



# Retlif Testing Laboratories

101 New Boston Road, Goffstown, NH 03045  
603-497-4600 - Fax: 603-497-5281

CORPORATE OFFICE  
795 Marconi Avenue  
Ronkonkoma, NY 11779  
631-737-1500 Fax 631-737-1497  
(A NY Corporation)

BRANCH LABORATORIES  
3131 Detwiler Road  
Harleysville, PA 19438  
215-256-4133 Fax 215-256-4130

WASHINGTON  
REGULATORY OFFICE  
703-533-1614 Fax 703-533-1612



## Data Package on

1000 mW COFDM Video Transmitter  
Model Number: PD2-TX-1000-S

**Customer Name:** DTC Communications, Inc.

**Customer P.O.:** 503324

**Date of Data Package:** May 18, 2009

**Data Package Number:** R-5174N

**Test Start Date:** May 8, 2009

**Test Finish Date:** May 12, 2009

**Test Technician:** Matthew Seamans

**Laboratory Supervisor:** Todd Hannemann

**Branch Manager:** Scott Wentworth

**Results Prepared By:** Jamie Ramsey

Our letters, procedures and reports are for the exclusive use of the customer to whom they are addressed and their communication or the use of the name of Retlif Testing Laboratories must receive our prior written approval. Our letters, procedures and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar products. The letters, procedures and reports and the name of Retlif Testing Laboratories or insignia are not to be used under any circumstances in advertising to the public. This report shall not be reproduced, except in full, without the prior written approval of Retlif Testing Laboratories. The only official copy of this document is the signed original provided by Retlif Testing Laboratories.

## Table of Contents

Certification and Signatures .....	3
Revision History .....	4
Test Program Summary .....	5
Spurious Radiated Emissions (ERP) .....	6
Equipment List .....	7
Test Photographs .....	8



**Retlif Testing Laboratories**

Data Package No. R-5174N

## Certification and Signatures

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



---

Todd Hannemann  
Laboratory Supervisor  
NARTE Certified ATL-0255-T



---

Scott Wentworth  
Branch Manager  
NVLAP Approved Signatory

### Non-Warranty Provision

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

### Non-Endorsement

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



**Retlif Testing Laboratories**

Data Package No. R-5174N

## Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

<b>Revision</b>	<b>Date</b>	<b>Pages Affected</b>
-	May 18, 2009	Original Release



**Retlif Testing Laboratories**

Data Package No. R-5174N

## Test Program Summary

**Data Package Number:** R-5174N  
**Customer:** DTC Communications, Inc.  
**Address:** 486 Amherst Street  
Nashua, NH 03063  
**Test Sample:** 1000 mW COFDM Video Transmitter  
**Model Number:** PD2-TX-1000-S  
**Serial Number:** SB020378  
**Manufacturer:** DTC Communications

### Test Specification:

FCC Part 2, TIA-603-C, Spurious Radiated Emissions (ERP)

### Mode of Operation:

During the performance of all testing specified herein, the EUT was continuously transmitting into a 50 ohm load.

### Test Method:

The following table depicts the test method that was performed on the EUT and the corresponding test results:

Testing Dates	Test Method	Test Results
5/8/09 to 5/12/09	Spurious Radiated Emissions (ERP), 30 MHz to 25 GHz	Complied

No modifications were made to the EUT during the course of this testing program in order to demonstrate compliance with the specified requirements.



Retlif Testing Laboratories

Data Package No. R-5174N

**Spurious Radiated Emissions (ERP)  
Equipment List, Test Photographs and Test Data**



**Retlif Testing Laboratories**

Data Package No. R-5174N

**Equipment List  
Spurious Radiated Emissions (ERP)**

<b>EN</b>	<b>Type</b>	<b>Manufacturer</b>	<b>Description</b>	<b>Model No.</b>	<b>Cal Date</b>	<b>Due Date</b>
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	1/21/2009	1/21/2010
3117	Power Supply	B&K Precision	0-30 Vdc, 3.0 A	1630	1/31/2008	1/31/2010
3258	Double Ridge Guide	EMCO	1 - 18 GHz	3115	8/20/2008	8/20/2009
3430	Horn Antenna	MCS Corporation	18 GHz - 26.5 GHz	K-5039	1/12/2009	1/21/2010
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	7/21/2008	7/21/2009
4202	Biconilog	EMCO	26 MHz - 2.7 GHz	3142	8/20/2008	8/20/2009
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	1/27/2009	1/27/2010
5070	EMI Test Receiver	Rohde & Schwarz	20 Hz - 40 GHz	ESIB40	1/14/2009	1/14/2010
5072	Preamplifier	Miteq	18 GHz-40 GHz	JS4-18004000-30	1/10/2009	1/10/2010
530A	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	8/21/2008	8/21/2009



**Retlif Testing Laboratories**

Data Package No. R-5174N

**Test Photographs**  
**Spurious Radiated Emissions (ERP)**



Test Setup



Test Setup



**Retlif Testing Laboratories**

Data Package No. R-5174N



**Test Photographs  
Spurious Radiated Emissions (ERP)**



Double Ridge Guide, Horizontal Antenna Polarization



Double Ridge Guide, Vertical Antenna Polarization



**Retlif Testing Laboratories**

Data Package No. R-5174N

**Test Photographs**  
**Spurious Radiated Emissions (ERP)**



Test Setup, High Gain Horn, Horizontal Antenna Polarization



Test Setup, High Gain Horn, Vertical Antenna Polarization



**Retlif Testing Laboratories**

Data Package No. R-5174N

# RETLIF TESTING LABORATORIES

## EMISSIONS DATA SHEET

<b>Test Method:</b>	Spurious Radiated Emissions (ERP) 30 MHz to 25 GHz		
<b>Customer:</b>	DTC Communications, Inc.	<b>Job No:</b>	R-5174N
<b>Test Sample:</b>	1000 mW COFDM Video Transmitter		
<b>Model No.:</b>	PD2-TX-1000-S	<b>Serial No.:</b>	SB020378
<b>Test Specification:</b>	FCC Part 2, TIA-603-C Paragraph: 2.1053		
<b>Operating Mode:</b>	Continuously Transmitting into a 50 Ohm Load.		
<b>Technician:</b>	M. Seamans	<b>Date:</b>	5/12/2009
<b>Notes:</b>	Transmit Frequency: 2.451 GHz Peak Detector		

Test Frequency	Antenna Position	EUT Position	Reference Reading	Signal Gen Level	Reference Ant Gain			Corrected Reading	Spurious Limit
MHz	(H/V) - Height	Degrees/Axis	dBuV	dBm	dBd			dBm	dBm
30.00	-	-	-	-	-			-	-13.00
39.93	V-1m	0/Y	33.50	-61.50	-14.06			-75.56	
40.25	V-1m	0/Y	32.50	-63.20	-13.82			-77.02	
43.34	V-1m	0/X	31.10	-70.50	-11.53			-82.03	
43.55	V-1m	0/Z	29.60	-72.20	-11.37			-83.57	
79.10	V-1m	0/Y	32.40	-72.50	-1.74			-74.24	
79.73	V-1m	0/Z	34.50	-70.40	-1.71			-72.11	
79.81	V-1m	0/X	33.90	-70.70	-1.71			-72.41	
81.10	V-1m	0/Y	35.60	-69.00	-1.70			-70.70	
82.16	V-1m	0/Y	35.70	-69.00	-1.70			-70.70	
83.90	V-1m	0/Y	31.20	-71.40	-1.70			-73.10	
	-	-	-	-	-			-	
	-	-	-	-	-			-	
	-	-	-	-	-			-	
	-	-	*	-	-			-	
4902.00	-	-	*	-	-			-	
7353.00	-	-	*	-	-			-	
9804.00	-	-	*	-	-			-	
12255.00	-	-	*	-	-			-	
14706.00	-	-	*	-	-			-	
17157.00	-	-	*	-	-			-	
19608.00	-	-	*	-	-			-	
22059.00	-	-	*	-	-			-	
24510.00	-	-	*	-	-			-	
	-	-	-	-	-			-	
25000.00	-	-	-	-	-			-	-13.00

EUT Emissions observed throughout the given frequency spectrum were recorded & evaluated.

\* These harmonic frequencies were not observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.



# RETLIF TESTING LABORATORIES

## EMISSIONS DATA SHEET

<b>Test Method:</b>	Spurious Radiated Emissions (ERP) 30 MHz to 25 GHz		
<b>Customer:</b>	DTC Communications, Inc.	<b>Job No.:</b>	R-5174N
<b>Test Sample:</b>	1000 mW COFDM Video Transmitter		
<b>Model No.:</b>	PD2-TX-1000-S	<b>Serial No.:</b>	SB020378
<b>Test Specification:</b>	FCC Part 2, TIA-603-C Paragraph: 2.1053		
<b>Operating Mode:</b>	Continuously Transmitting into a 50 Ohm Load.		
<b>Technician:</b>	M. Seamans	<b>Date:</b>	5/12/2009
<b>Notes:</b>	Transmit Frequency: 2.4825 GHz Peak Detector		

Test Frequency	Antenna Position	EUT Position	Reference Reading	Signal Gen Level	Reference Ant Gain				Corrected Reading	Spurious Limit
MHz	(H/V) - Height	Degrees/Axis	dBuV	dBm	dBd				dBm	dBm
30.00	-	-	-	-	-				-	-13.00
40.29	V-1m	0/Y	29.00	-73.10	-13.79				-86.89	
40.53	V-1m	0/Z	30.80	-69.40	-13.61				-83.01	
40.81	V-1m	0/X	29.90	-71.10	-13.40				-84.50	
42.52	V-1m	0/Y	28.40	-74.00	-12.14				-86.14	
42.95	V-1m	0/Z	32.10	-67.20	-11.82				-79.02	
79.73	V-1m	0/Y	34.70	-68.70	-1.71				-70.41	
80.21	V-1m	0/X	33.60	-70.80	-1.70				-72.50	
80.53	V-1m	0/Z	33.00	-71.00	-1.70				-72.70	
83.49	V-1m	0/Y	30.70	-75.20	-1.70				-76.90	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
4965.00	-	-	*	-	-				-	
7447.50	-	-	*	-	-				-	
9930.00	-	-	*	-	-				-	
12412.50	-	-	*	-	-				-	
14895.00	-	-	*	-	-				-	
17377.50	-	-	*	-	-				-	
19860.00	-	-	*	-	-				-	
22342.50	-	-	*	-	-				-	
24825.00	-	-	*	-	-				-	
	-	-	-	-	-				-	
25000.00	-	-	-	-	-				-	-13.00

EUT Emissions observed throughout the given frequency spectrum were recorded & evaluated.

\* These harmonic frequencies were not observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.