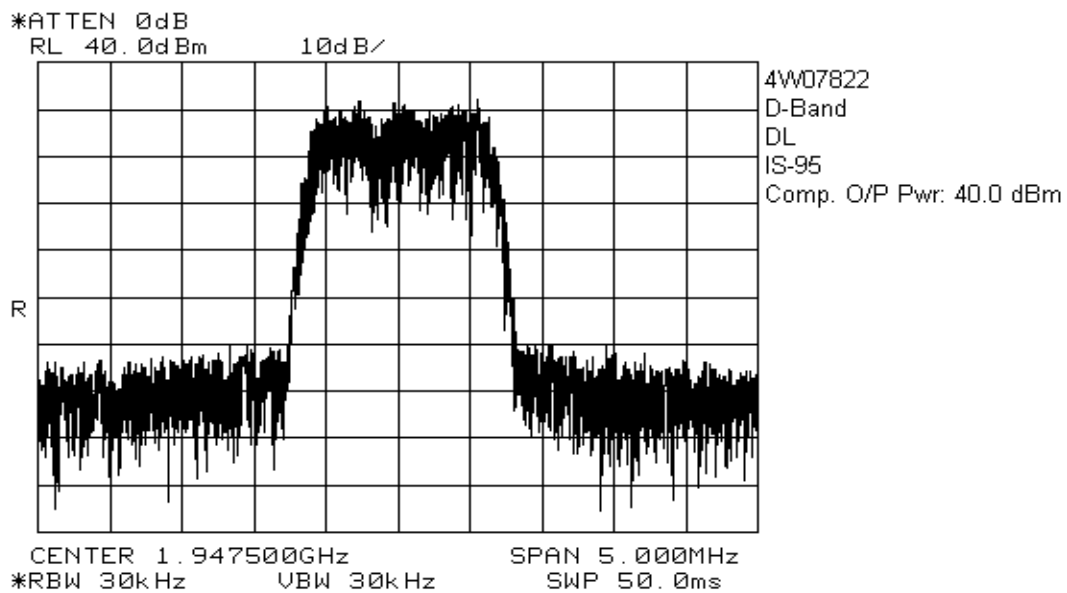
Uplink, GSM



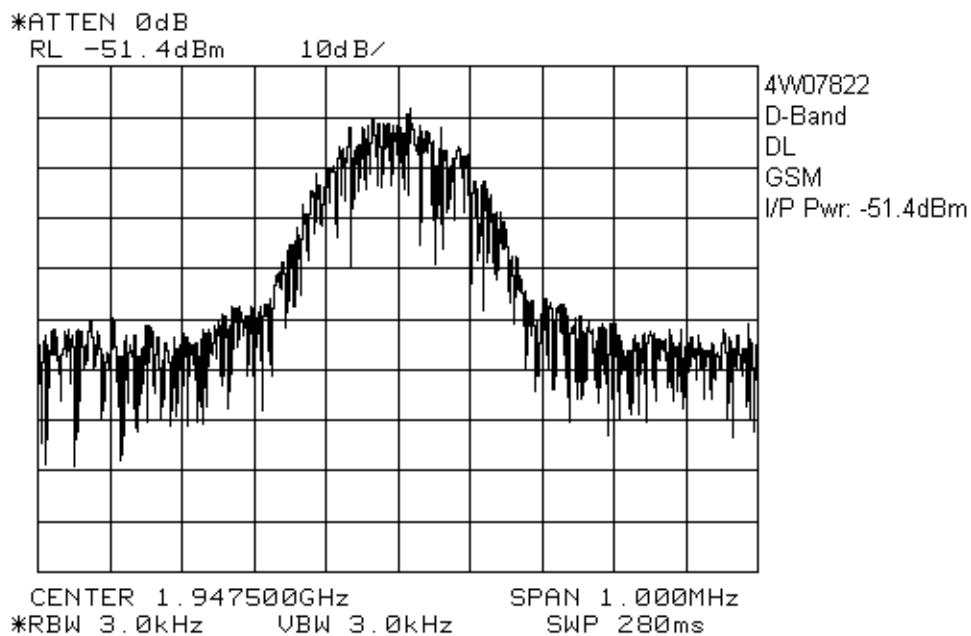
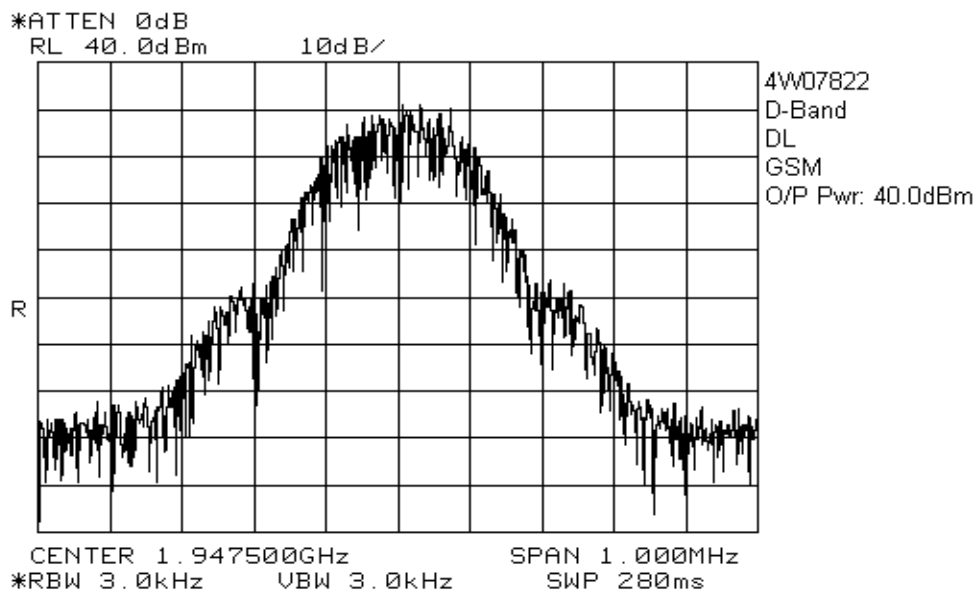
Downlink, IS-136



Downlink, IS-95



Downlink, GSM



## **Section 5. Spurious Emissions at Antenna Terminals**

**Para. No.: 2.1051**

<b>Test Performed By: Kevin Carr</b>	<b>Date of Test: 18 Feb. 2004</b>
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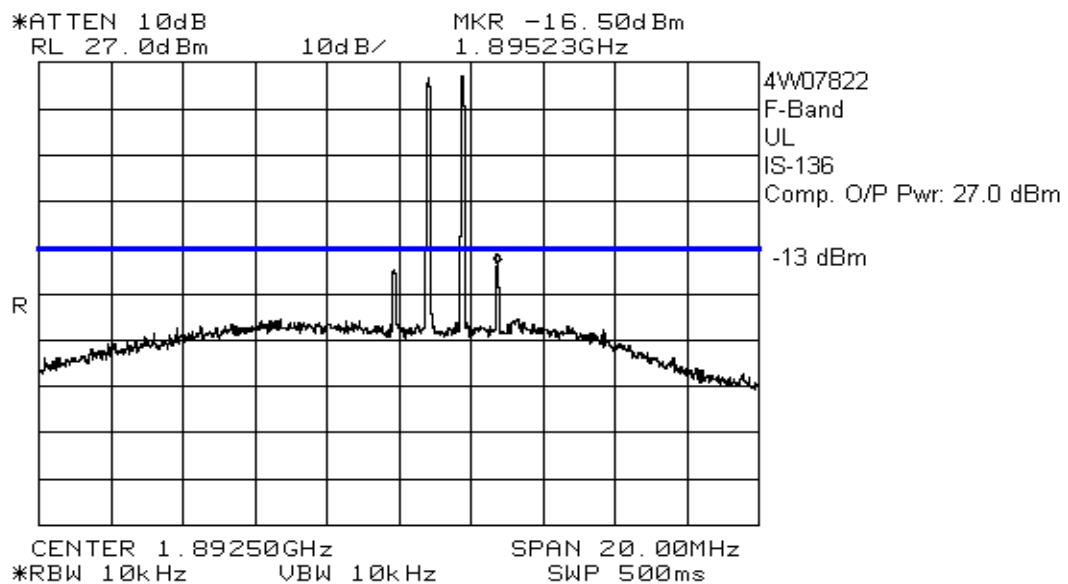
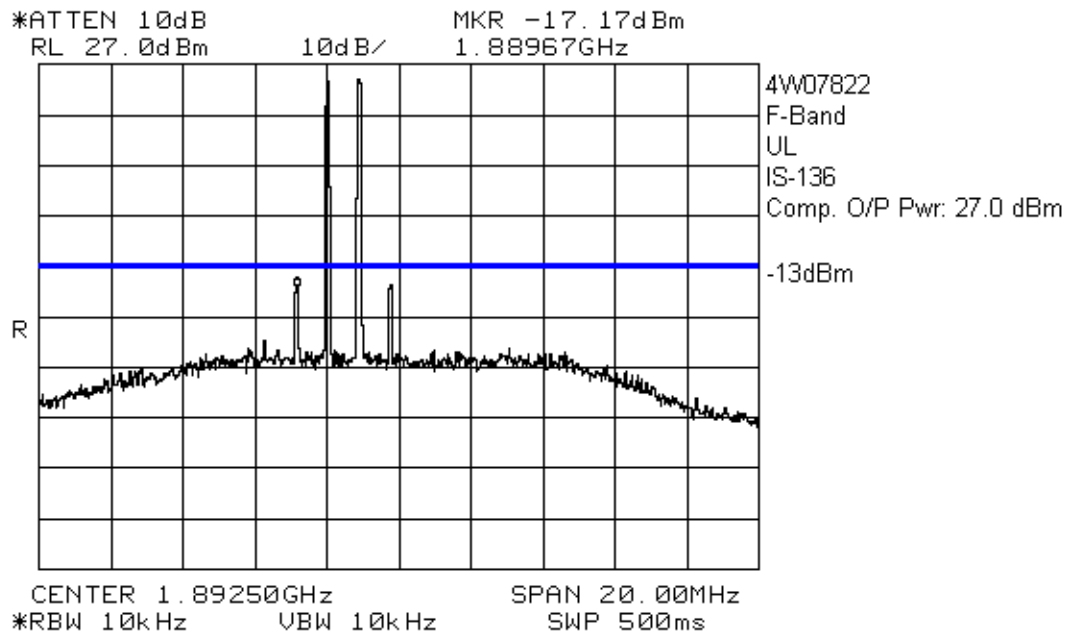
**Minimum Standard:** Para. No.: 24.238.

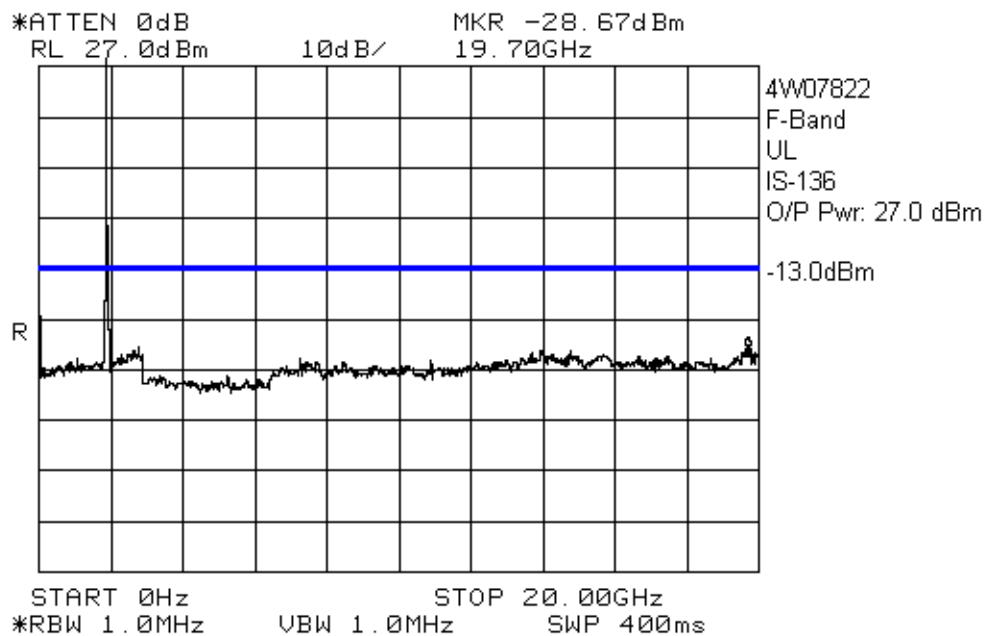
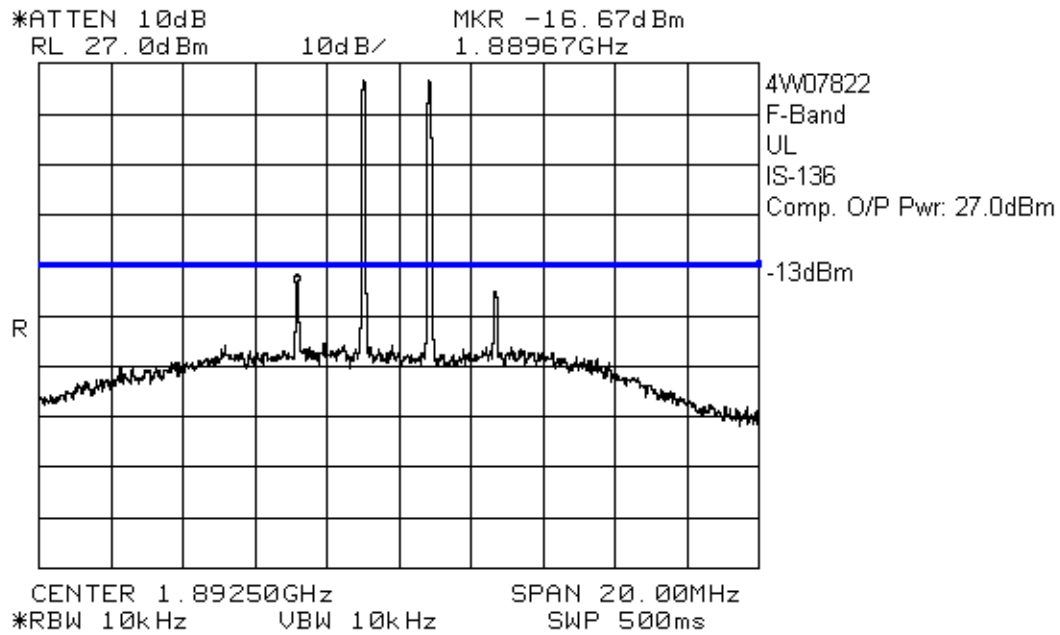
**Test Results:** Complied

**Test Data:** See attached graph(s).

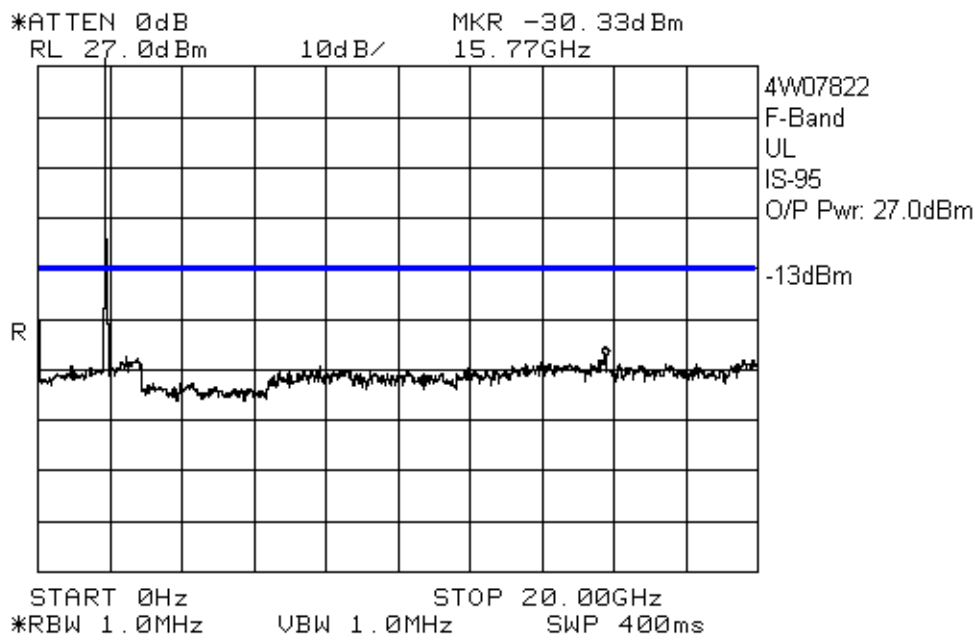
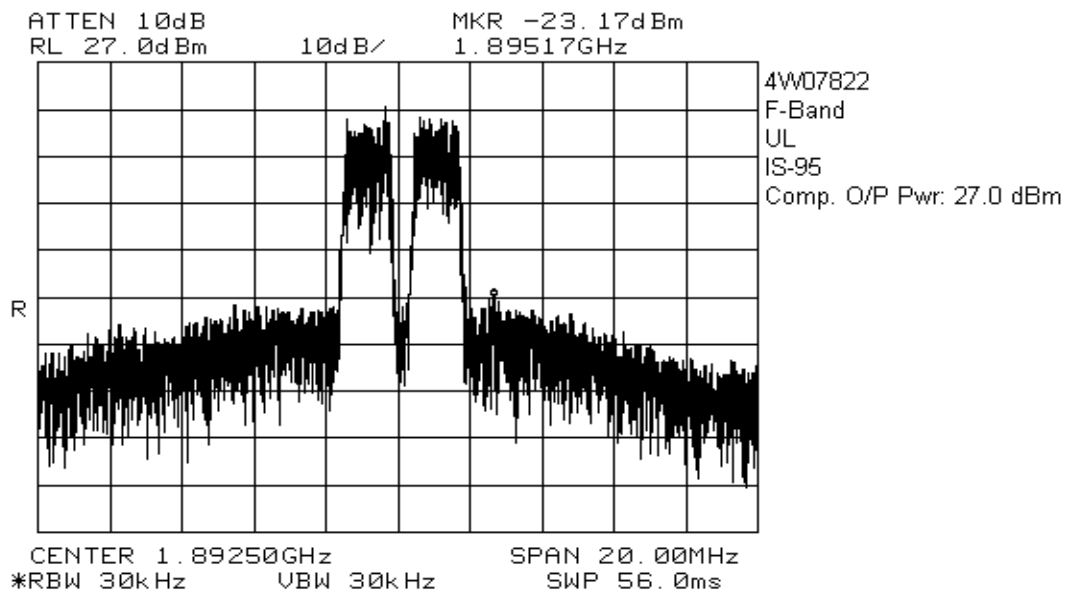
**MW-BDA-PCS-F-50W90**

Uplink, IS-136



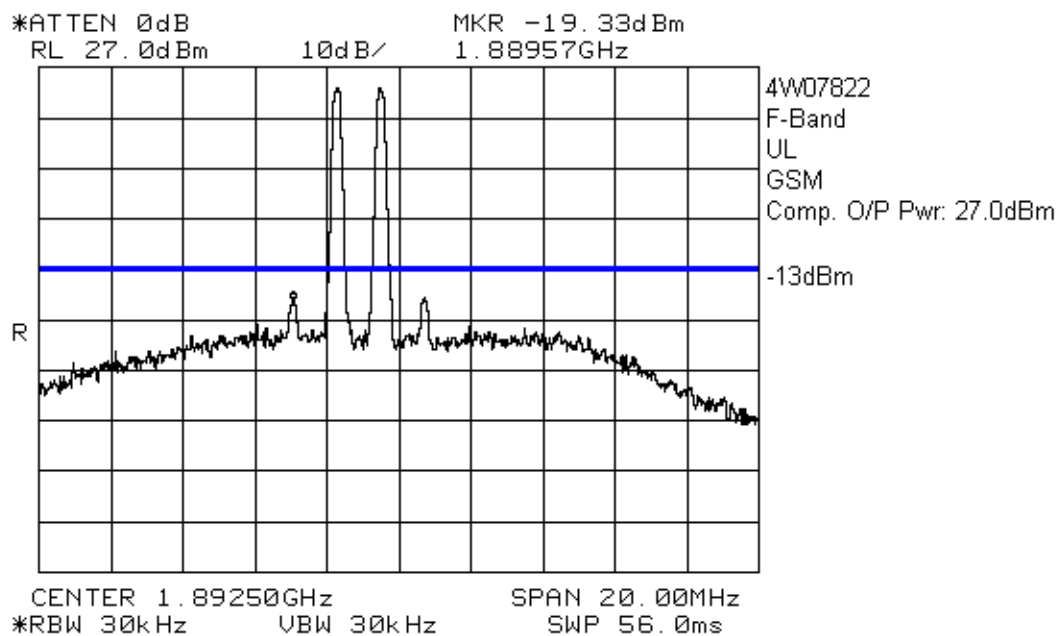
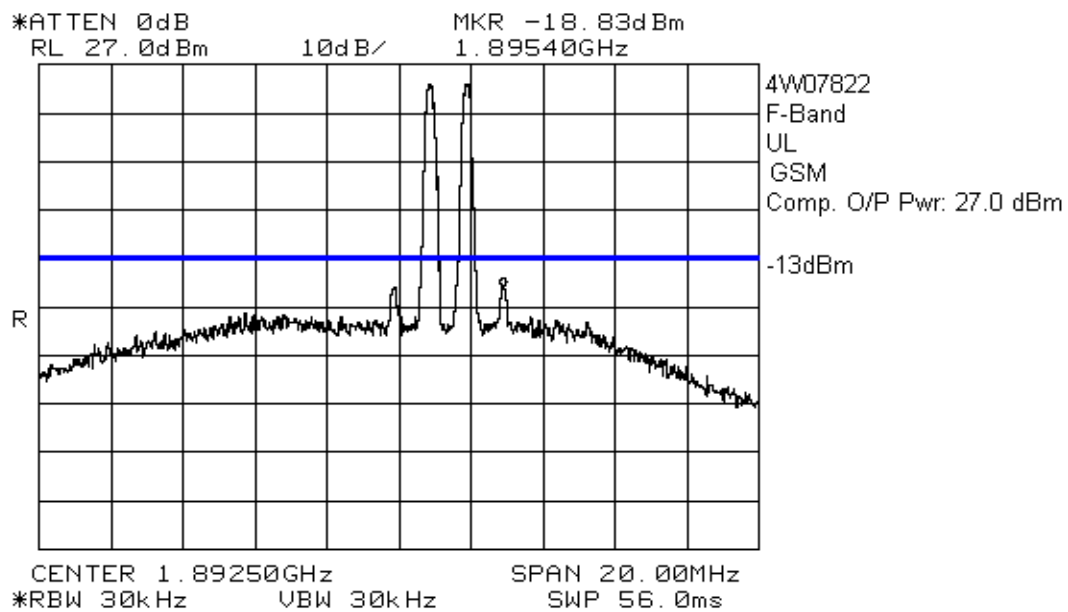


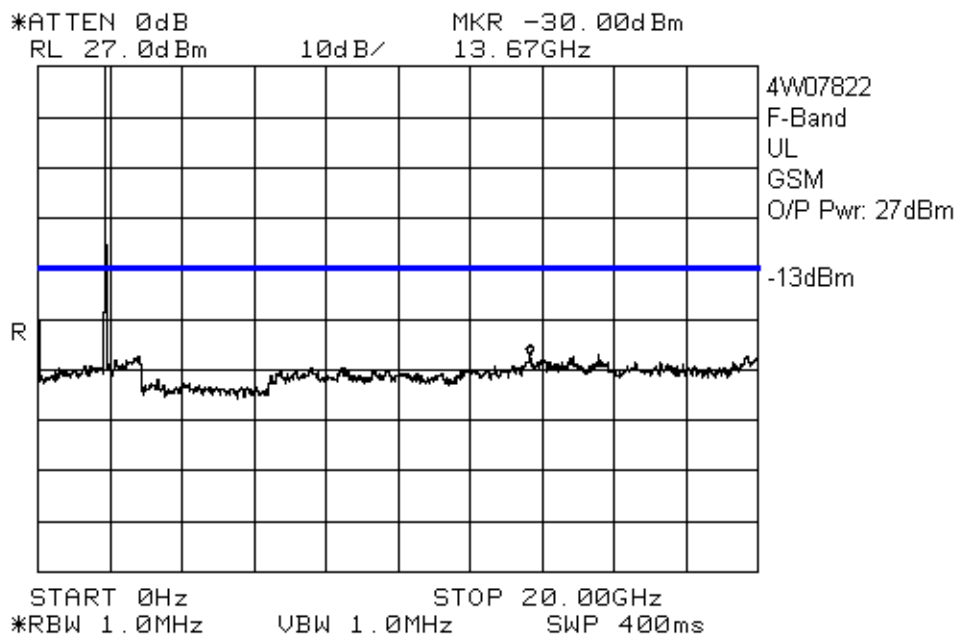
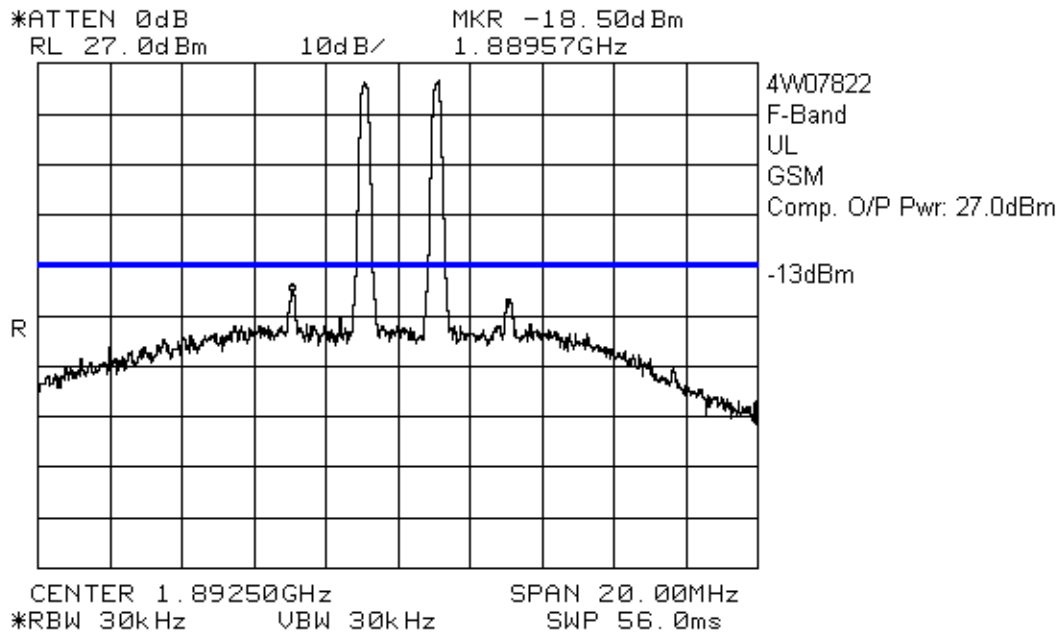
Uplink, IS-95



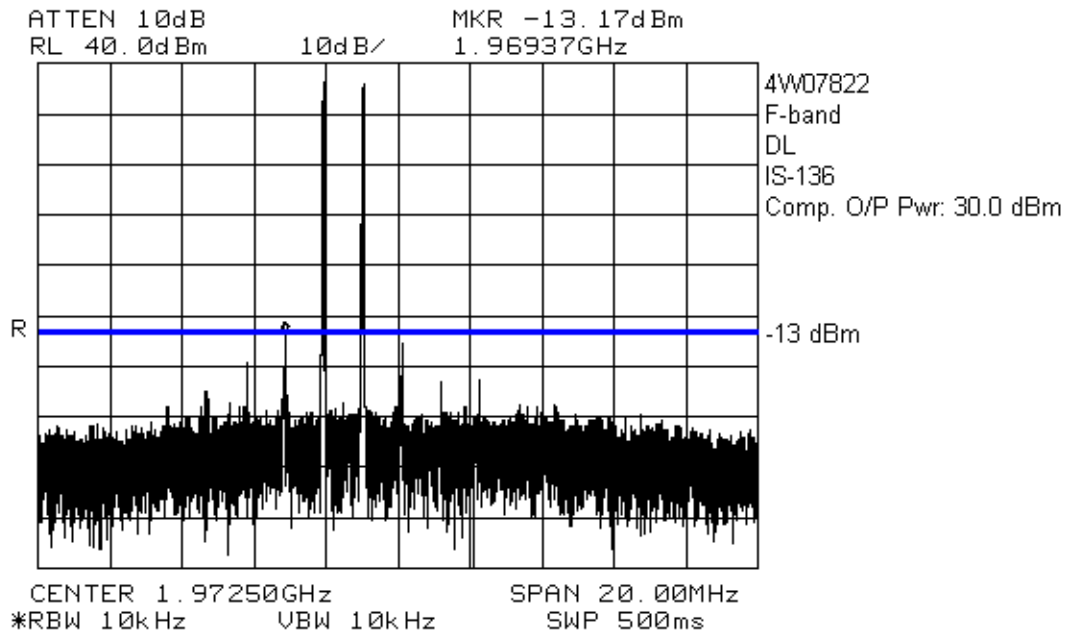
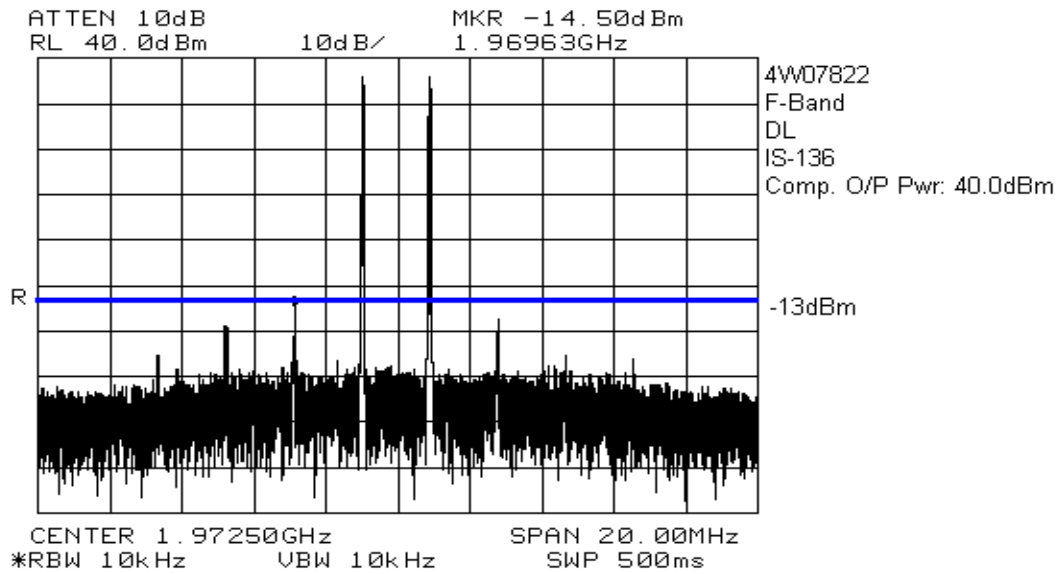


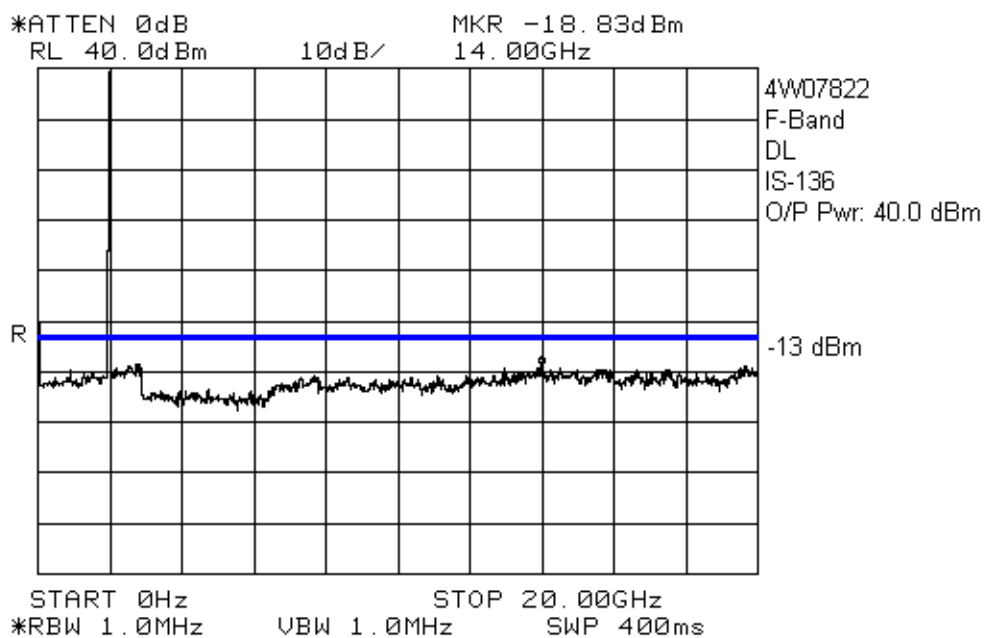
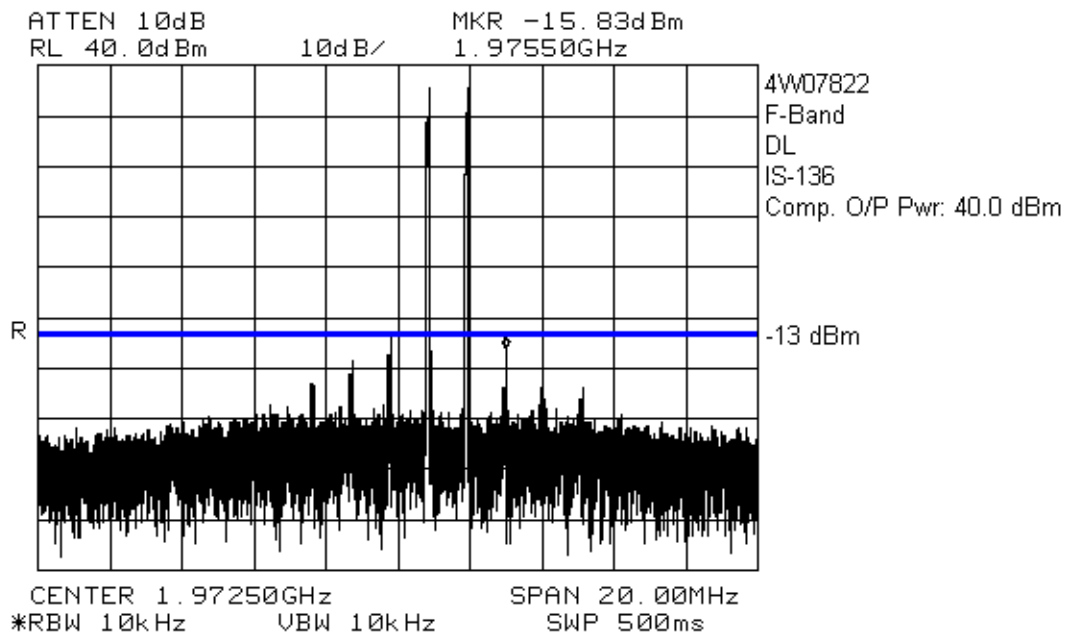
Uplink, GSM



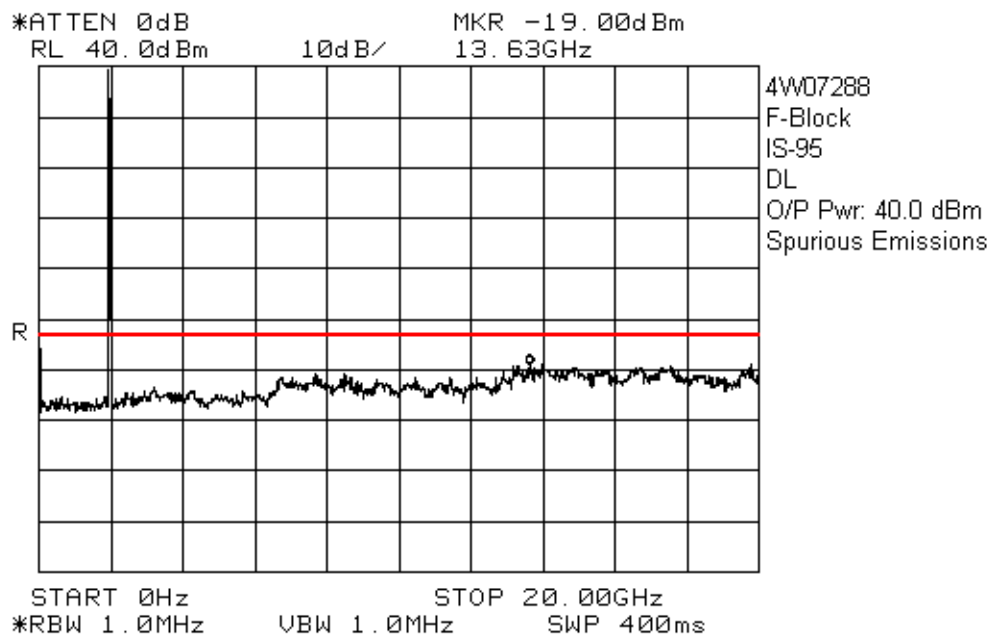
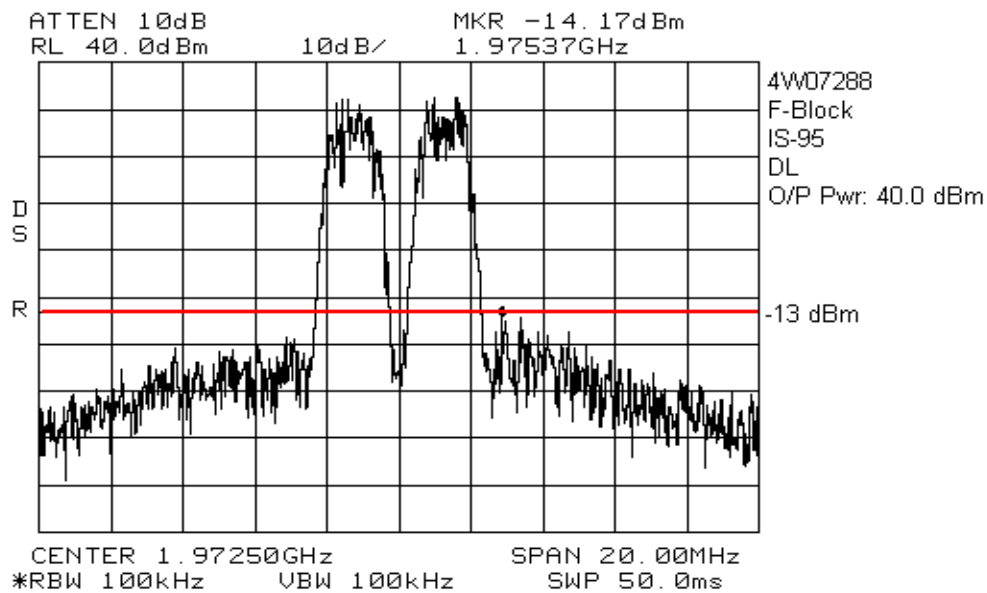


Downlink, IS-136

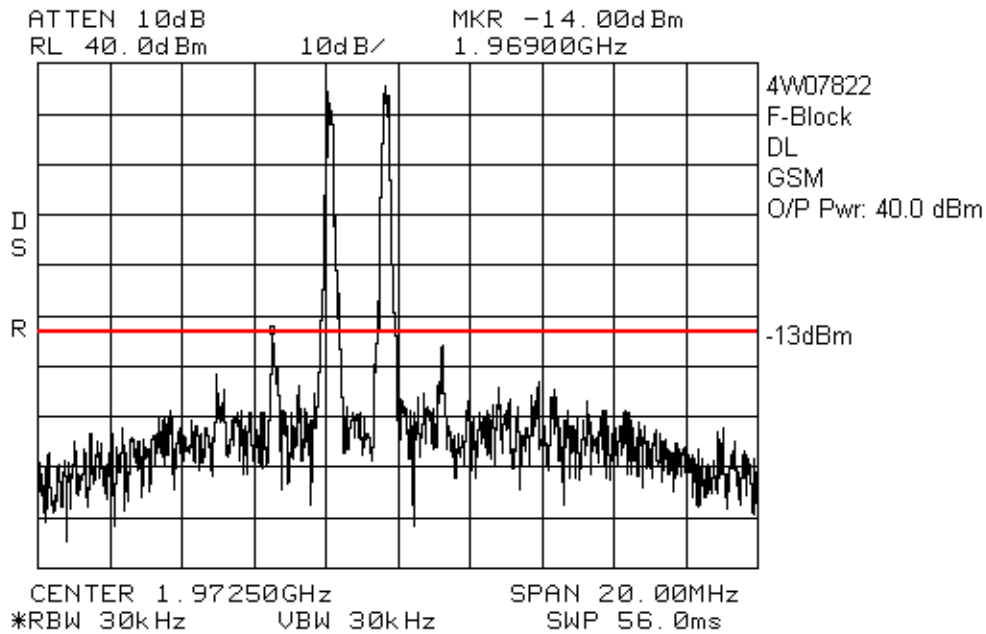
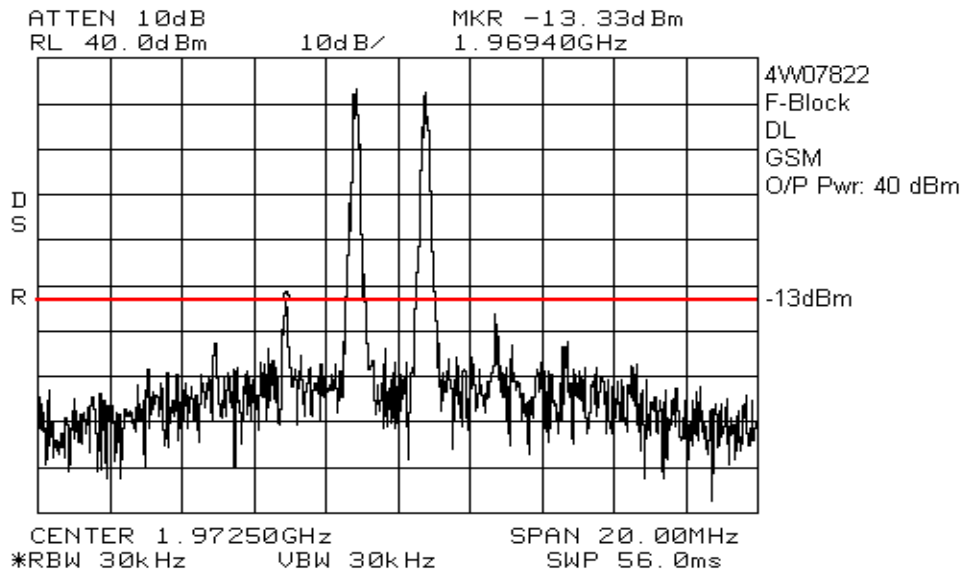


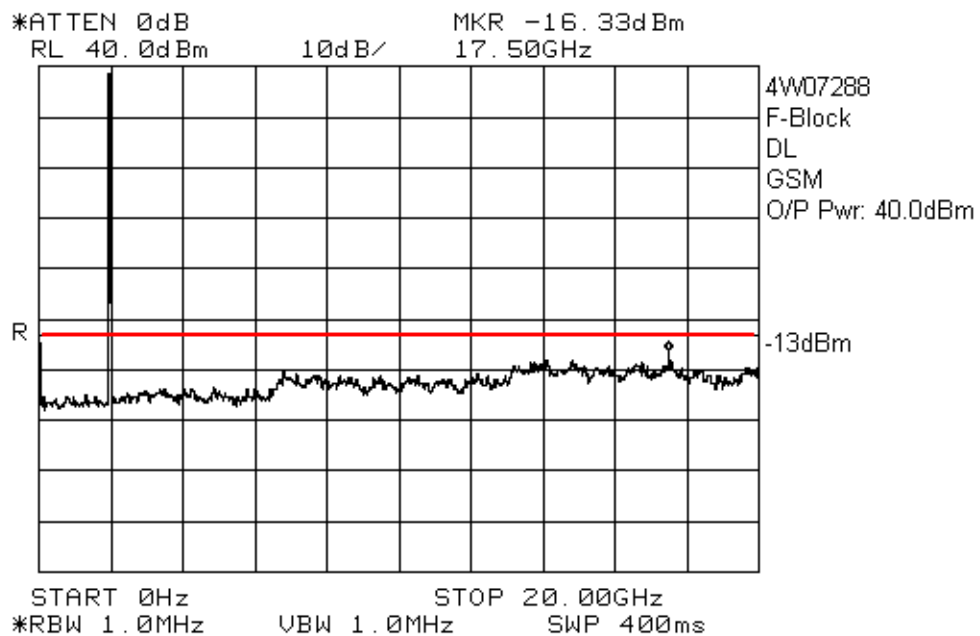
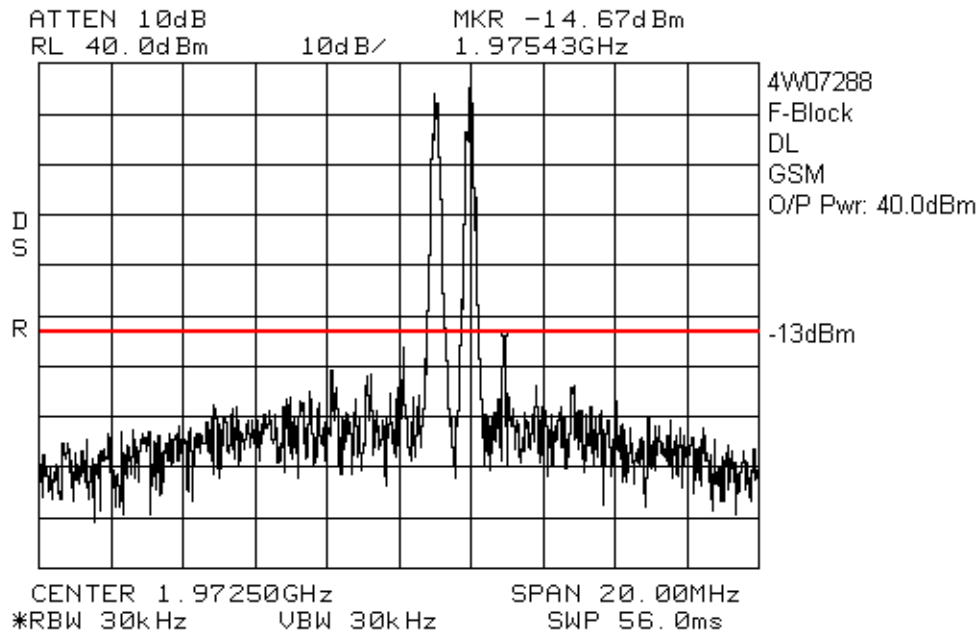


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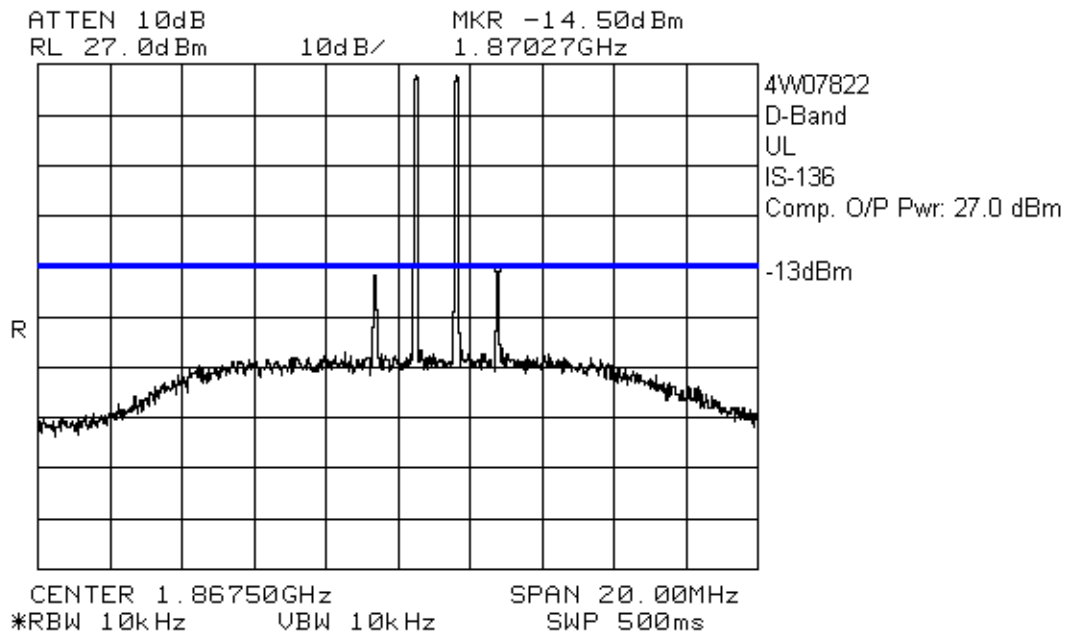
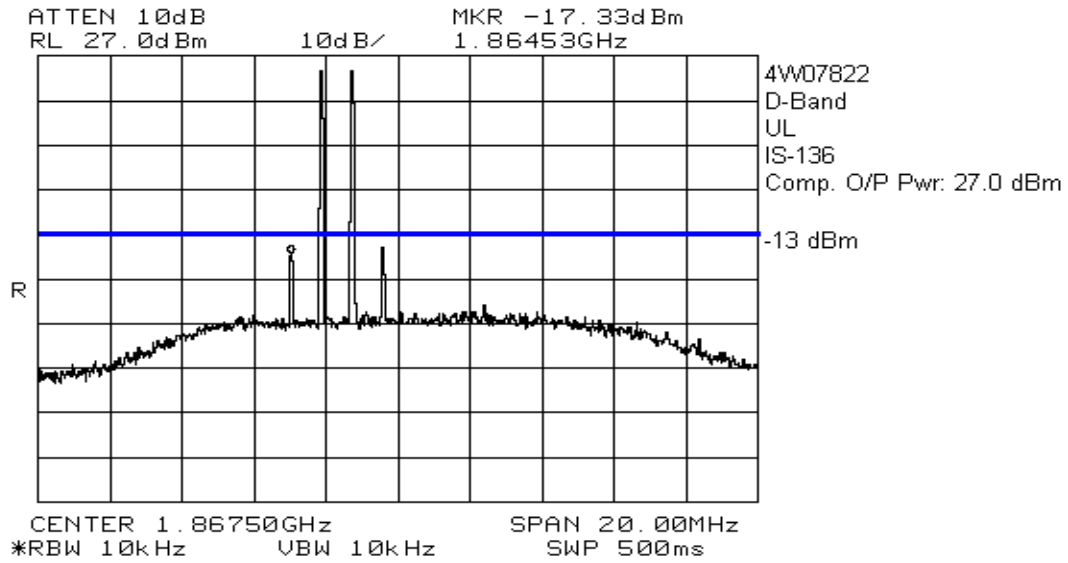
Downlink, GSM



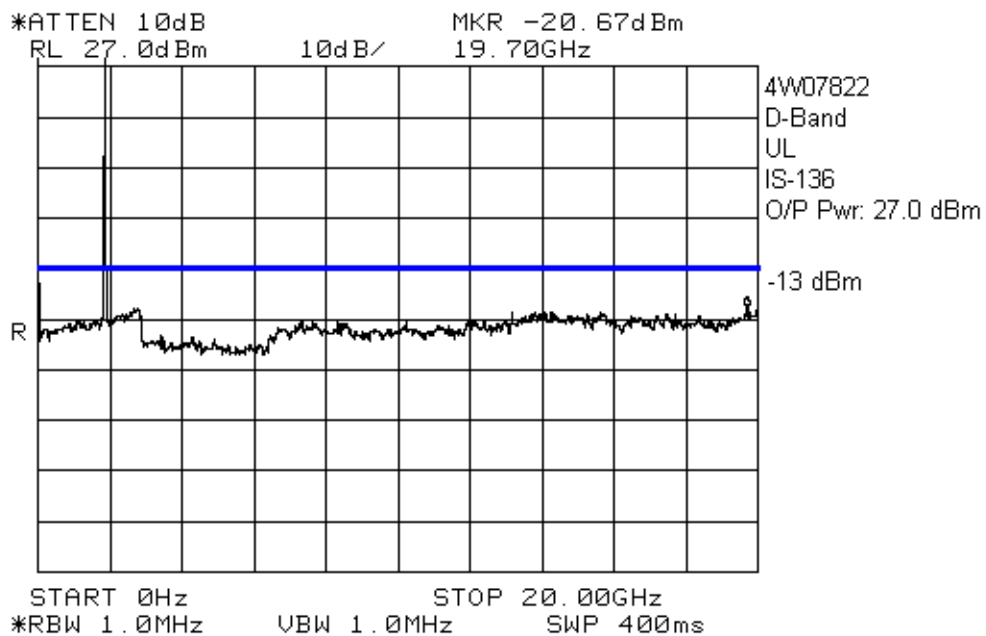
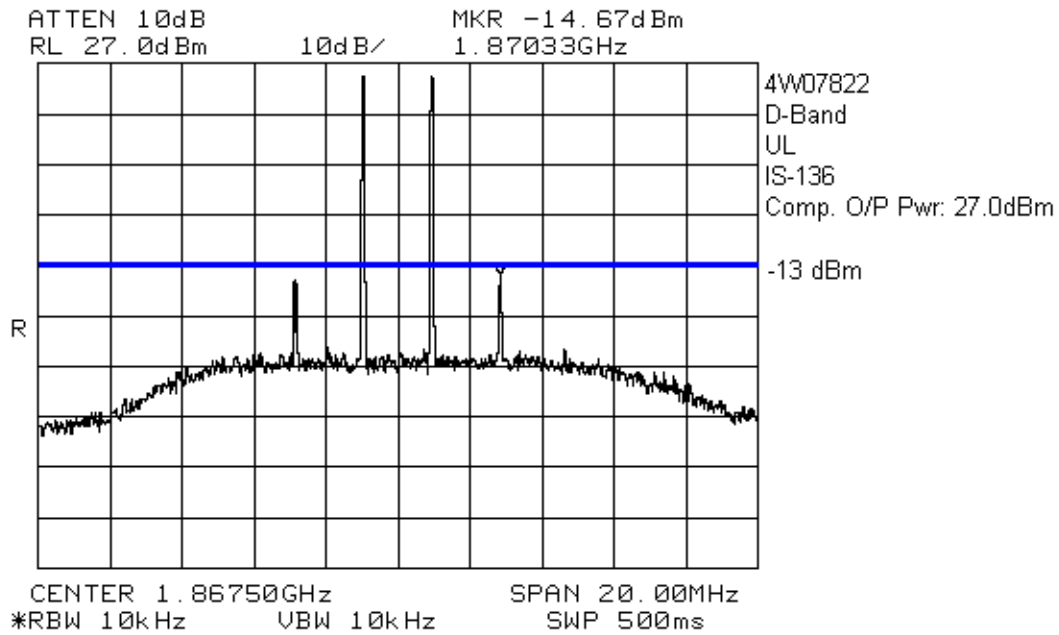


**MW-BDA-PCS-D-50W90 CDMA Repeater**

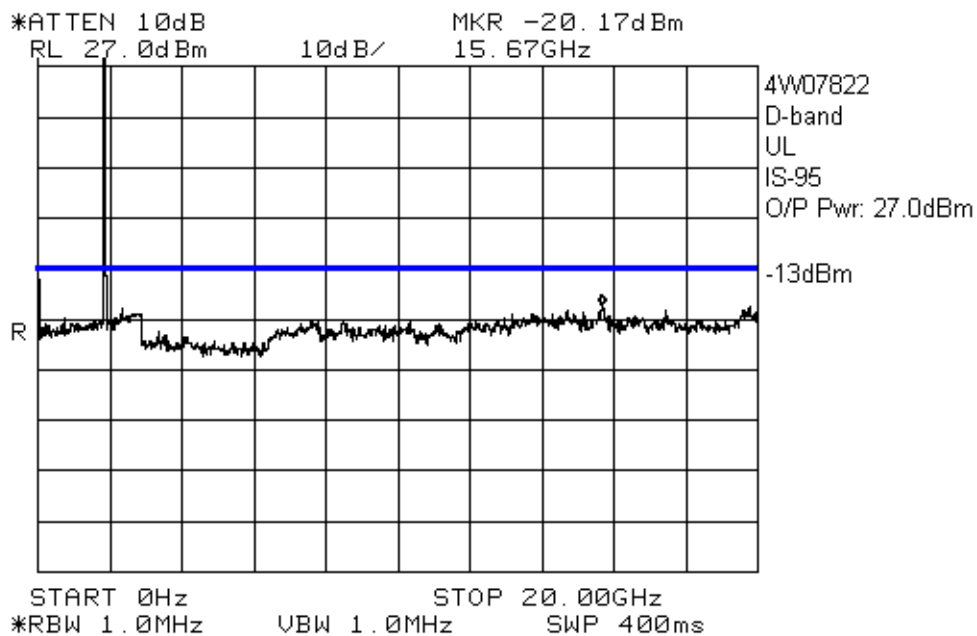
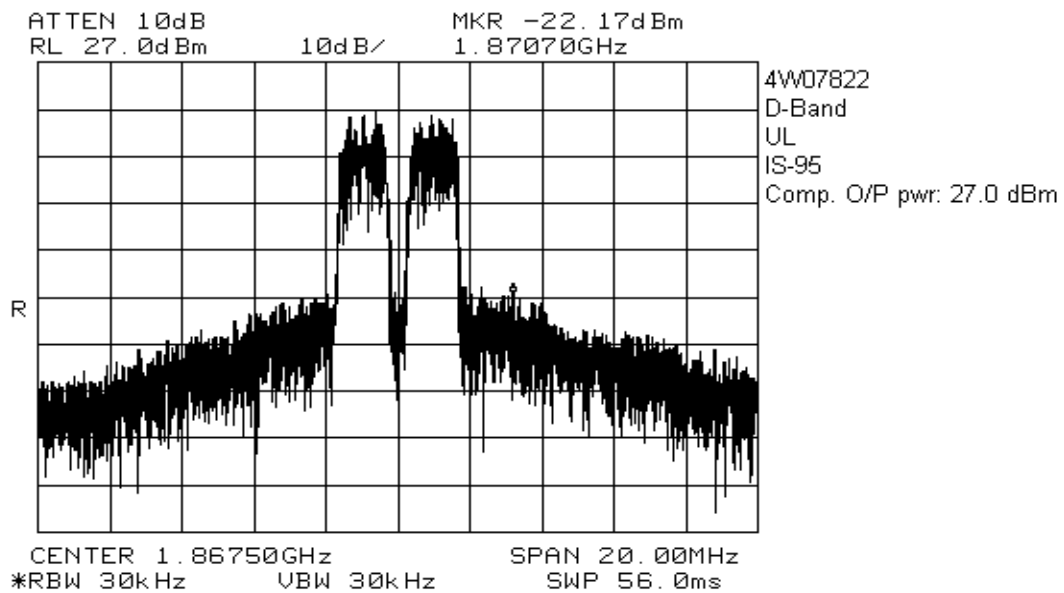
Uplink, IS-136



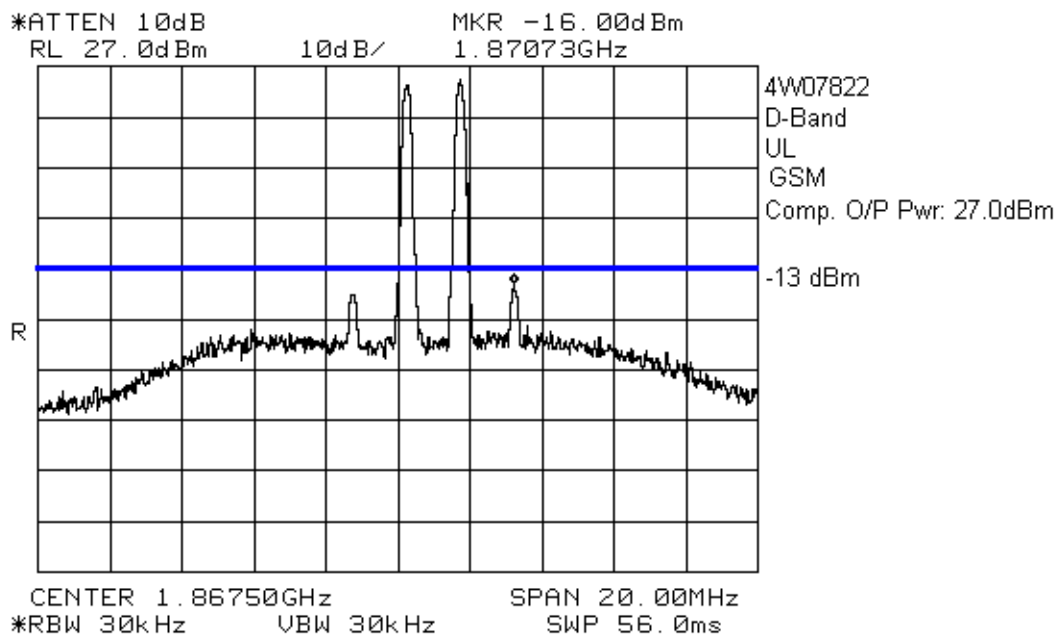
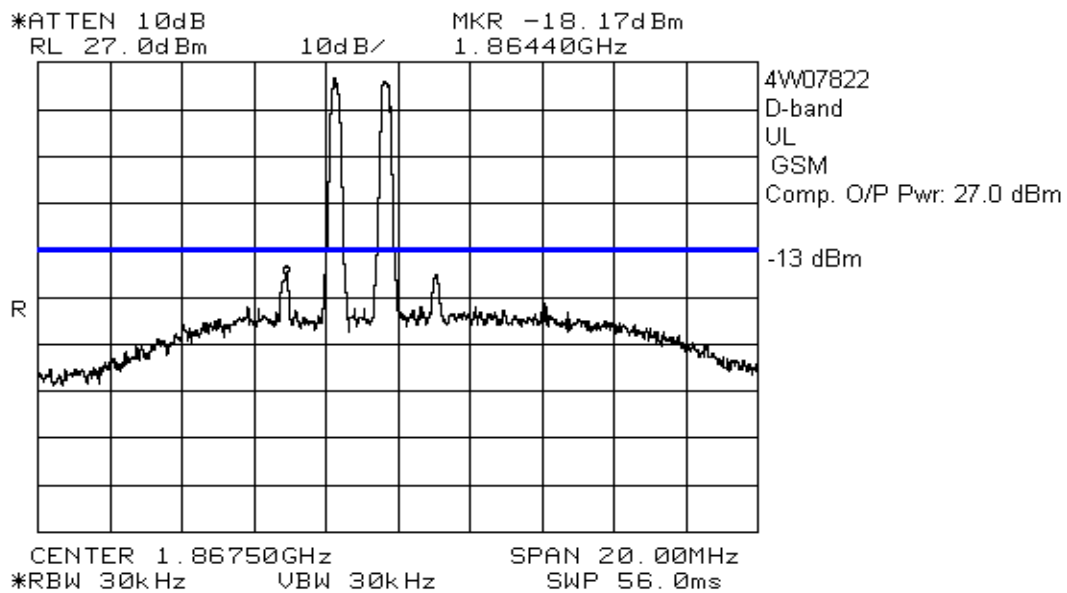


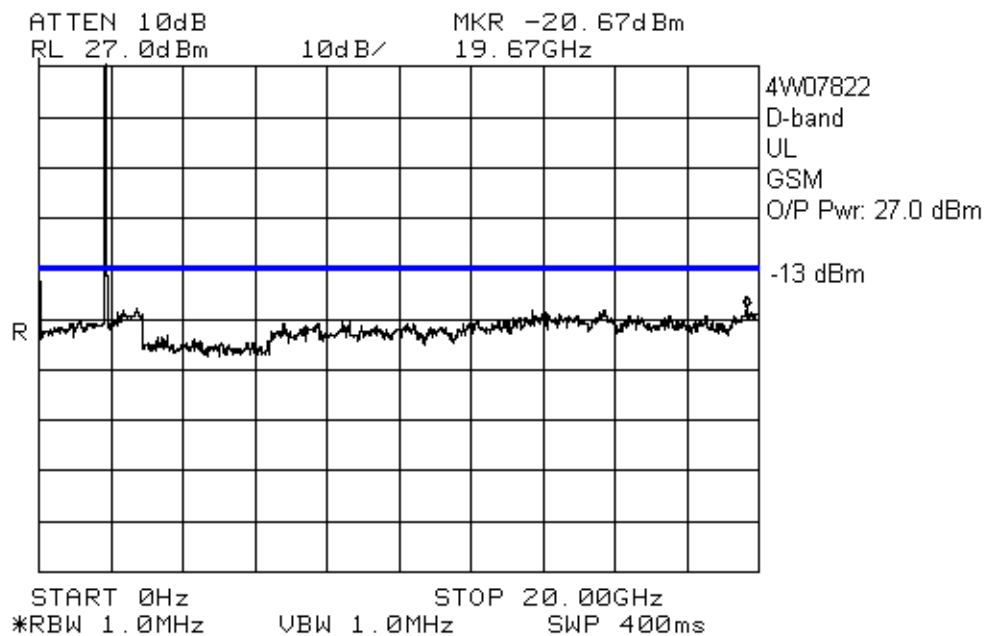
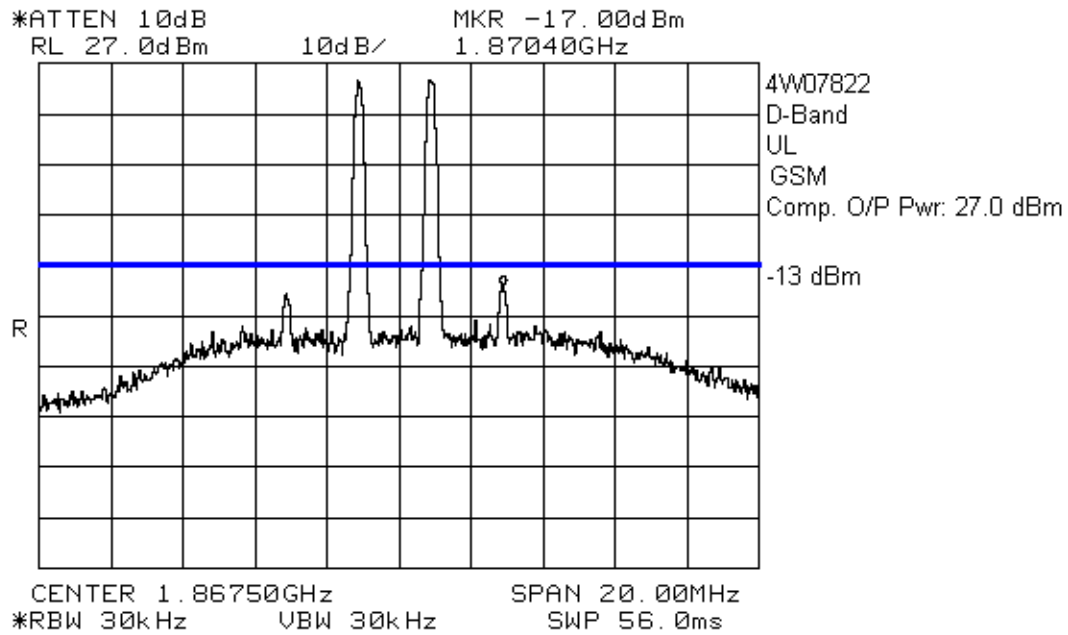


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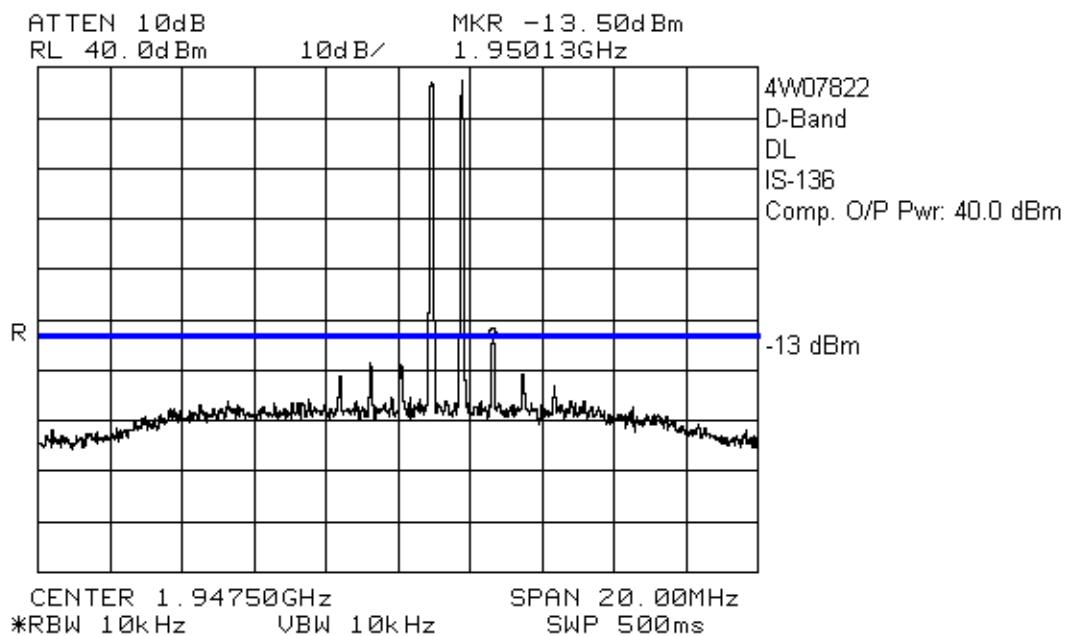
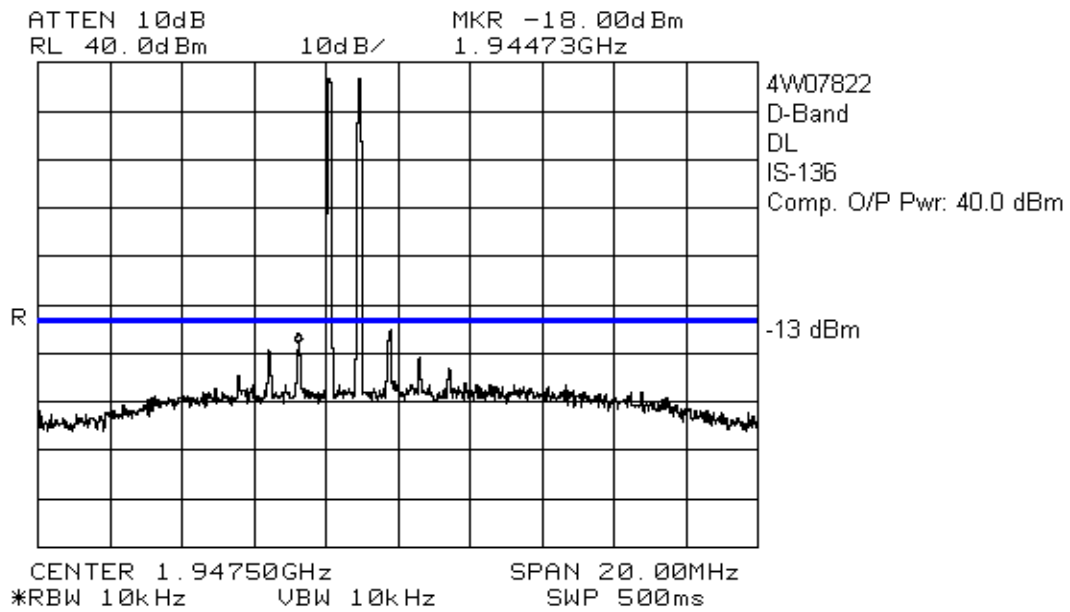


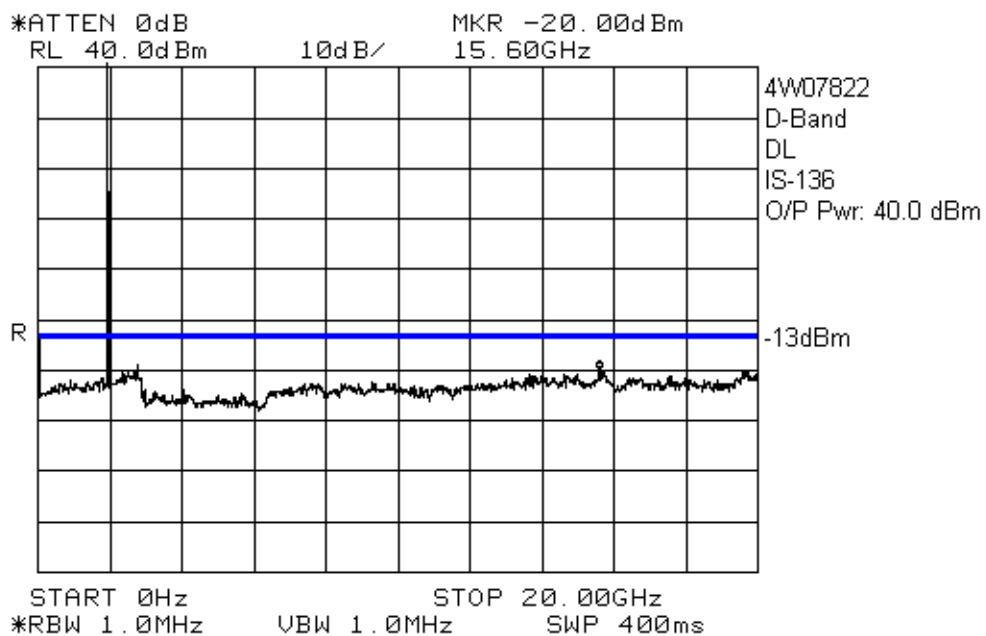
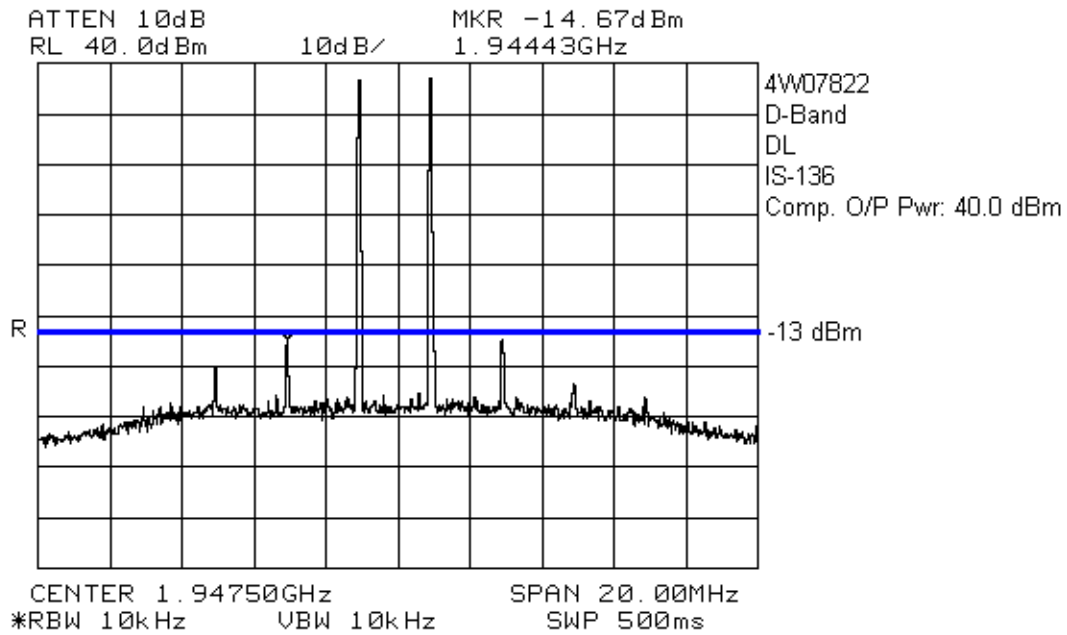
Uplink, GSM



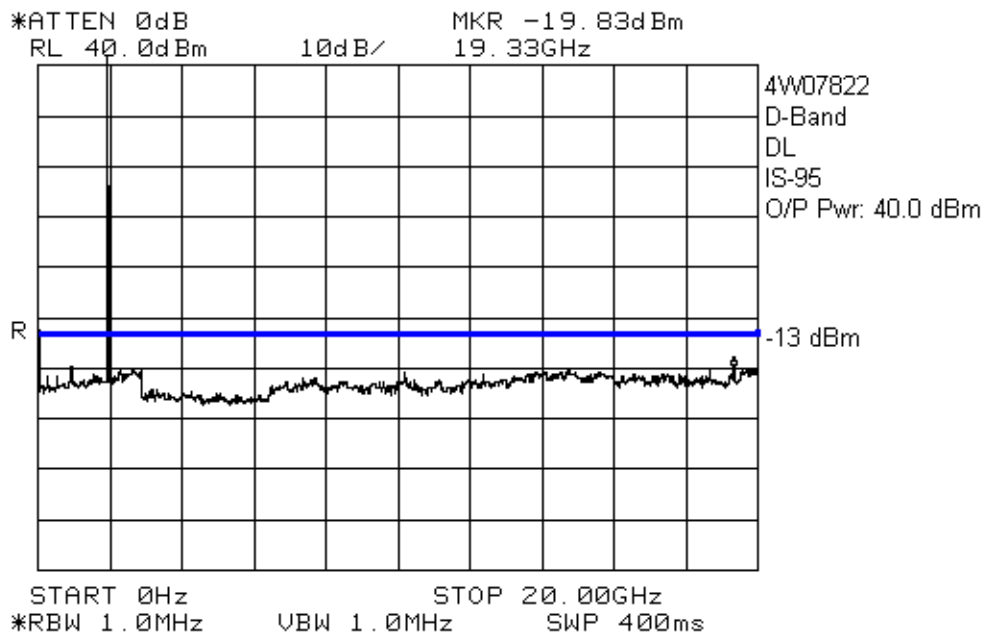
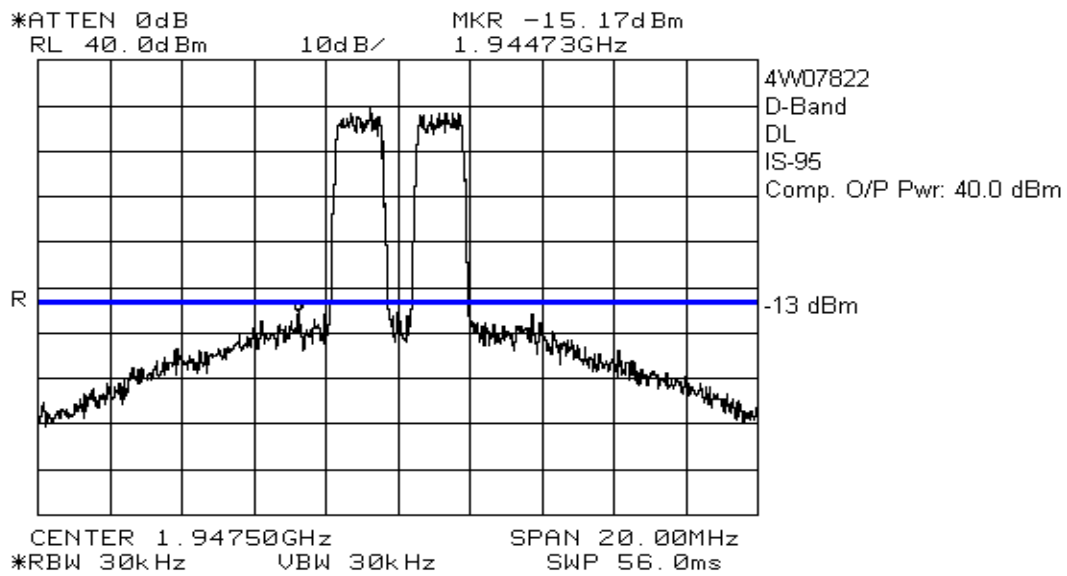


Downlink, IS-136

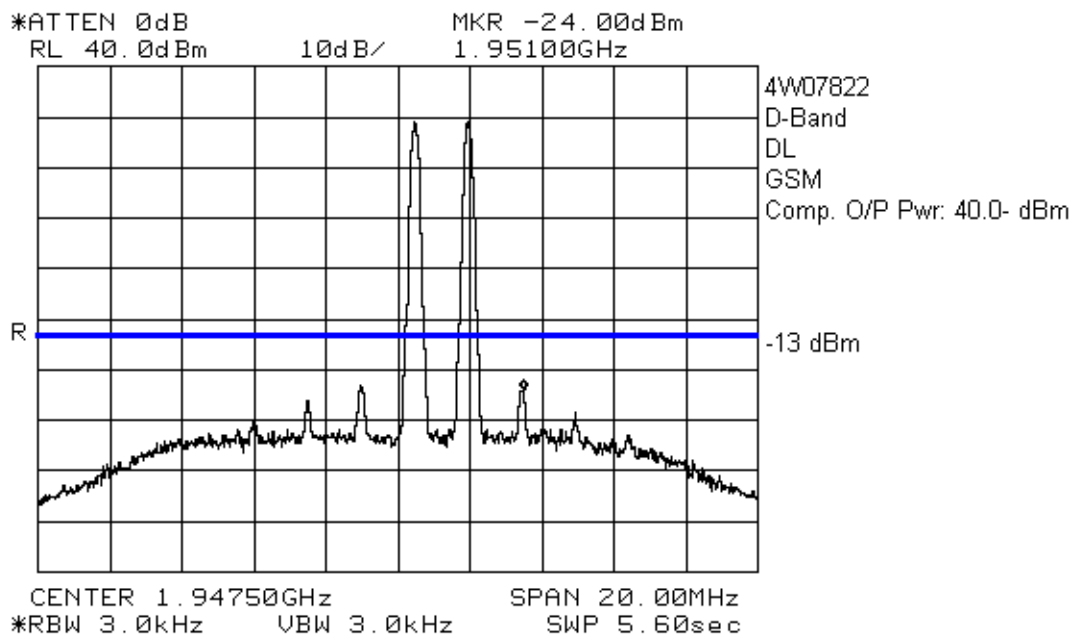
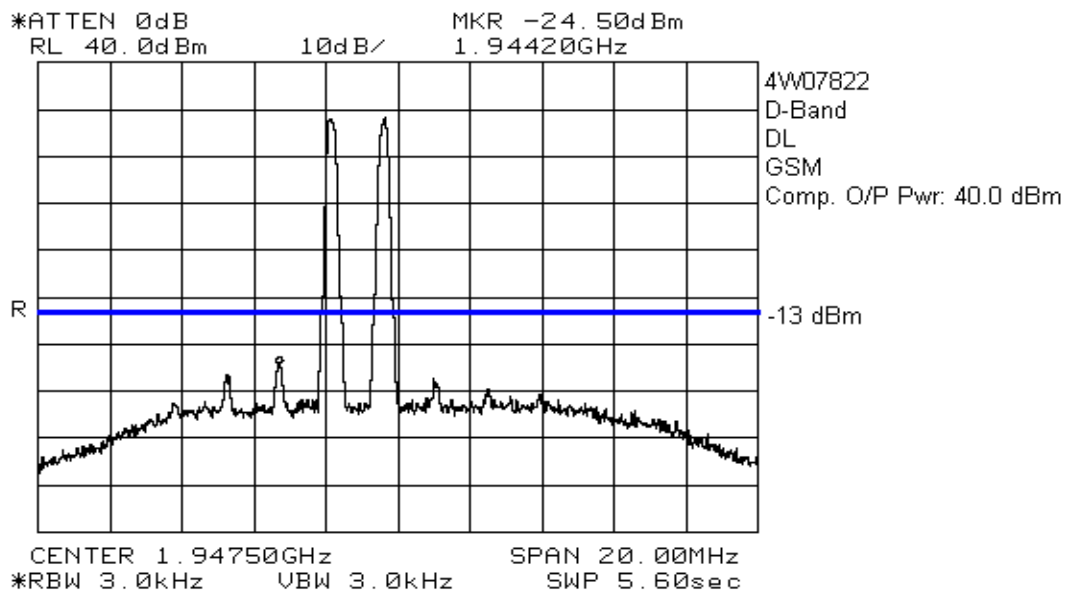




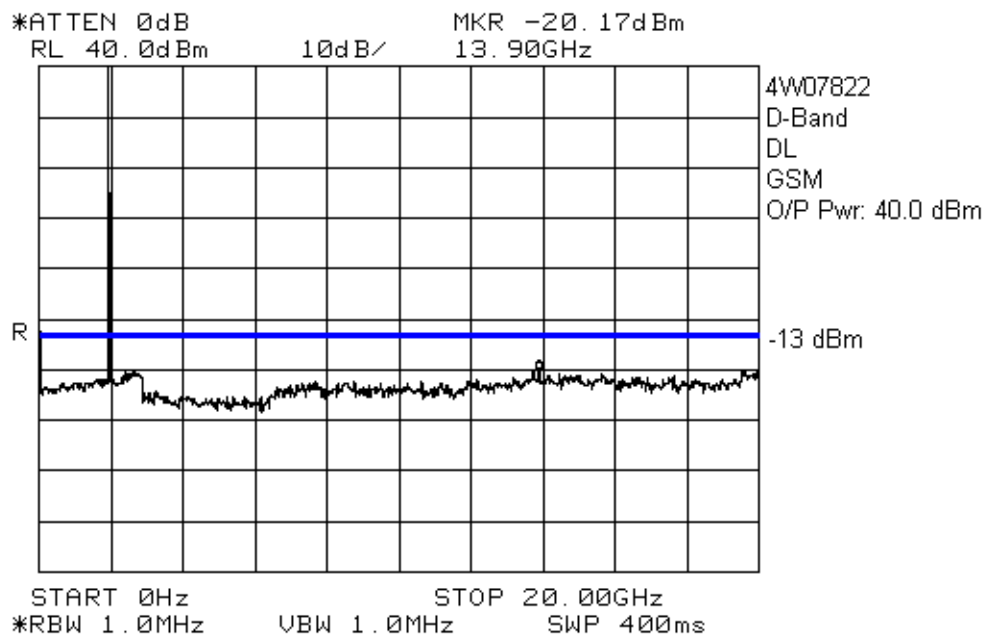
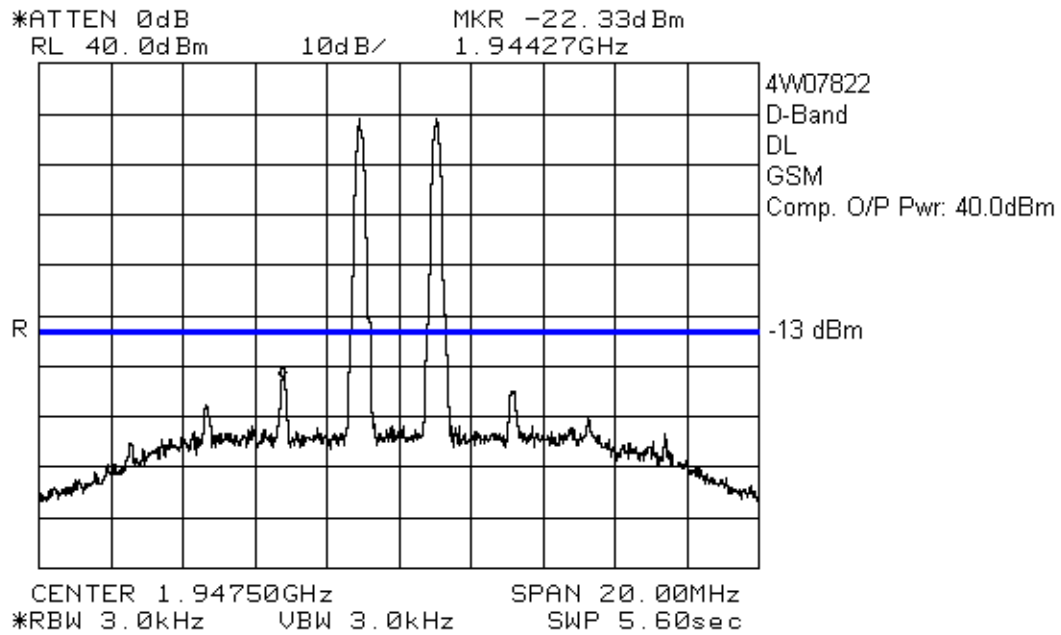
Downlink, IS-95



Downlink, GSM







**Section 6.           Field Strength of Spurious**

**Para. No.: 2.1053**

<b>Test Performed By: Kevin Carr</b>	<b>Date of Test: 20 Feb. 2004</b>
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**Minimum Standard:**           Para. No.: 24.238.

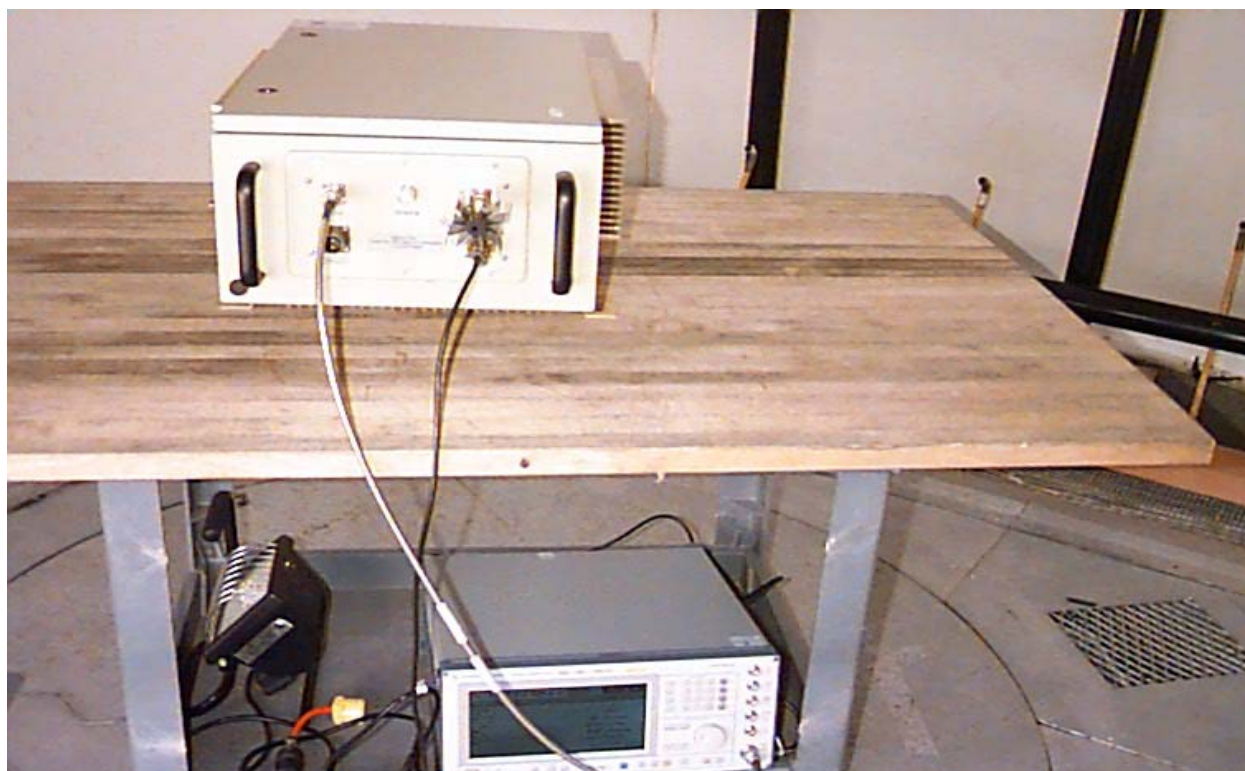
**Test Results:**               Complied

**Test Data:**               As per attached tabulated data.

## Radiated Disturbance Test Data: MW-BDA-PCS-D-50W90

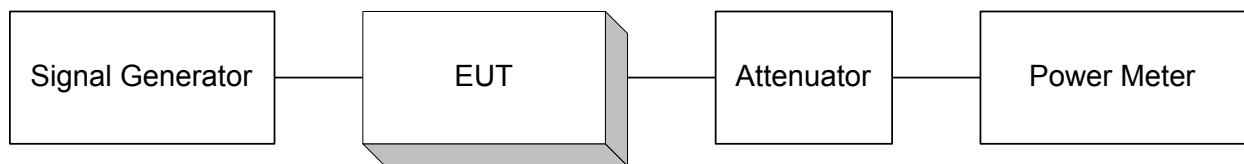
Test Date: 20 Feb. 2004									
Engineer's Name: Kevin Carr									
Temperature (C°): 10						Humidity %: 45			
Test Distance (meters): 3						Range: 1			
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBμV)	Sig. Sub. Factor (dB)	Emission Level (dBm)	Limit (dB/m)	Margin (dB)	Detector	Amp.
3892.0000	Horn2	V	68.0	-116.1	-48.1	-13.0	35.1	Peak	2-4GHz
3892.0000	Horn2	H	58.8	-118.1	-59.3	-13.0	46.3	Peak	2-4GHz
5838.0000	Horn2	V	63.6	-109.5	-45.9	-13.0	32.9	Peak	4-8GHz
5838.0000	Horn2	H	52.0	-107.0	-55.0	-13.0	42.0	Peak	4-8GHz
7784.0000	Horn2	V	52.0	-103.8	-51.8	-13.0	38.8	Peak	4-8GHz
7784.0000	Horn2	H	52.0	-105.0	-53.0	-13.0	40.0	Peak	4-8GHz
3734.2000	Horn2	V	53.0	-116.6	-63.6	-13.0	50.6	Peak	2-4GHz
3734.2000	Horn2	H	52.0	-119.6	-67.6	-13.0	54.6	Peak	2-4GHz
5601.3000	Horn2	V	50.0	-109.1	-59.1	-13.0	46.1	Peak	4-8GHz
5601.3000	Horn2	H	50.0	-107.5	-57.5	-13.0	44.5	Peak	4-8GHz
7468.4000	Horn2	V	53.0	-104.7	-51.7	-13.0	38.7	Peak	4-8GHz
7468.4000	Horn2	H	53.0	-104.1	-51.1	-13.0	38.1	Peak	4-8GHz
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW									
Notes:		AGC On							

Range Set up: Photo

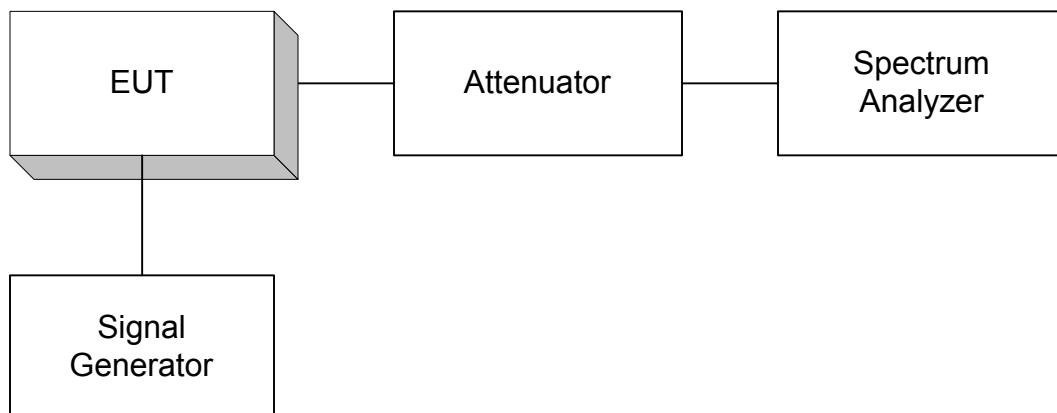


## **Section 7.       Block Diagrams**

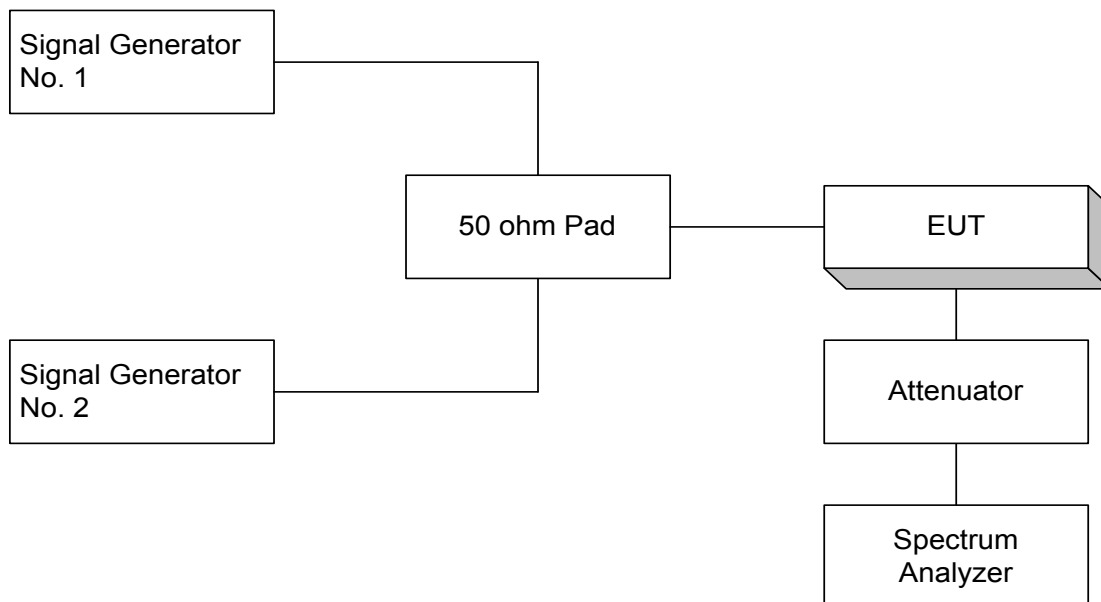
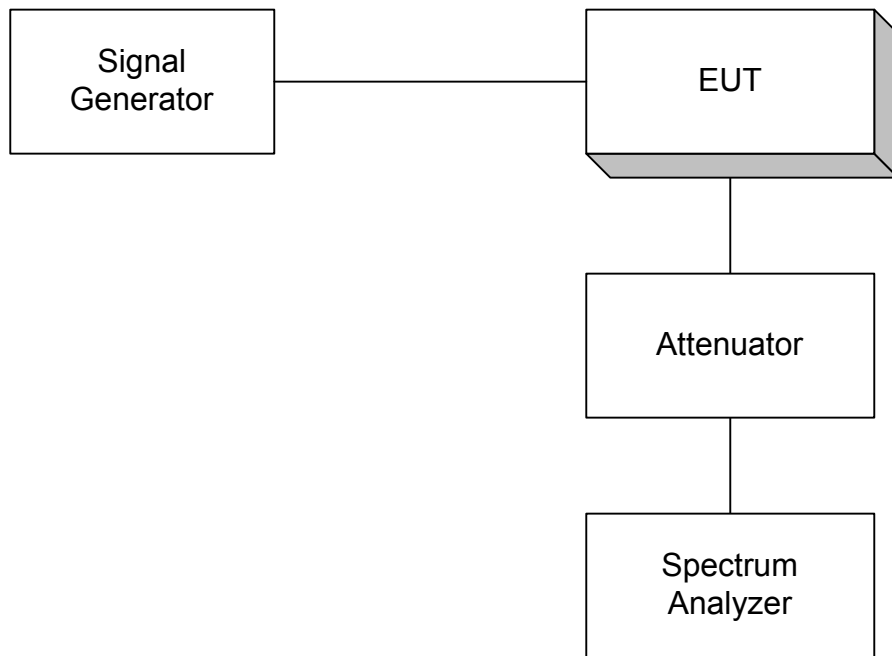
### **Para. No. 1046 - R.F. Power Output**



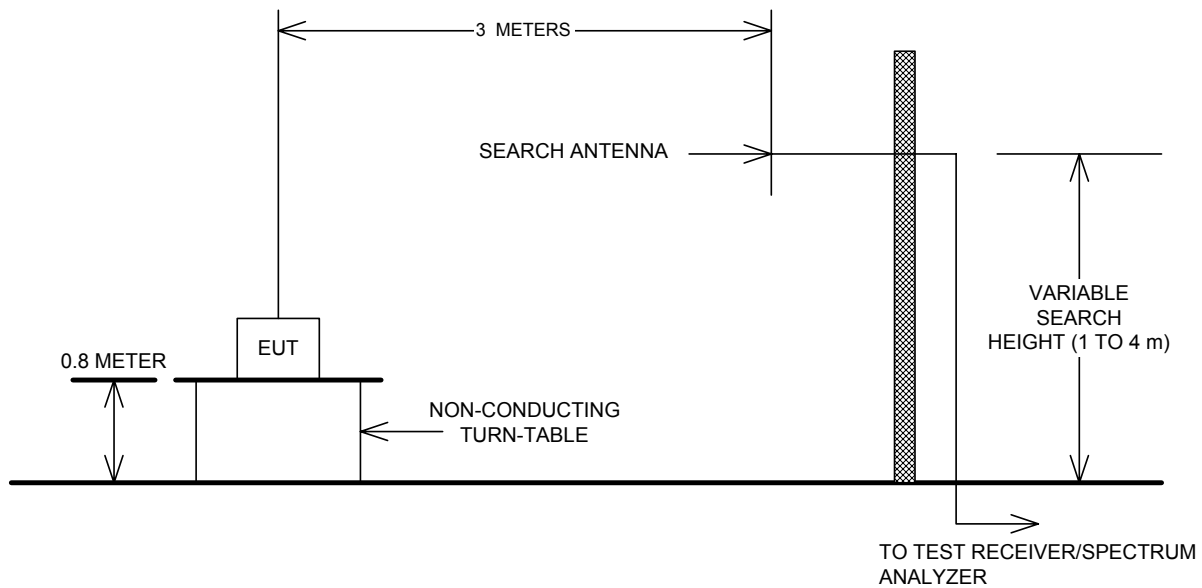
### **Para. No. 2.1049 - Occupied Bandwidth**



**Para. No. 2.1051 - Spurious Emissions at Antenna Terminals**



**Para. No. 2.1053 - Field Strength of Spurious Radiation**



**Section 8. Test Equipment List****Equipment List - Radiated Emissions**

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Spectrum Analyzer	Hewlett-Packard	8564E	FA001367	May. 13/03	May. 13/04
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 10/03	Dec. 10/04
COU	Horn 18 – 40 GHz	Electro-Metrics	SH-50/60-1	FA000479	COU	COU
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 18/03	June. 18/04
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 18/03	June. 18/04
1 Year	4.0 – 8.0 GHz Amplifier	JCA	48-600	FA001497	June. 18/03	June. 18/04
COU	5.0 – 18.0 GHz Amplifier	NARDA	DWT-186N23U40	FA001409	COU	COU
COU	18.0 – 26.0 GHz Amplifier	NARDA	BBS-1826N612	FA001550	COU	COU

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair