



# 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

Digital Video Transmitter  
Model Number: Pd2-TX

**Customer Name:** Cobham, Inc.

**Customer P.O.:** 507744

**Date of Data Package:** January 10, 2012

**Data Package Number:** R-5558N

**Test Start Date:** January 4, 2012

**Test Finish Date:** January 4, 2012

**Test Technician:** M. Seamans

**Laboratory Supervisor:** T. Hannemann

**Branch Manager:** S. Wentworth

**Results Prepared By:** J. 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-5558N

## 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-5558N

## Revision History

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

Revision	Date	Pages Affected
-	January 10, 2012	Original Release



**Retlif Testing Laboratories**

Data Package No. R-5558N

## Test Program Summary

**Data Package Number:** R-5558N  
**Customer:** Cobham, Inc.  
**Address:** 486 Amherst Street  
Nashua, NH 03063  
**Test Sample:** Digital Video Transmitter  
**Part Number:** PD2-TX-5000-S  
**Model Number:** Pd2-TX  
**Serial Number:** SB057279  
**Manufacturer:** Cobham, Inc.

### Test Specification:

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

### Mode of Operation:

During the performance of all testing specified herein, the Digital Video Transmitter was continuously transmitting a digital signal (Channel 1: 2451.25, Channel 2: 2466.00, Channel 3: 2482.5).

### 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
January 4, 2012	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-5558N

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



**Retlif Testing Laboratories**

Data Package No. R-5558N

## Equipment List Spurious Radiated Emissions (ERP)

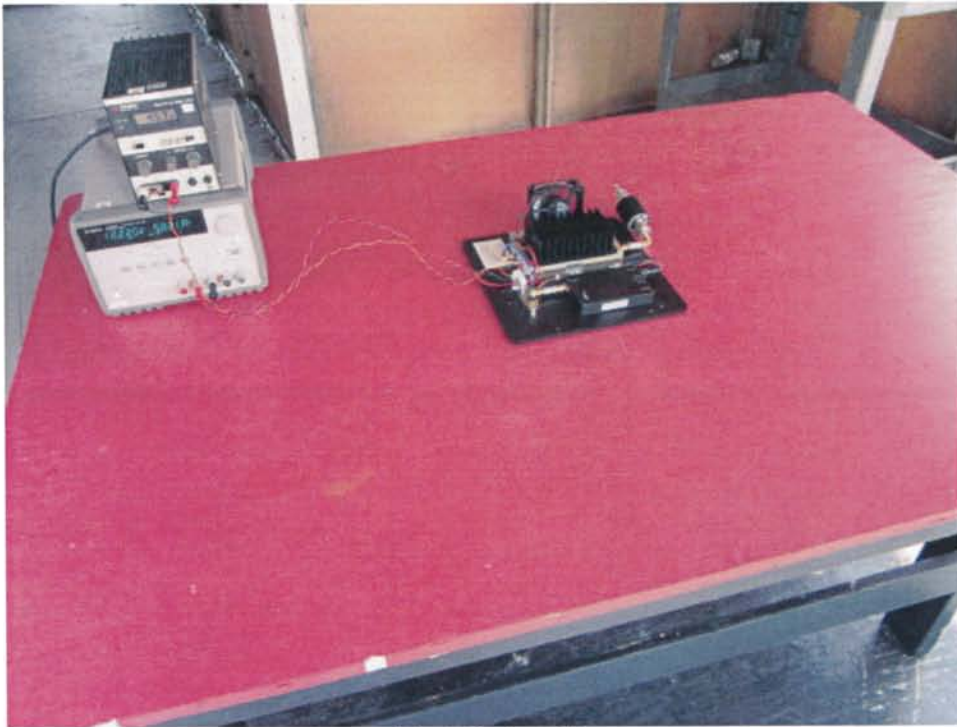
EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5GHz	8449B	5/10/2011	5/10/2012
1245	AGILENT / HP	SIGNAL GENERATOR	40 GHz	N5183A	11/1/2011	11/1/2012
3000	EMPIRE DEVICES	TUNED DIPOLE ANTENNA	20 MHz - 200 MHz	T1	Inspect Before Use	
3001	EMPIRE DEVICES	TUNED DIPOLE ANTENNA	200 MHz - 400 MHz	T2	Inspect Before Use	
3002	EMPIRE DEVICES	TUNED DIPOLE ANTENNA	400 MHz - 1 GHz	T3	Inspect Before Use	
3258	EMCO	DOUBLE RIDGED GUIDE ANTENNA	1 GHz - 18GHZ	3115	1/12/2011	1/12/2012
3430	MCS	HORN ANTENNA	18 GHz - 26.5 GHz	K-5039	1/13/2011	1/13/2012
4003	TENSOR	ANTENNA, RIDGED GUIDE	1 GHz - 18 GHz	4105	5/11/2011	5/11/2012
4029	RETLIF	OPEN AREA TEST SITE	3 / 10 Meters	RNH	8/21/2009	8/21/2012
8165	EMCO	BICONILOG	26 - 2000 MHz	3142	6/13/2011	6/13/2012
R444	AGILENT / HP	SPECTRUM ANALYZER	100 Hz - 26.5 GHz	E7405A;A	6/4/2010	6/4/2012



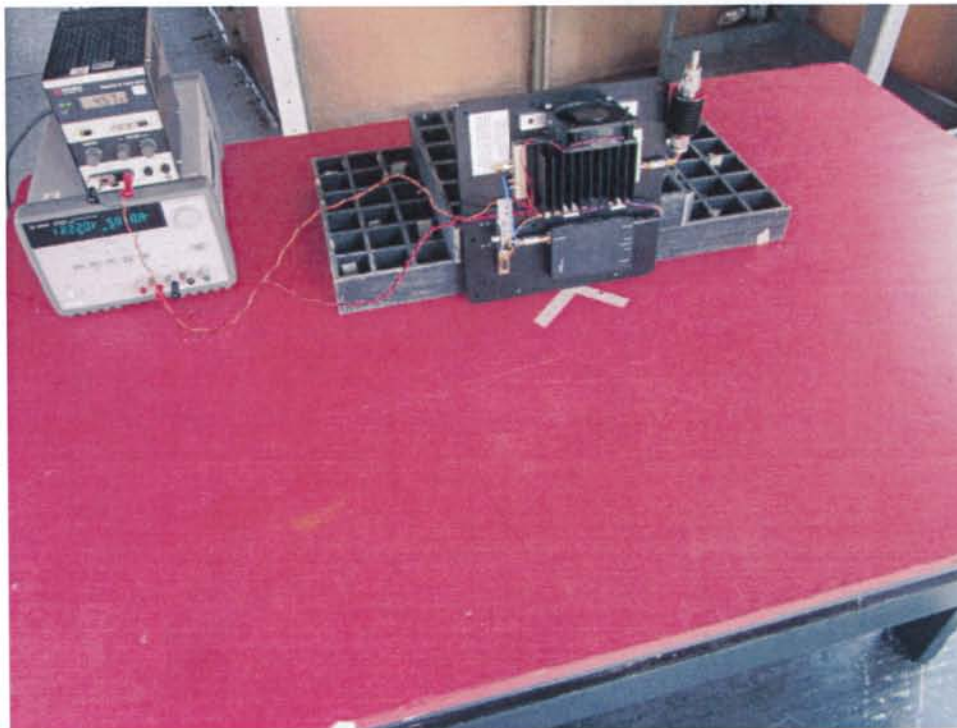
**Retlif Testing Laboratories**

Data Package No. R-5558N

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



Test Setup X



Test Setup Y



**Retlif Testing Laboratories**

Data Package No. R-5558N



**Test Photographs**  
**Spurious Radiated Emissions (ERP)**  
**30 MHz to 1 GHz**



Biconical Antenna, Horizontal Polarization



Biconical Antenna, Vertical Polarization



**Retlif Testing Laboratories**

Data Package No. R-5558N

**Test Photographs  
Spurious Radiated Emissions (ERP)  
1 GHz to 18 GHz**



Double Ridge Guide Antenna, Horizontal Polarization



Double Ridge Guide Antenna, Vertical Polarization



**Retlif Testing Laboratories**

Data Package No. R-5558N

**Test Photographs  
Spurious Radiated Emissions (ERP)  
18 GHz to 26 GHz**



High Gain Horn Antenna, Horizontal Polarization

**Photograph Unavailable**

High Gain Horn Antenna, Vertical Polarization



**Retlif Testing Laboratories**

Data Package No. R-5558N

**Test Photographs**  
**Spurious Radiated Emissions (ERP)**  
**1 GHz to 18 GHz**



High Gain Horn Antenna, Horizontal Polarization,  
Substitution Antenna High Field



High Gain Horn Antenna, Vertical Polarization  
Substitution Antenna Low Field



**Retlif Testing Laboratories**

Data Package No. R-5558N

# RETLIF TESTING LABORATORIES

## EMISSIONS DATA SHEET

<b>Test Method:</b>	Spurious Radiated Emissions (ERP) 30 MHz to 25 GHz		
<b>Customer:</b>	Cobham, Inc.	<b>Job No:</b>	R-5558N
<b>Test Sample:</b>	Digital Video Transmitter		
<b>Part No.</b>	PD2-TX-5000-S	<b>Serial No:</b>	SB057279
<b>Test Specification:</b>	FCC Part 2, TIA/EIA-603 Paragraph: 2.1053		
<b>Operating Mode:</b>	Transmitting Digital Signal		
<b>Technician:</b>	M. Seamans	<b>Date:</b>	1/4/2012
<b>Notes:</b>	Transmit Frequency: 2.45125 GHz Peak Detector		

Test Frequency	Antenna/EUT Position	Reference Reading	Signal Gen Level	Reference Ant Gain				Corrected Reading	Spurious Limit
MHz	Polarity/Axis	dBuV	dBm	dBd				dBm	dBm
30.00	-	-	-	-				-	-13.00
	-	-	-	-				-	
4902.50	V/Y	50.15	-56.51	10.80				-45.71	
7353.75	V/Y	49.87	-56.58	10.50				-46.08	
9805.00	-	*	-	-				-	
12256.25	-	*	-	-				-	
14707.50	-	*	-	-				-	
17158.75	-	*	-	-				-	
19610.00	-	*	-	-				-	
22061.25	-	*	-	-				-	
24512.50	-	*	-	-				-	
	-	-	-	-				-	
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

Test Method:	Spurious Radiated Emissions (ERP) 30 MHz to 25 GHz		
Customer:	Cobham, Inc.	Job No:	R-5558N
Test Sample:	Digital Video Transmitter		
Part No.	PD2-TX-5000-S	Serial No:	SB057279
Test Specification:	FCC Part 2, TIA/EIA-603 Paragraph: 2.1053		
Operating Mode:	Transmitting Digital Signal		
Technician:	M. Seamans	Date:	1/4/2012
Notes:	Transmit Frequency: 2.483 GHz Peak Detector		

Test Frequency	Antenna/EUT Position	Reference Reading	Signal Gen Level	Reference Ant Gain				Corrected Reading	Spurious Limit
MHz	Polarity/Axis	dBuV	dBm	dBd				dBm	dBm
30.00	-	-	-	-				-	-13.00
	-	-	-	-				-	
4965.00	V/Y	49.44	-56.62	10.80				-45.82	
7447.50	V/Y	49.18	-56.80	10.50				-46.30	
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.