

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-1000-S

Customer Name: DTC Communications Customer P.O.: D000001082 Date of Data Package: December 29, 2009 Data Package Number: R-5265N Test Start Date: December 22, 2009 Test Finish Date: December 28, 2009 Test Technician: Matthew Seamans **Laboratory Supervisor:** Todd Hannemann **Branch Manager:** Scott Wentworth Results Prepared By: Jamie Ramsey

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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.



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Revision History

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

Revision	Date	Pages Affected
·	December 29, 2009	Original Release



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Test Program Summary

Data Package Number: R-5265N

Customer: DTC Communications, Inc.

486 Amherst Street

Nashua, NH 03063

Test Sample: Digital Video Transmitter

Part Number: N/A

Model Number: PD2-TX-1000-S

Serial Number: SB030464

Manufacturer: DTC Communications, Inc.

Test Specification:

FCC Part 2.1053/TIA-603-C, Land Mobile FM or PM-Communications Equipment-Measurement and Performance Standards

Mode of Operation:

During the performance of all testing specified herein, the EUT was transmitting a signal 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 Date(s)	Test Method	Test Results	
12/22/09-12/23/09, 12/28/09	Spurious Radiated Emission (ERP), 30 MHz to 26.5 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.



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Spurious Radiated Emissions (ERP) Re	port of Measurements
Equipment List, Test Photograph	s and Test Data
	Retlif Testing Laboratories
	Data Package No. R-5265N

Equipment List

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	1/21/2009	1/21/2010
3117	Power Supply	B&K Precision	0-30 Vdc, 3.0 A	1630	1/31/2009	1/31/2010
3430	Horn Antenna	MCS Corporation	18 GHz - 26.5 GHz	K-5039	1/12/2009	1/12/2010
4003A	Double Ridge Guide	EMCO	1 - 18 GHz	3105	8/5/2009	8/5/2010
4202	Biconilog	EMCO	26 MHz - 2.7 GHz	3142	8/19/2009	8/19/2010
4984A	High Gain Horn	Microlab/FXR	1.0 - 1.7 GHz	L638A	1/21/2009	1/21/2010
4984B	High Gain Horn	Microlab/FXR	1.7 - 2.6 GHz	R638A	1/21/2009	1/21/2010
4984C	High Gain Horn	Microlab/FXR	2.6 - 3.95 GHz	S638A	1/21/2009	1/21/2010
4984D	High Gain Horn	Microlab/FXR	3.95 - 5.85 GHz	H638A	1/21/2009	1/21/2010
4984E	High Gain Horn	Microlab/FXR	5.8 - 8.2 GHz	C638A	1/21/2009	1/21/2010
4984F	High Gain Horn	Microlab/FXR	8.2 - 12.4 GHz	X638A	1/21/2009	1/21/2010
4984G	High Gain Horn	Microlab/FXR	12.4 GHz - 18 GHz	Y638A	1/21/2009	1/21/2010
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	1/27/2009	1/27/2010
5072	Preamplifier	Miteq	18 GHz-40 GHz	JS4-18004000-30	10/1/2009	10/1/2010
5107	Signal Generator	Agilent	100 kHz - 20 GHz	N5183A	3/6/2009	3/6/2010



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Test Setup



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Horizontal Antenna Polarization, 30 to 1000 MHz



Vertical Antenna Polarization, 30 to 1000 MHz



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Horizontal Antenna Polarization, 1 to 1.7 GHz



Vertical Antenna Polarization, 1 to 1.7 GHz



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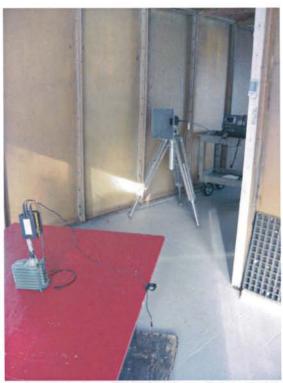
Horizontal Antenna Polarization, 1.7 to 2.6 GHz



Vertical Antenna Polarization, 1.7 to 2.6 GHz



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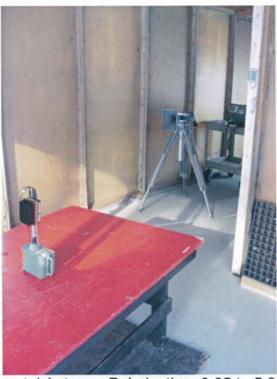
Horizontal Antenna Polarization, 2.6 to 3.95 GHz



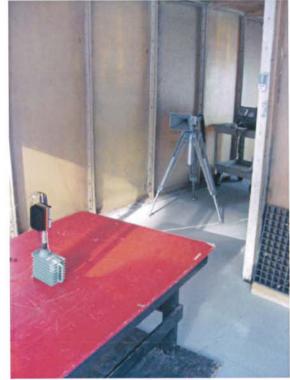
Vertical Antenna Polarization, 2.6 to 3.95 GHz



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Horizontal Antenna Polarization, 3.95 to 5.8 GHz



Vertical Antenna Polarization, 3.95 to 5.8GHz



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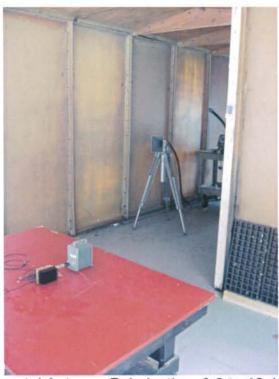
Horizontal Antenna Polarization, 5.8 to 8.2 GHz



Vertical Antenna Polarization, 5.8 to 8.2 GHz



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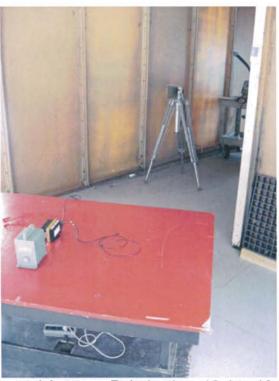
Horizontal Antenna Polarization, 8.2 to 12.4 GHz



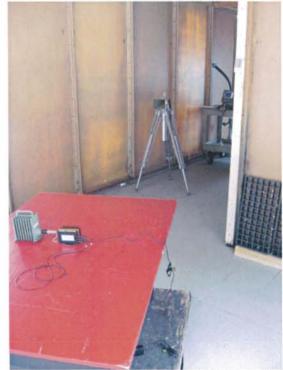
Vertical Antenna Polarization, 8.2 to 12.4 GHz



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Horizontal Antenna Polarization, 12.4 to 18 GHz



Vertical Antenna Polarization, 12.4 to 18 GHz



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Horizontal Antenna Polarization, 18 to 26.5 GHz



Vertical Antenna Polarization, 18 to 26.5 GHz



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RETLIF TESTING LABORATORIES **EMISSIONS DATA SHEET** Spurious Radiated Emissions (ERP) 30 MHz to 26.5 GHz Test Method: R-5265N Customer: DTC Communications, Inc. Job No: Test Sample: Digital Video Transmitter PD2-TX-1000-S SB030464 Model No: Serial No: FCC Part 2, TIA-603-C Test Specification: Paragraph: 2.1053 Continuously Transmitting into a 50 Ohm Load. Operating Mode: 12/28/2009 M. Seamans Date: Technician: Notes: Transmit Frequency: 2.4825 GHz Peak Detector Spurious Test Antenna EUT Referance Signal Gen Reference Ant Corrected Limit Reading Gain Frequency Position Position Reading Level dBm dBm (H/V) - Height Degrees\Axis dBuV dBm dBd -13.00 30.00 4965.00 7447.50 * 1 1 9930.00 12412.50 14895.00 1 17377.50 1 19860.00 -1 22342.50 24825.00 1 1 -13.00 26500.00 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. R-5265N Data Sheet 1 of 1

RETLIF TESTING LABORATORIES **EMISSIONS DATA SHEET** Spurious Radiated Emissions (ERP) 30 MHz to 26.5 GHz Test Method: R-5265N Customer: DTC Communications, Inc. Job No: Test Sample: Digital Video Transmitter SB030464 PD2-TX-1000-S Model No: Serial No: FCC Part 2, TIA-603-C Test Specification: Paragraph: 2.1053 Continuously Transmitting into a 50 Ohm Load. Operating Mode: Date: 12/28/2009 M. Seamans Technician: Notes: Transmit Frequency: 2.466 GHz Peak Detector Spurious Test Antenna EUT Referance Signal Gen Reference Ant Corrected Limit Reading Position Gain Frequency Position Reading Level dBm dBm (H/V) - Height Degrees\Axis dBuV dBm dBd -13.00 30.00 -4932.00 7398.00 * 1 ī 9864.00 12330.00 14796.00 1 17262.00 1 19728.00 1 22194.00 24660.00 1 -13.00 26500.00 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

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10dB below the limit.

Data Sheet 1 of 1

RETLIF TESTING LABORATORIES EMISSIONS DATA SHEET Spurious Radiated Emissions (ERP) 30 MHz to 26.5 GHz Test Method: Job No: R-5265N Customer: DTC Communications, Inc. Test Sample: Digital Video Transmitter SB030464 PD2-TX-1000-S Model No: Serial No: FCC Part 2, TIA-603-C Test Specification: Paragraph: 2.1053 Continuously Transmitting into a 50 Ohm Load. Operating Mode: 12/28/2009 Technician: M. Seamans Date: Transmit Frequency: 2.451 GHz Notes: Peak Detector Spurious EUT Corrected Antenna Referance Signal Gen Reference Ant Reading Limit Position Position Reading Level Gain Frequency dBm MHz (H/V) - Height Degrees\Axis dBuV dBm dBd dBm

MHz	(H/V) - Height	Degrees\Axis	dBuV	dBm	dBd				dBm	dBm
30.00		-		-	2				2	-13.00
1	-	-	-	2.5	-				-	1
4902.00	-	-	*	-	*				-	1
7353.00	14	2	*	127	<u> </u>				-	1
9804.00			*		-				3	1
12255.00	£ 7 8	-	*	9.5	-					1
14706.00	2040	-	*	1(*)	-				-	- 1
17157.00	848	2		1141	-				-	1
19608.00	•	-	*	12	-				:=	1
22059.00	15	-	*	187	-				-	1
24510.00	(-)	×	*	(I+)	-				:-	1
	-		12	-	ш				-	1
1	-	-	-	-	-				-	1
1	(c .e.)	-	(*)	2.00	-				÷.	1
26500.00	1941	-			-				-	-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							n of		
	10dB below the limit.									

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