

# 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



May 16, 2007

DTC Communications, Inc. 486 Amherst St. Nashua, NH 03063

Attention: Mr. Steve Russell

Dear Steve:

Enclosed you will find Data Package R-4793N covering the testing of the Hazmat Flashlight, Model: HVT-250-S, Serial Number: SB001232 to the requirements of FCC, Part 2.1053, Spurious Radiated Emissions. This testing was performed against Purchase Order Number 59527.

Test setup photographs, equipment lists and test data are included for each test method performed on the above test sample.

Thank you for this opportunity to be of service to you. Should you have any questions concerning this data or the actual testing of your unit, please do not hesitate to contact us.

Sincerely,

RETLIF TESTING LABORATORIES

Jamie Ramsey Publications

Enc. (as stated)



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#### DATA PACKAGE FOR

### **DTC COMMUNICATIONS**

### HAZMAT FLASHLIGHT

MODEL: HVT-250-S SERIAL NUMBER: SB001232

Customer Name:

**DTC** Communications

Customer P.O.:

59527

Data Package No.:

R-4793N

Package Date:

May 11, 2007

Test Start Date:

May 9, 2007

Test Finish Date:

May 9, 2007

Test Technicians:

Matthew Seamans & Todd Hannemann

Test Engineer:

Scott Wentworth

Data Prepared By:

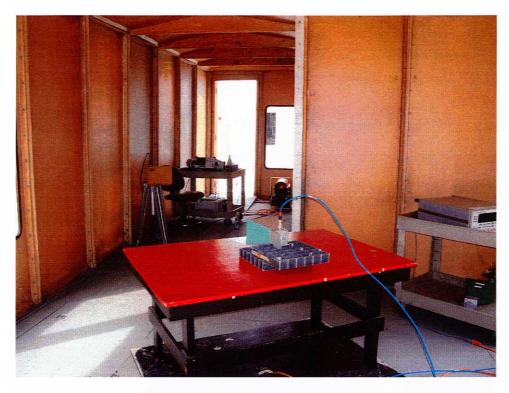
Jamie Ramsey

Supervisor:

Scott Wentworth

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## TEST SETUP PHOTOGRAPHS SPURIOUS RADIATED EMISSIONS







Retlif Testing Laboratories

DATA PACKAGE No. R-4793N

### TEST SETUP PHOTOGRAPHS SPURIOUS RADIATED EMISSIONS







**Retlif Testing Laboratories** 

DATA PACKAGE No. R-4793N

		RE	ETLIF	TESTI	NG LABO	PRAT	ORIES		-1			
a series de la			Grandan er	EMISSIO	NS DATA SHE	ET	Section 1		Hadel			
Test Method		Spurious Rad	iated Emission	ns (ERP) 30 MH	Hz to 25 GHz							
Customer:		DTC Commu	nications		Job No	r: R-479	93N					
Test Sample		Hazmat Flashlight										
Model No:		HVT-250-S			Serial I	No: SB00	1232					
Test Specific	ation:	FCC Part 2. T	IA/FIA-603									
		FCC Part 2, TIA/EIA-603  Paragraph: 2.1053										
Operating M	ode:	Transmitter and Camera on with LEDs off										
Technician:		T. Hannemann					05/09/2007					
Notes:				Hz	γ-]							
inotos.		Transmit Frequency: 2.45 GHz Peak Detector										
Test	Antenna/EUT	Reference	Signal Gen	Reference Ant				Corrected	Spurious			
Frequency	Position	Reading	Level	Gain		18		Reading	Limit			
MHz	Polarity/Axis	dBuV	dBm	dBd				dBm	dBm			
30.00	-	-	-	-				-	-13.00			
Ī	-											
4900.00	H/Y	74.69	-36.90	6.55				-30.35	ı			
7350.00	H/Y	75.46	-32.50	6.45				-26.05	l			
9800.00	-	*	•	-				-	ı			
12250.00	-	*	-	-					l l			
14700.00	-	*	40	-								
17150.00	•	*	7/	-					1			
19600.00 22050.00	-	*		-	-				1			
24500.00		*						<del> </del>				
1				-				-	i			
25000.00	Age 1	-	_	-				-	-13.00			
b												
					<del></del>		<del></del>					
Ţ.												
7												
9	EUT Emission	ns observed the	roughout the a	iven frequency	spectrum were record	ed & evaluate	ed.					
	* These harmonic frequencies were not observed above the noise floor of the test equipment which was a minimum of											
	10dB below th	0dB below the limit.										
Data Shee	1 of 3								R-4793N			

		- Sept - D. A.			NS DATA SHE	.C I					
est Method		Spurious Rad	iated Emissio	ns (ERP) 30 MH	z to 25 GHz						
Customer:		DTC Communications Job No: R-4793N									
est Sample:		Hazmat Flash	light			1.					
Model No:		HVT-250-S			Serial N	lo: SB001232					
est Specific	ation:	FCC Part 2, T	IA/FIA-603		Joernario	io.   OBOUTZUZ					
est opeoine	audii.	100   411 2, 1	##E## 000		Paragra	ph: 2.1053					
perating Mo	ode:	Transmitter ar	nd Camera on	with LEDs off							
Technician:		T. Hannemann			Date:	05/09/2007					
lotes:		Transmit Frequency: 2.466 GHz									
		Peak De	tector								
Test	Antenna/EUT	Reference	Signal Gen	Reference Ant			Corrected	Spurio			
Frequency	Position	Reading	Level	Gain		2	Reading	Limit			
MHz	Polarity/Axis	dBuV	dBm	dBd			dBm	dBm			
30.00	-	-		-			-	-13.0			
1000.00	-	70.40	- 40.50	- 0.55		_	-	1			
4932.00 7398.00	H/Y H/Y	72.43 70.67	-40.50	6.55 6.45			-33.95	1			
9864.00	п/ r -	*	-35.30			-	-28.85	1			
12330.00	-	*		-				<u> </u>			
14796.00		*						1			
17262.00	-	*		-			-	i			
19728.00	-	*	-	-			-	1			
22194.00	-	*	) <u>(E</u> C)	_			<u> </u>	1			
24660.00		*		-			-	1			
1				<b>-</b> 0			•	1			
25000.00	-	-	-	_			*	-13.0			
A A											
				<del>  </del>							
	EUT Emission	ns observed thr	oughout the a	iven frequency	spectrum were recorde	ed & evaluated.					
	* These harm	onic frequencie	es were not of	served above t	e noise floor of the tes	st equipment which v	was a minimum of				
	10dB below th										

#### **RETLIF TESTING LABORATORIES EMISSIONS DATA SHEET** Test Method: Spurious Radiated Emissions (ERP) 30 MHz to 25 GHz Customer: DTC Communications R-4793N Job No: Test Sample: Hazmat Flashlight HVT-250-S SB001232 Model No: Serial No: FCC Part 2, TIA/EIA-603 Test Specification: Paragraph: 2.1053 Operating Mode: Transmitter and Camera on with LEDs off T. Hannemann 05/09/2007 Technician: Date: Notes: Transmit Frequency: 2.483 GHz Peak Detector Antenna/EUT Signal Gen Spurious Reference Reference Ant Corrected Test Limit Frequency Position Reading Level Gain Reading Polarity/Axis MHz dBuV dBm dBd dBm dBm -13.00 30.00 4967.00 H/Y 72.86 -40.00 6.55 -33.451 7450.00 H/Y 70.62 -34.60 1 6.45 -28.15 9934.00 1 12417.00 1 14901.00 17384.00 I 19868.00 1 22351.00 24835.00 1 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. R-4793N Data Sheet 3 of 3

#### EQUIPMENT LIST SPURIOUS RADIATED EMISSIONS

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	08/25/2006	08/25/2007
3117	Power Supply	<b>B&amp;K Precision</b>	0-30 Vdc, 3.0 A	1630	01/23/2007	01/23/2008
3258	Double Ridge Guide	EMCO	1 - 18 GHz	3115	11/21/2006	11/21/2007
3430	Horn Antenna	MCS Corporation	18 GHz - 26.5 GHz	K-5039	01/23/2007	01/23/2008
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	05/24/2006	05/24/2007
4895	Spectrum Analyzer	Hewlett Packard	9kHz - 22GHz	8593EM	02/13/2007	02/13/2008
4984D	High Gain Horn	Microlab/FXR	3.95 - 5.85 GHz	H638A	01/24/2007	01/24/2008
4984E	High Gain Horn	Microlab/FXR	5.8 - 8.2 GHz	C638A	01/24/2007	01/24/2008
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	02/08/2006	06/08/2007
5070	EMI Test Receiver	Rohde & Schwarz	20Hz - 40GHz	ESIB40	11/22/2006	11/22/2007
5072	Preamplifier	Miteq	18 GHz-40 GHz	JS4-18004000-30	01/10/2007	01/10/2008



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DATA PACKAGE No. R-4793N