IC: 7027A-DRX1-4



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Electromagnetic Compatibility Test Report

Prepared in accordance with

FCC Part 15

On

DRX1-4 Radio

DRX1-4

Prepared for:

Carestream Health Inc.

150 Verona St

Rochester NY, 14608

Prepared by:

TUV Rheinland of North America, Inc.

Report No.:

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		1					
4 -	. C	Carestream Health Inc	. Ronald C	ain			
$A \iota$	ftraggeber: Client:	150 Verona St	585-627-	8321 / 585-	-477-2718		
	Citciii.	Rochester NY, 14608	Rochester NY, 14608 ronald.cain@cares				
Bezeichnung: Identification:	DRX1-4	Radio	Serien-Nr.: Serial No.	00403			
Gegenstand der Prüfung: Test item:	DRX1-4		Prüfdatum: Date tested:	03/12/2	2010		
Prüfort: Testing location:	336 Initia	einland of North Americ ative Drive er, NY 14624	ca				
Prüfgrundlage: Test specification:	Emission	Emissions: FCC Part 15.407 Subpart E FCC Part 15.209(a) FCC part 15.407(a)(3), FCC Part 15.407(a)(5) RSS-210 Issue 7, FCC Part 15.407(a)(6), FCC Part 15.407(b)(8), FCC Part 15.205, FCC Part 15.407(c), FCC Part 15.407(g), FCC Part 15.203, RSS-210					
Prüfergebnis: Test Result	oben ger	stehend beschriebene nannter Prüfgrundlage ove test standard(s)					
geprüft / tested by:	Randall Mas	iline	reviewed by: Ceci	l Gittens			
19 April 2010 Date Sonstiges: Other Aspects:	Name	Signature	19 April 2010 <i>Date</i> None	Name	Signature		
	pliant, Does not Co	entspricht Prüfgrundlage mply = entspricht nicht	Fail, Not	s, Compliant, Cor Compliant, Does ot applicable	mplies = passed s Not Comply = failed		
FC		qalvn	Industry Cana	ada	BSMI		
US5253	NVL	AP CODE 200313-0	3466C-1		SL2-IN-E-050R		
	•			-			



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1 General Information

1.1 Scope

This report is intended to document the status of conformance with the requirements of the FCC Part 15, based on the results of testing performed on 03/12/2010 on the DRX1-4 Radio, Model No. DRX1-4, manufactured by Carestream Health Inc.. This report only applies to the specific samples tested under the stated test conditions. It is the responsibility of the manufacturer to assure that additional production units of this model are manufactured with identical or EMI equivalent electrical and mechanical components. This report is further intended to document changes and modifications to the EUT throughout its life cycle. All documentation will be included as a supplement.

1.2 Purpose

Testing was performed to evaluate the EMC performance of the EUT (Equipment Under Test) in accordance with the applicable requirements, procedures, and criteria defined in the application of regulations and application of standards listed in this report.

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1.3	Sum	ma	ry of Test Results								
Applicant	Carestream Health Inc.			Tel	585-627-8321 Con		Con	ntact Ronald Cain			
пррисши			IY, 14608	Fax	585-477-271	8	e-ma	ail	ronald.cain@ h.com	carestreamhealt	
Description		DR	X1-4 Radio	Model	Number	DRX	Κ1-4				
Serial Number		004	103	Test V	oltage/Freq.	Batt	ery 14.	4VDC			
Test Date Com	pleted:	03/	12/2010	Test E	ngineer	Ran	dall N	1aslin	e		
Standa	rds		Description	Se	verity Level o	r Limi	t	Me	easurement	Test Result	
RSS-210 Issue	7		Industry Canada - Low-power License-exempt Radiocommunication Devices	See ca	ılled out basi	c stan	dards	See 1	Below	Complies	
FCC Part 15.407 5.725-5.825 GH		EΕ	Unlicensed National Information Infrastructure Devices	See called out basic standards below		dards	See 1	Below	Complies		
FCC Part 15.209	FCC Part 15.209(a)		Radiated Emissions	Class B, 30 - 1000 MHz				Complies			
FCC Part 15.207(c)			Conducted Emissions	Class B, 0.15 - 30 MHz				ot Required tery Powered	Complies		
FCC Part 15.407	FCC Part 15.407(a) (3)		Conducted Output Power	1Watt Maximum			1	15.9 dBm	Complies		
FCC part 15.407	7(a)(3)		-26 dB Bandwidth							Complies	
FCC Part 15.407	7(a)(5)		Peak Power Spectral Density							Complies	
FCC Part 15.407	7(a)(6)		Peak Power Excursion							Complies	
FCC Part 15.407	7(b)(8)		Band Edge							Complies	
FCC Part 15.205	5		Restricted Bands							Complies	
FCC Part 15.407(c)			Discontinuance Of Transmission							Complies	
FCC Part 15.407(g) Fre		Frequency Stability	Stability						Complies		
FCC Part 15.203		Antenna Requirements							Complies		
RSS-210			99% Bandwidth							Complies	

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2 Laboratory Information

2.1 Accreditations & Endorsements

2.1.1 US Federal Communications Commission

TUV Rheinland of North America located at 336 Initiative Dr, Rochester NY is accredited by the commission for performing testing services for the general public on a fee basis. This laboratory test facilities have been fully described in reports submitted to and accepted by the FCC (Registration No US90575). The laboratory scope of accreditation includes: Title 47 CFR Part 15, and 18. The accreditation is updated every 3 years.

2.1.2 NIST / NVLAP

Program, which is administered under the auspices of the National Institute of Standards and Technology. The laboratory has been assessed and accredited in accordance with ISO Standard 17025:2005 (Lab code:200313-0). The scope of laboratory accreditation includes emission and immunity testing. The accreditation is updated annually.

2.1.3 VCCI

VCCI Accredited test lab. Registration numbers R-1065, C-1120, C-1121

2.1.4 Industry Canada

Registration No.: 3466C-1. The OATS has been accepted by Industry Canada to perform testing to 3 and to 10m, based on the test procedures described in ANSI C63.4-2003.

2.1.5 **BSMI**

Registration No.: SL2-IN-E-050R. The BSMI accreditation was obtained by NIST MRA with the BSMI.

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2.2 Measurement Uncertainty

General

The estimated combined standard uncertainty for ESD immunity measurements is \pm 0.43%.
The estimated combined standard uncertainty for radiated immunity measurements is $\pm 2.0 dB$.
The estimated combined standard uncertainty for EFT fast transient immunity measurements is \pm 6.0%.
The estimated combined standard uncertainty for surge immunity measurements is \pm 5.0%.
The estimated combined standard uncertainty for conducted immunity measurements is ± 2.0 dB.
The estimated combined standard uncertainty for power frequency magnetic field immunity measurements is $\pm 2.57\%$.
The estimated combined standard uncertainty for voltage variation and interruption measurements is \pm 4.89%.
The estimated combined standard uncertainty for radiated emissions measurements is \pm 4.6 dB.
The estimated combined standard uncertainty for conducted emissions measurements is ± 2.6 dB.
The estimated combined standard uncertainty for harmonic current \pm 7.27% and flicker measurements is \pm 3.87%.

2.3 Calibration Traceability

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Measurement method complies with ANSI/NCSL Z540-1-1994 and ISO Standard 17025:2005. Equipment calibration records are kept on file at the test facility.

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2.4 Measurement Equipment Used

Equipment	Manufacturer	Model #	Ref.	Serial #	Last Cal dd/mm/yy	Next Cal dd/mm/yy	Test
Biconical Antenna	EMCO	3110	C004	1502	13 Feb 10	13 Feb 12	RE
Log Periodic Antenna	EMCO	3147	C023	1369	13 Feb 10	13 Feb 12	RE
Horn	EMCO	3115	C025	9812-4630	30-Jun 09	30-Jun-11	RE
BiLog	Chase	CBL6111	C017	1169	9-Jul-09	9-Jul-10	RE
EMI Receiver	Rohde & Schwarz	ESVS 30	C310	826006/015	17-Dec-09	17-Dec-10	RE
Analyzer w RF Filter Section 85460A	НР	8546A	C311	3325A00127	30-Jul-09	30-Jul-10	RE, CE
Receiver (20Hz-40GHz)	Rohde & Schwarz	ESI 40	C320	839283/005	29-Jul-09	29-Jul-10	RE,CE
EMI Receiver	Rohde & Schwarz	ESHS 30	C323	831954/012	17-Dec-09	17-Dec-10	CE
Amplifier (18-26.5GHz)	Rohde & Schwarz	TS-PR26	C443	100005	30-Jul-09	30-Jul-11	RE
Digital Pressure/Temp/RH	Davis	Perception II	C444	40917	09-Feb10	09-Feb-12	All tests
Horn	EMCO	3160-09	C447	03-0338-018	16-Sep-08	16-Sep-10	RE
BiLog	Chase	CBL6111B	C448	2081	21-Nov-09	21-Nov-10	RE
Multimeter	Fluke	8062A	C452	4715199	17-Dec-09	17-Dec-10	All tests
Analyzer w RF Filter Section 85460A	HP	8546A	D004	3625A00356	29-Jul-09	29-Jul-10	RE, CE
Temp Chamber	Tenney	T-14 Special		9928	20-Nov-09	20-Nov-10	RE

Note: CE = Conducted Emissions, CI= Conducted Immunity, DP=Disturbance Power, EFT=Electrical Fast Transients, ESD = Electrostatic Discharge, FLI=Flicker, HAR=Harmonics, MF=Magnetic Field Immunity, RE=Radiated Emissions, RI=Radiated Immunity, SI=Surge Immunity, VDSI=Voltage Dips and Short Interruptions

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3 Product Information

3.1 Product Description

See Appendix A

Channel	Operating Frequency (MHz)	Rated Power (dBm)
149	5.745	+30
153	5.765	+30
157	5.785	+30
161	5.805	+30

3.2 **Equipment Modifications**

No modifications were needed to bring product into compliance.

3.3 Test Plan

The EUT product information, test configuration, mode of operation, test types, test procedures, test levels, pass/failure criteria, in this report were carried out per the product test plan located in appendix A of this report.

There were no deviations, adaptations or exclusions made to the standards shown on page 2 during the testing of the DRX1-4 radio.

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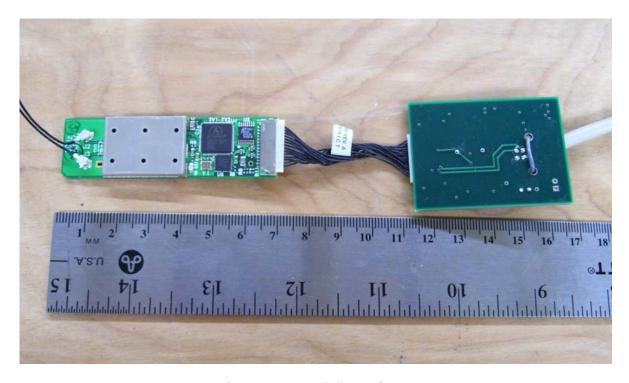


Figure 1 – Internal Photo of EUT

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4 Emissions

4.1 Radiated Emissions

This test measures the electromagnetic levels of spurious signals generated by the EUT that radiated from the EUT and may affect the performance of other nearby electronic equipment.

4.1.1 Over View of Test

Results	Complies (as tested per this report)					03/11/2	010	
Standard	FCC Part 15.209(a)	CC Part 15.209(a)						
Product Model	DRX1-4	DRX1-4 Serial # 00403						
Configuration	See test plan for det	ails						
Test Set-up	Tested on 10m O.A.	T.S. plac	ed on turn-1	able, see test	plans f	or details		
EUT Powered By	Battery 14.4VDC	Temp	24°C	Humidity	54%	Pressure	1013mbar	
Frequency Range	30 - 1000 MHz @ 1	0m						
Criteria	Class B. (Below Limit) Perf. Verif			fication	Readings Under Limit			
Mod. to EUT	None	·	Test Perf	ormed By	Randall Masline			

4.1.2 Test Procedure(s)

Radiated and FCC emissions tests were performed using the procedures of ANSI C63.4 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration.

The frequency range from 30 - 1000 MHz was investigated for radiated emissions.

Radiated emission testing was first performed at a distance of 3 meters in the semi-anechoic chamber in order to identify the specific frequencies for which these measurements will be made on the 10 m OATS.

In accordance with FCC Public Notice DA 02-2138 Measurement Procedure updated for Peak Transmit Power in the Unlicensed National Information Infrastructure (U-NII) Bands.

The transmitter was transmitting continuously at maximum power for all tests. Therefore; method 1 was used to measure peak power.

4.1.3 Deviations

There were no deviations from the test methodology listed in the test plan for the radiated emission test.

4.1.4 Final Test

All final radiated emissions measurements were below (in compliance) the limits.

The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.

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4.1.5 Final Tabulated Data

Radiated Er	nissions l	Measure	ments			2			
Standard:	47 CFR 15.209(a), Class B				Final		Date:	3/11/2010	į.
Device Tested:	DRX1-4 Rad	oib	:		3.0m	8	File:	:	
3	Me	easured Le	l vel			5			
Meas#	Freq (MHz)	Quasi- Peak	Quasi- Peak Limit	Quasi- Peak Δ	Result	Polarization	Angle (degrees)	Antenna Height (meters)	Comment
1	33.4680	32.10	40.00	-7.90	Complied	Vertical	0	1.00	
2	80.0640	29.70	40.00	-10.30	Complied	Vertical	0	1.00	
3	133.0200	31.50	43.50	-12.00	Complied	Vertical	0	1.00	
4	163.1280	28.60	43.50	-14.90	Complied	Vertical	0	1.00	8
5	672.0000	37.30	46.00	-8.70	Complied	Vertical	0	1.00	
6	242.0000	37.40	46.00	-8.60	Complied	Horizontal	0	1.00	
7	472.0000	41.10	46.00	-4.90	Complied	Horizontal	0	1.00	
8	484.0000	42.30	46.00	-3.70	Complied	Horizontal	0	1.00	

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4.2 Spurious Emissions

Spurious emissions were investigated to the 10th harmonic or in this case to 40 GHz, measurements were taken on the highest channel, channel 161, 5805 MHz at 24 Mbits/s.

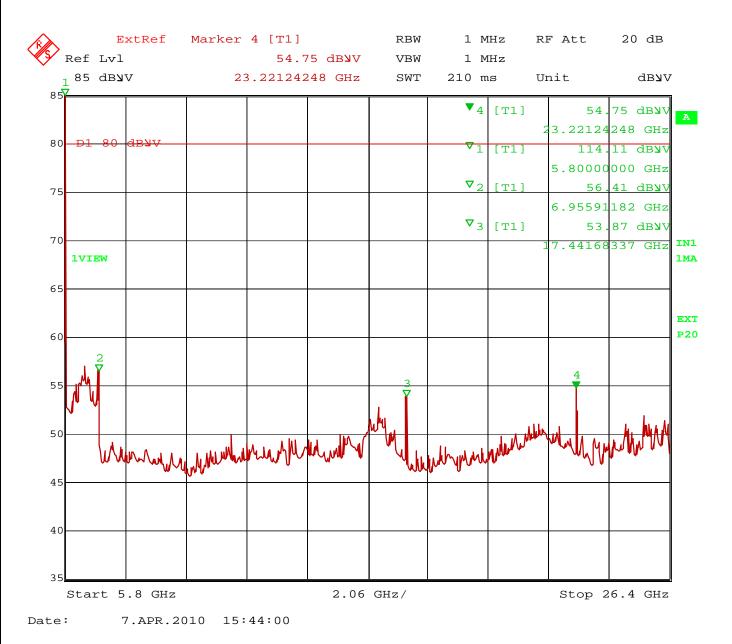


Figure 2 – Spurious Emissions from 5.8 GHz to 26.4 GHz

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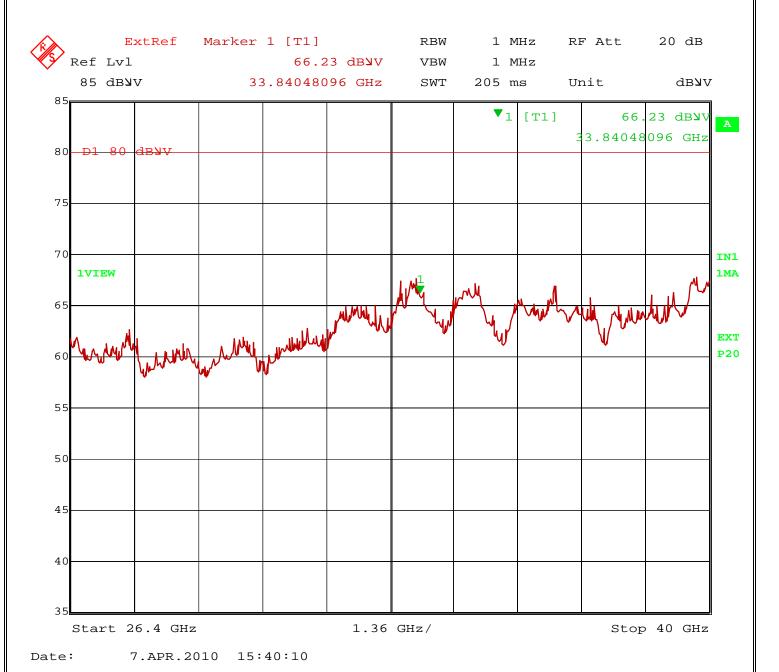


Figure 3 – Spurious Emissions from 26.4 GHz to 40 GHz

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4.3 Conducted Emissions

This test measures the electromagnet levels of spurious signals generated by the EUT on the AC power line that may affect the performance of other near by electronic equipment.

The EUT operated on 12VDC battery only, therefore testing was not performed.

4.4 Conducted Output Power Limits

Testing has been carried out on the EUT in accordance with 47 CFR Part 15.407(a)(3) in order to determine the -26 dB emission bandwidth of the transmitted signal. It has been determined that the -26 emission bandwidth is 26 MHz.

The peak transmit power limit based on the -26dB emission bandwidth in the frequency band of 5725 – 5825 MHz can be calculated as follows:

+17 dBm + 10 log B where B is the -26 dB emission Bandwidth in MHz

 $+17 \text{ dBm} + 10 \log 26 = +17 \text{ dBm} + 14.14 = 31.14 \text{ dBm} (1.3\text{W})$

In accordance with 47 CFR Part 15.404(a)(3) the peak transmit power in the frequency band of 5725 – 58250 MHz shall not exceed the lesser of 1W or +17 dBm + 10log B, where B is the -26 dB emission bandwidth in MHz.

In accordance with 47 CFR Part 15.407(a)(3), the peak transmit power limit, in the frequency band of 5725 – 5825 MHz, has been determined at +30 dBm (1W)

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4.4.1 Maximum Peak Transmit Power Test Results

Transmission Bitrate	M	Limit (dBm) Antena gain			
(Mbits/s)	Ch 149	Ch 153	Ch 157	Ch 161	< 6 dBi
	5745 MHz	5765 MHz	5785 MHz	5805 MHz	
6	15.9	15.8	15.6	15.7	+30
12	15.8	15.8	15.6	15.6	+30
24	15.7	15.7	15.5	15.6	+30
54	15.7	15.7	15.6	15.5	+30

Table 1 – Maximum Peak transmit power at 20MHz Bandwidth

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4.5 Peak Power Spectral Density

The results of the testing on the EUT, carried out in accordance with 47 CFR Part 15.407(a)(5), are depicted in the table 2 below. The limits have been derived from 47 CFR Part 15.407(a)(3)

In accordance with FCC Public Notice DA 02-2138 Measurement Procedure updated for Peak Transmit Power in the Unlicensed National Information Infrastructure (U-NII) Bands. Method #2 was used

4.5.1 Test Results

Transmission					
Bitrate		Conducted in a	ny 1 MHz band		Limit (dBm)
(Mbits/s)	Ch 149	Ch 153	Ch 157	Ch 161	
	5745 MHz	5765 MHz	5785 MHz	5805 MHz	
6	9.10	10.04	9.41	9.62	+17
12	9.63	9.09	9.64	8.92	+17
24	8.87	9.86	9.20	10.17	+17
54	9.41	8.95	9.74	9.41	+17

Table 2 – Peak Power Spectral Density at 20MHz Bandwidth

4.5.2 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

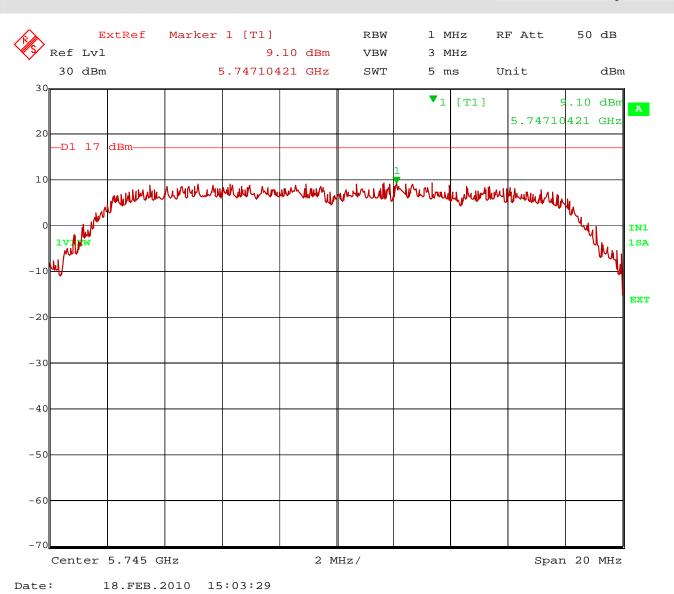
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Plot 1– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 6 Mbits/s

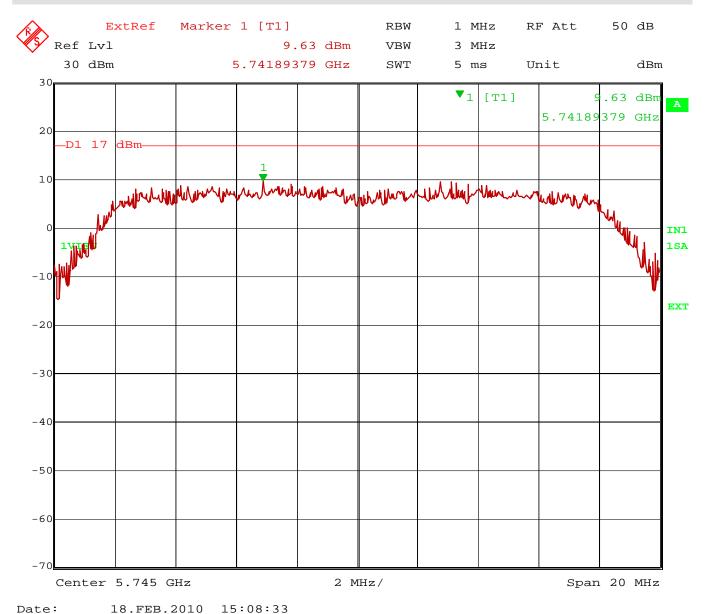
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Plot 2– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 12 Mbits/s

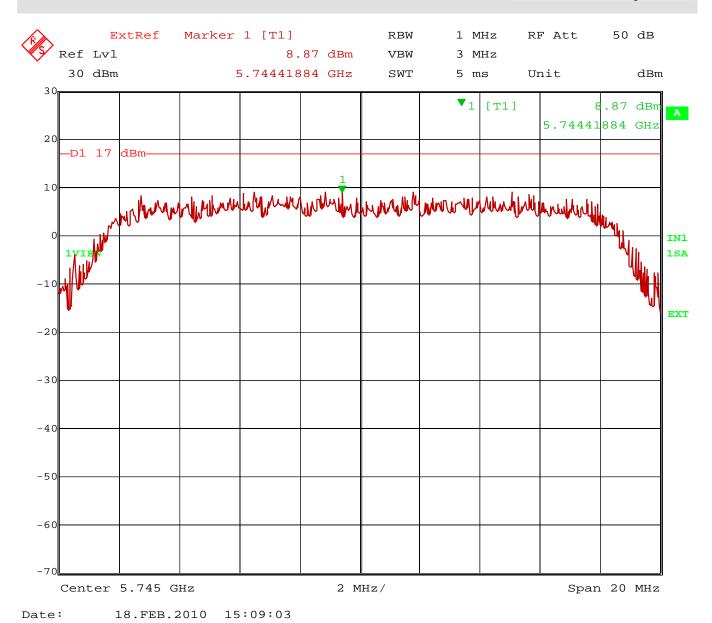
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Plot 3– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 24 Mbits/s

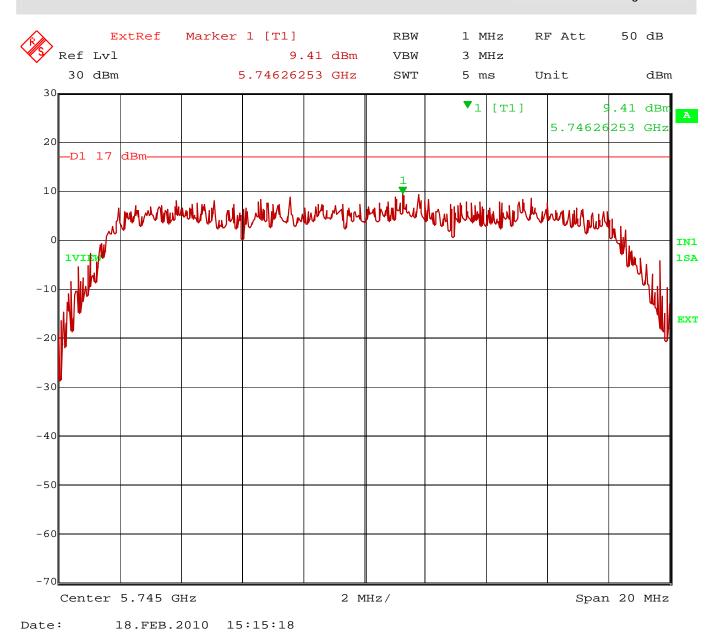
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Plot 4– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 54 Mbits/s

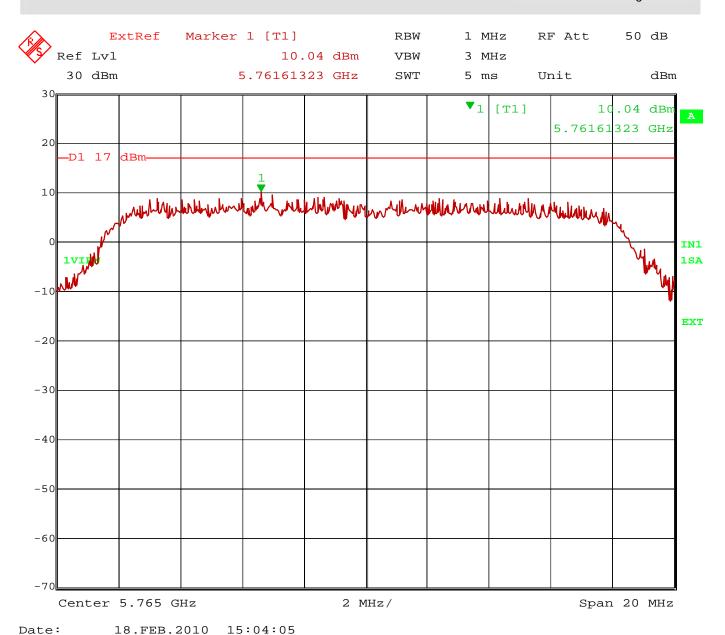
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Plot 5– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 6 Mbits/s

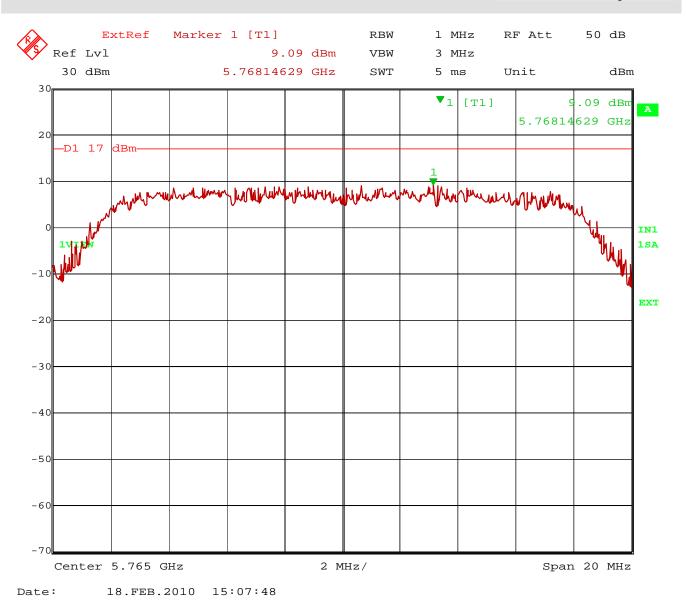
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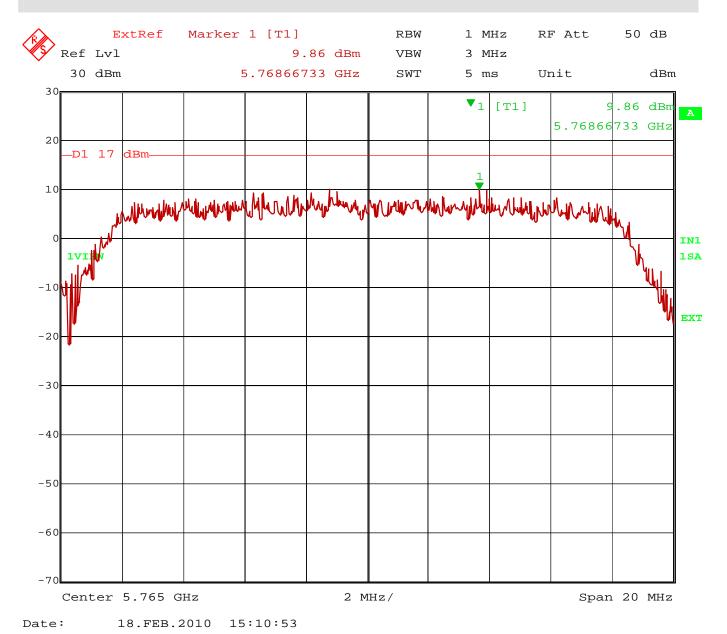
Plot 6– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 12 Mbits/s



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Plot 7– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 24 Mbits/s

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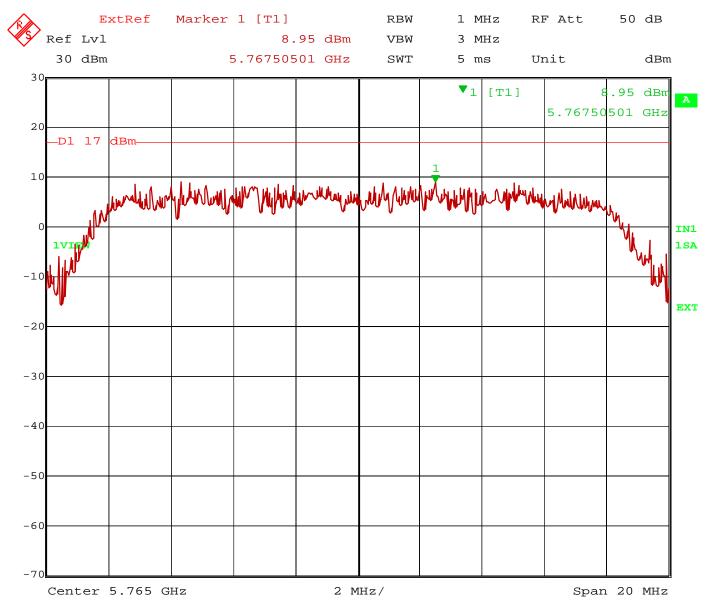
Rev 1.0



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Date: 18.FEB.2010 15:14:38

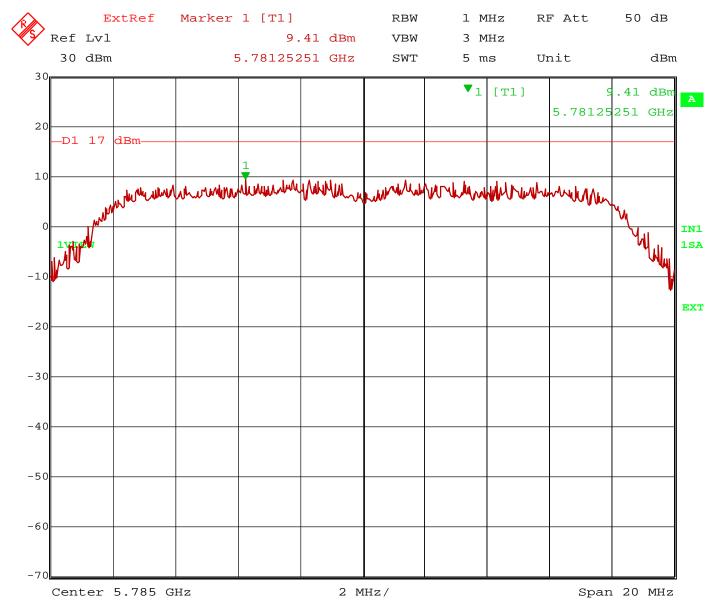
Plot 8– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 54 Mbits/s



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Date: 18.FEB.2010 15:04:54

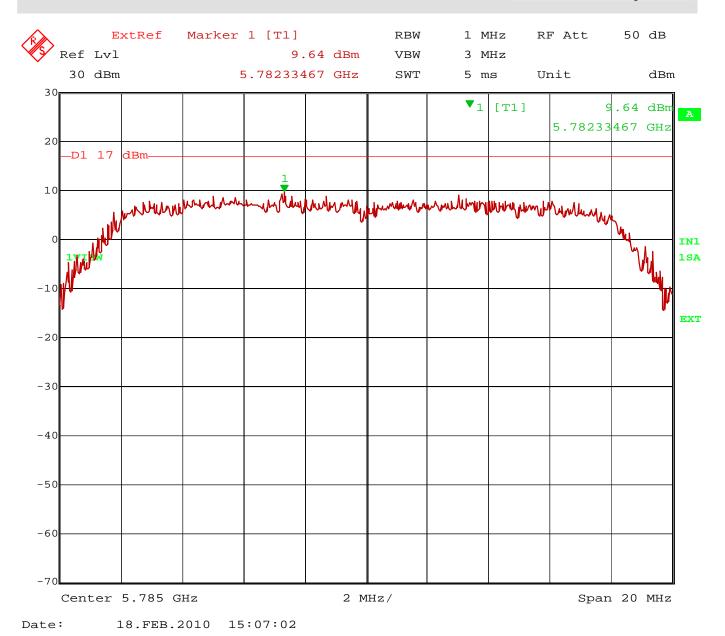
Plot 9– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 6 Mbits/s



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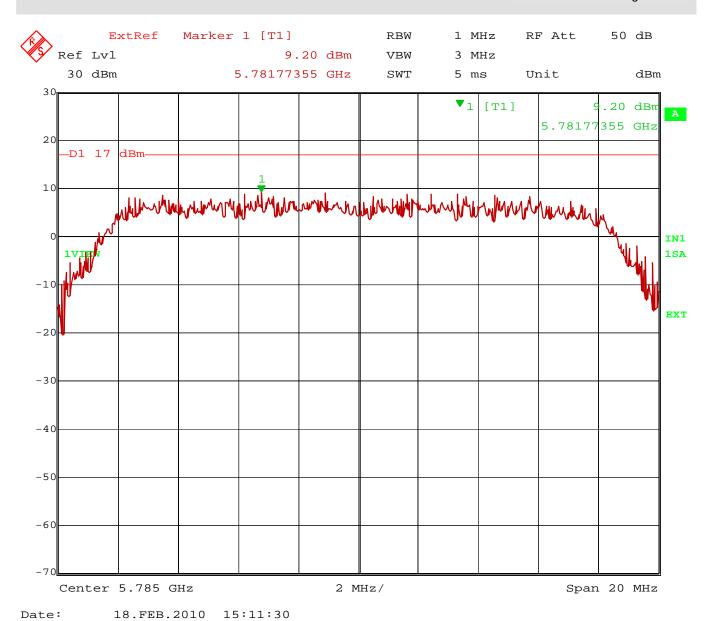
Plot 10– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 12 Mbits/s

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Plot 11– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 24 Mbits/s

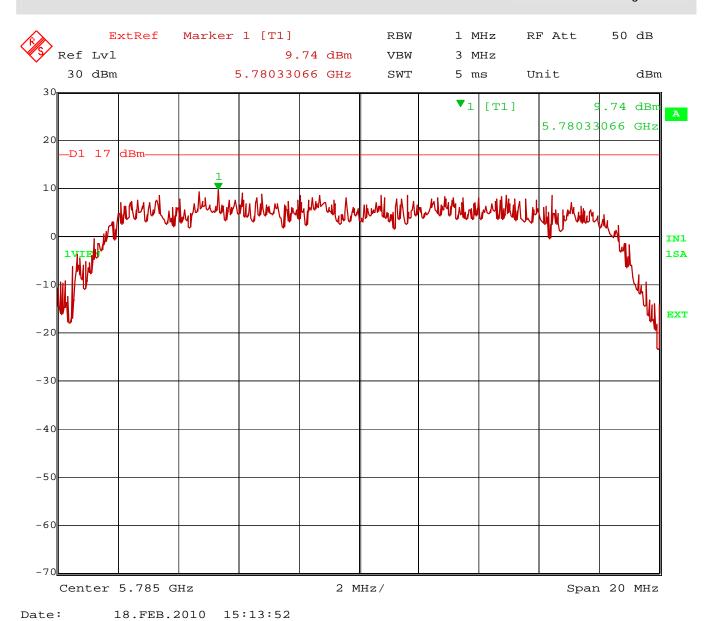
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Plot 12– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 54 Mbits/s

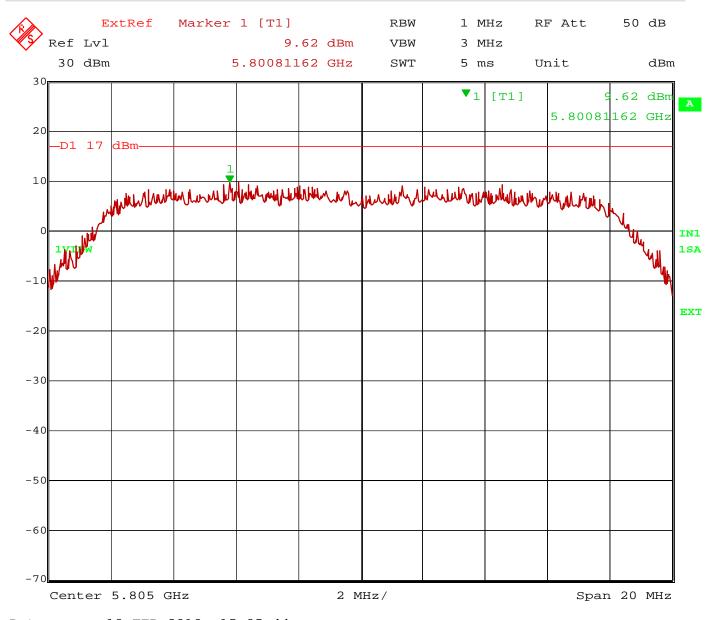
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Date: 18.FEB.2010 15:05:44

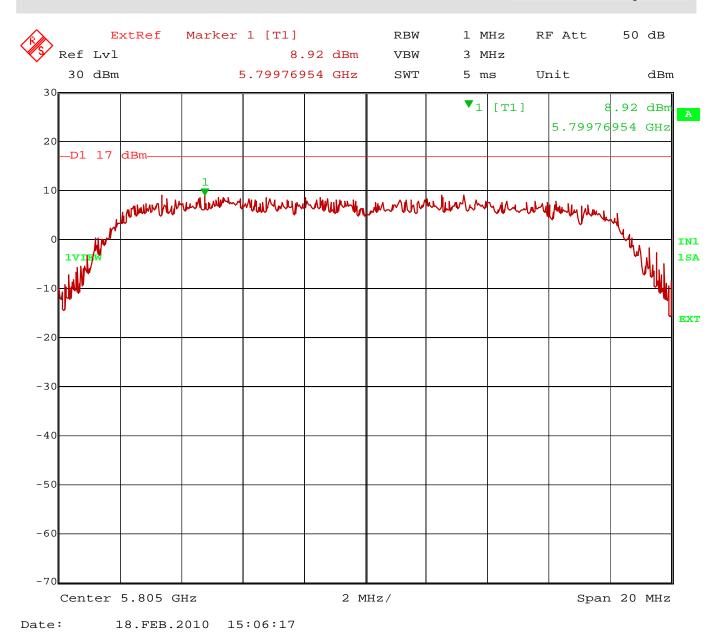
Plot 13– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 6 Mbits/s



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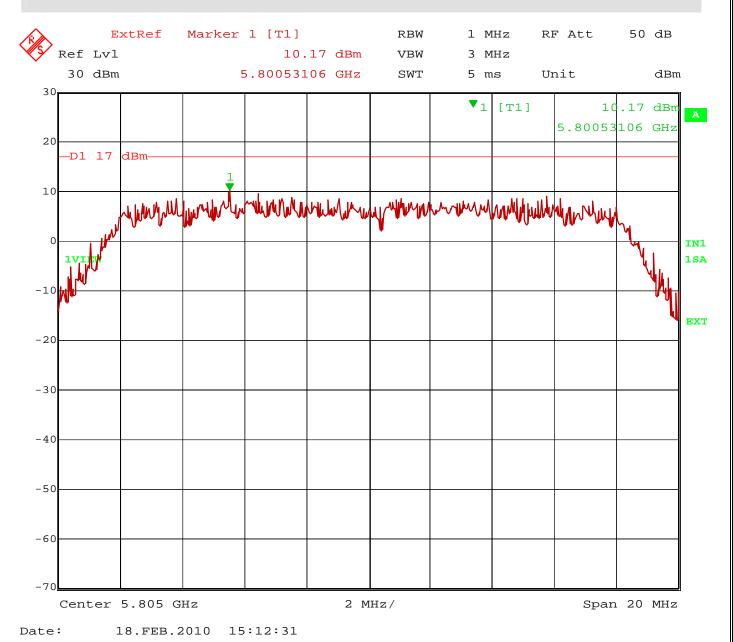
Plot 14 – Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 12 Mbits/s



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Plot 15 – Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 24 Mbits/s

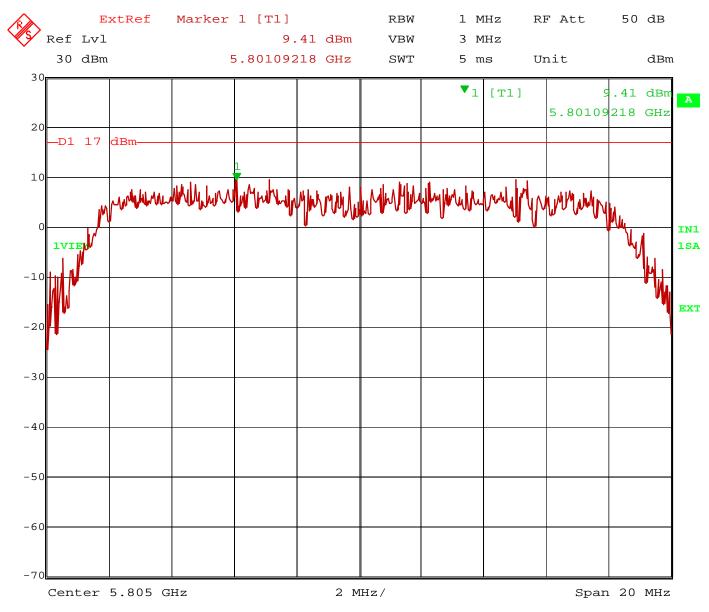
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Date: 18.FEB.2010 15:13:15

Plot 16– Peak Power Spectral Density (conducted) in any 1 MHz band EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 54 Mbits/s

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4.6 Peak Power Excursion

The results of the testing on the EUT, carried out in accordance with 47 CFR Part 15.407(a)(6), are depicted in table 3 below.

4.6.1 Test Results

Transmission Bitrate (Mbits/s)	Ratio o	Limit (dB)			
	Ch 149 5745 MHz	Ch 153 5765 MHz	Ch 157 5785 MHz	Ch 161 5805 MHz	
6	-6.37	-8.91	-8.39	-8.04	≤13.0
12	-8.39	-7.80	-8.30	-7.33	≤13.0
24	-8.21	-8.17	-8.75	-8.87	≤13.0
54	-7.97	-7.40	-9.90	-8.13	≤13.0

Table 3 – Ratio of the peak excursion of the modulation envelope

4.6.2 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

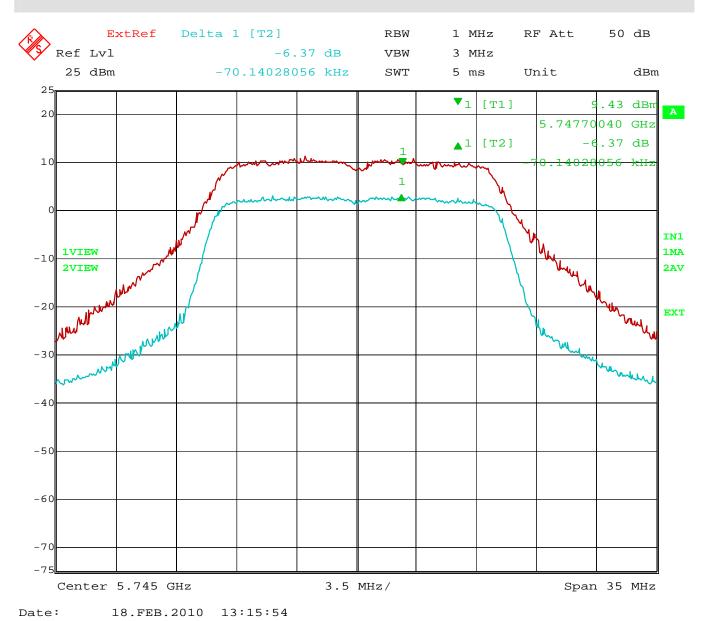
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Plot 17 - Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 6 Mbits/s

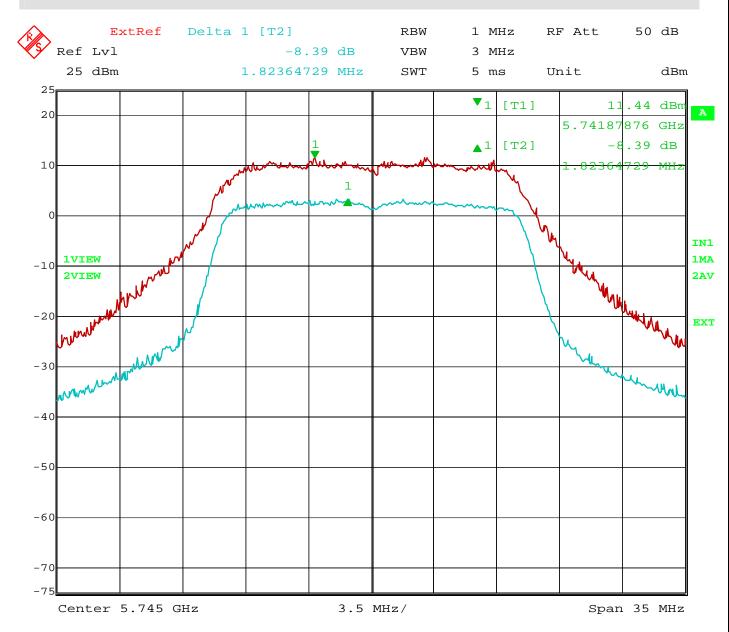
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Date: 18.FEB.2010 12:01:57

Plot 18 - Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 146 (5745 MHz) at a Transmission rate of 12 Mbits/s

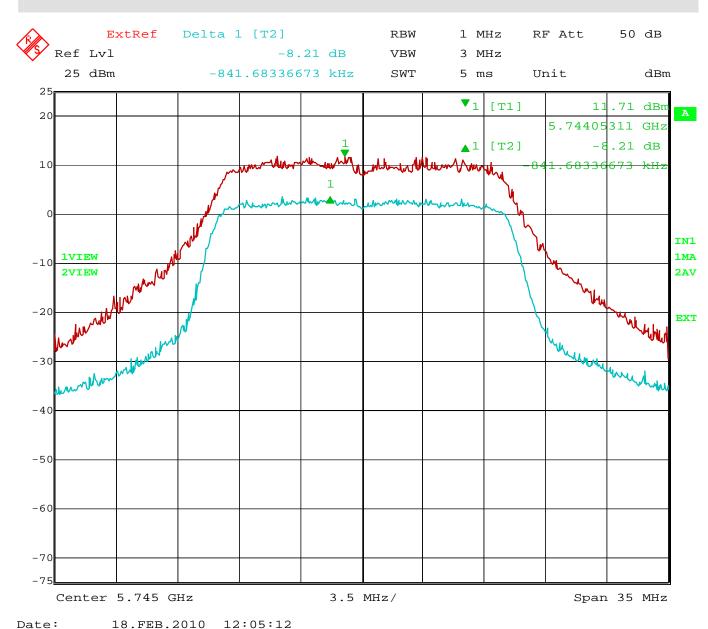
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Plot 19- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 24 Mbits/s

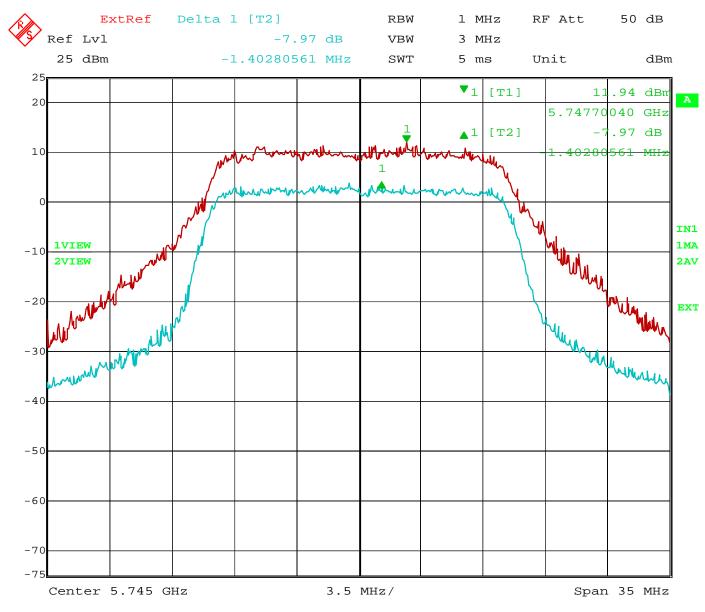
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Date: 18.FEB.2010 13:13:21

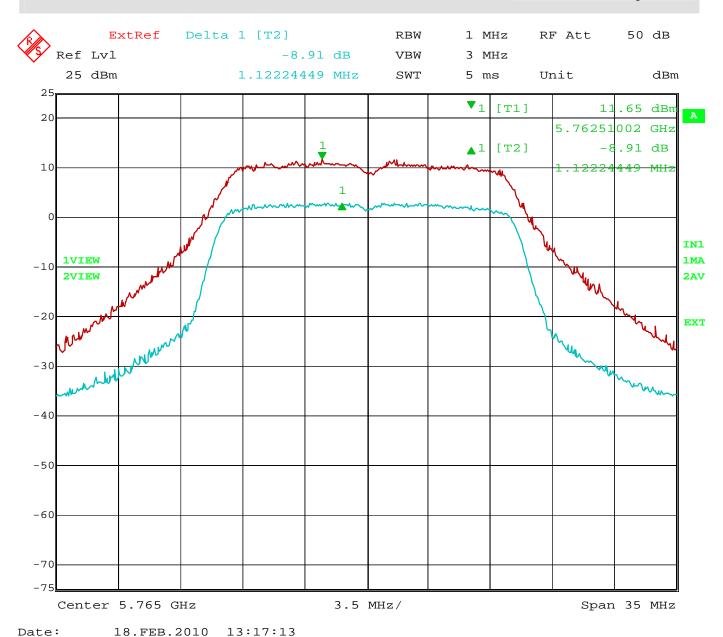
Plot 20 - Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 149 (5745 MHz) at a Transmission rate of 54 Mbits/s



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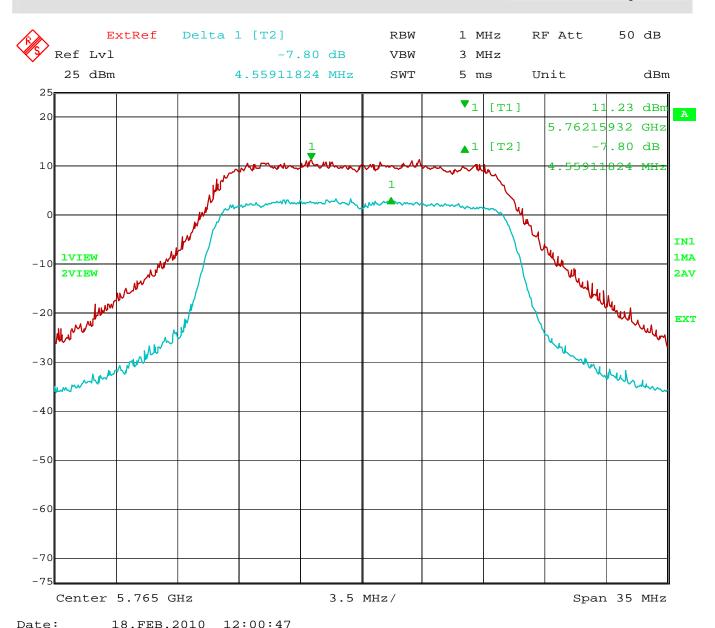
Plot 21 - Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 6 Mbits/s

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Plot 22- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 24 Mbits/

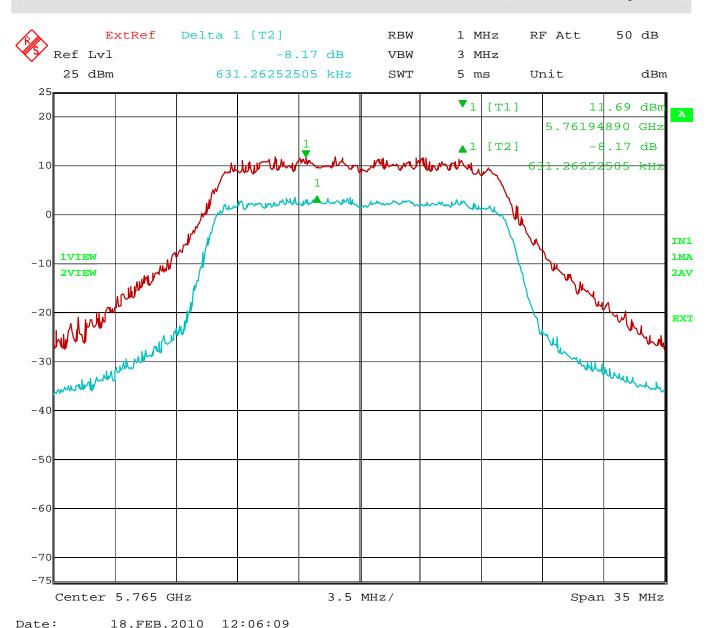
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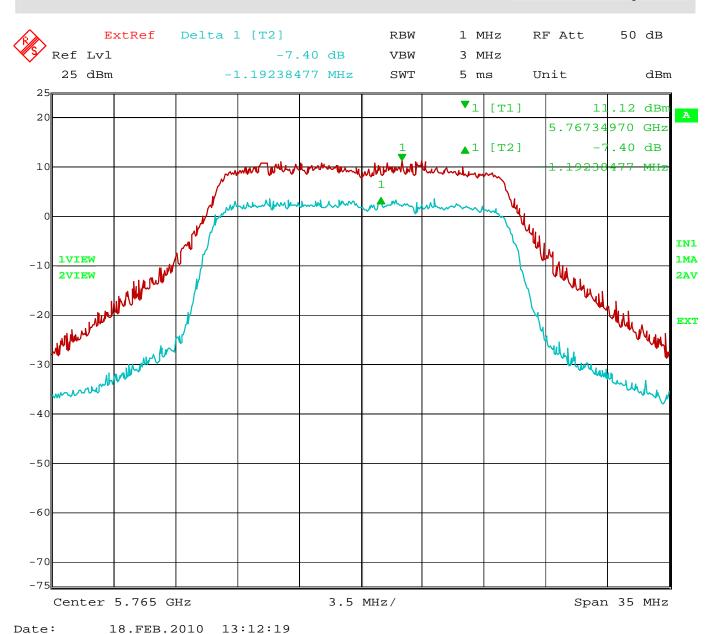
Plot 23- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 24 Mbits/s



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Plot 24- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 153 (5765 MHz) at a Transmission rate of 54 Mbits/s

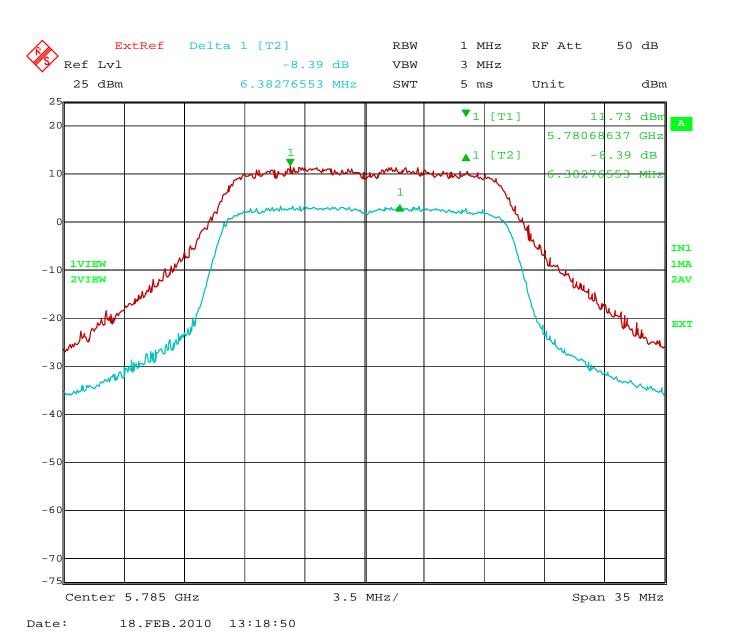
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Plot 25- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 6 Mbits/s

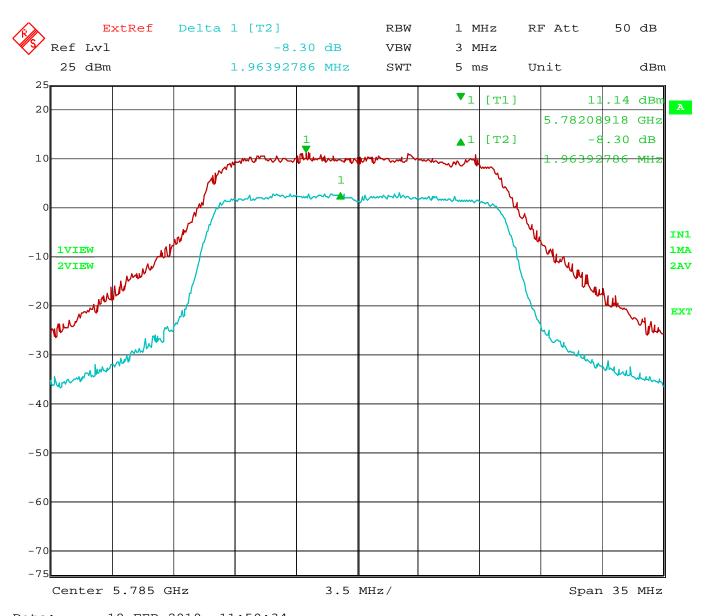
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Date: 18.FEB.2010 11:59:34

Plot 26- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 12 Mbits/s

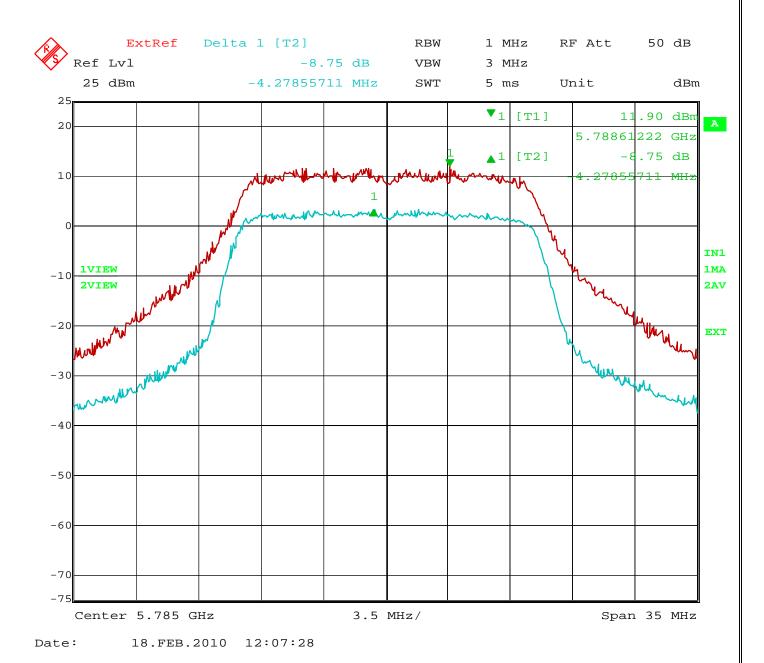
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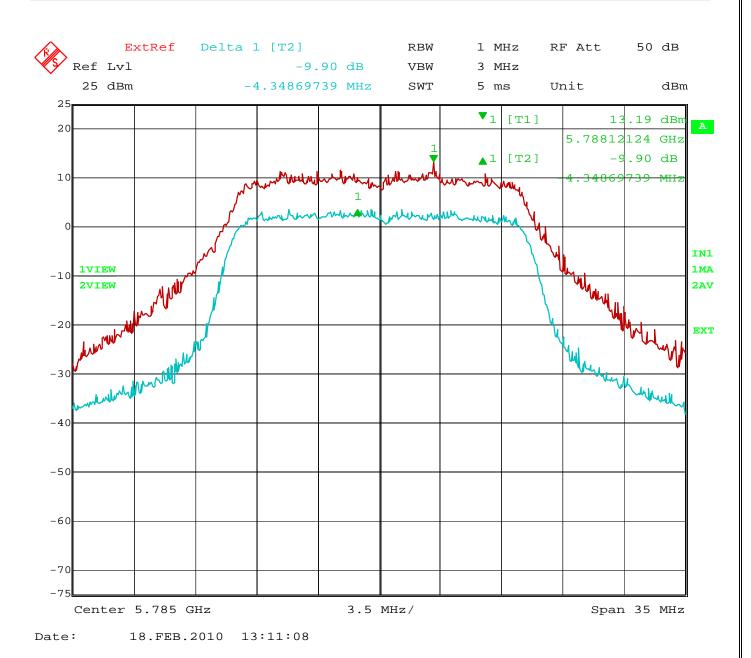
Plot 27- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 24 Mbits/s

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Plot 28- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 157 (5785 MHz) at a Transmission rate of 54 Mbits/s

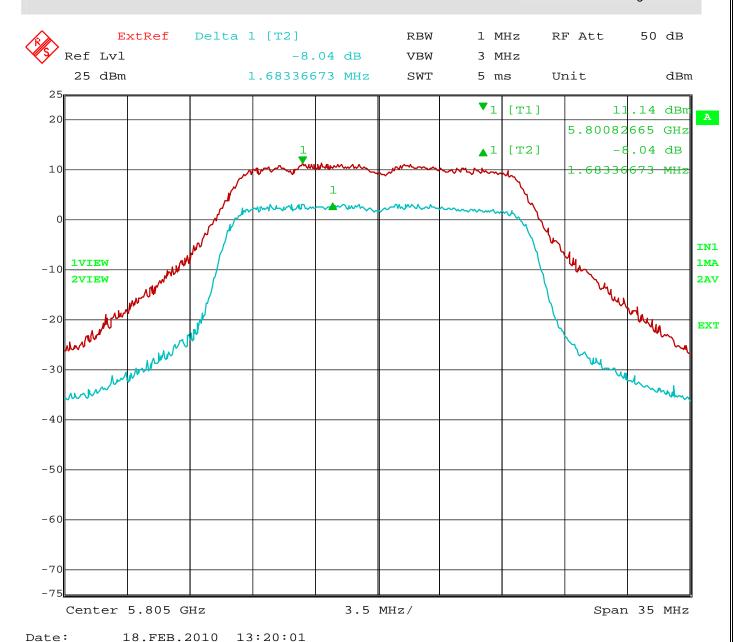
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Plot 29- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 6 Mbits/s

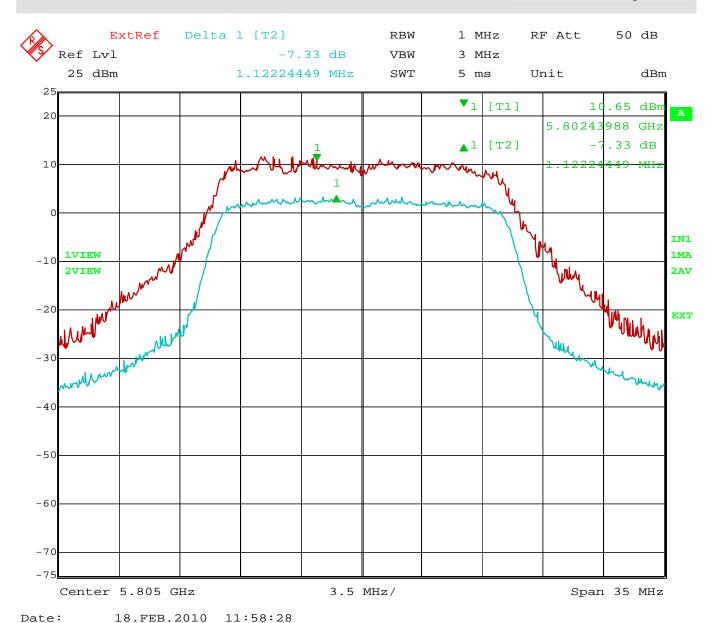
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Plot 30- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 12 Mbits/s

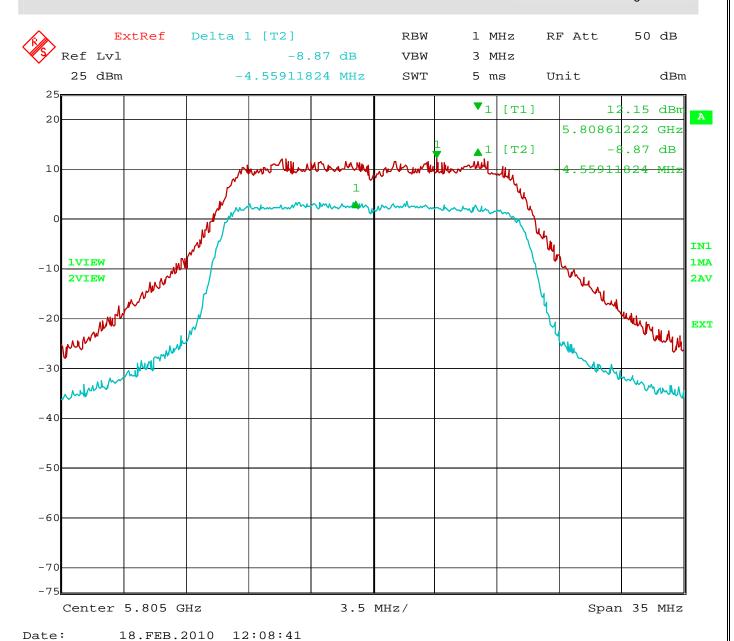
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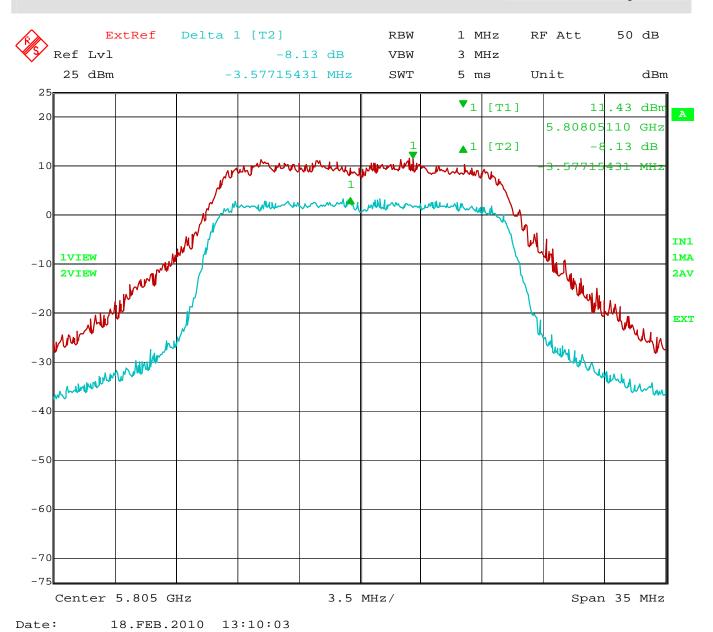
Plot 31- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 24 Mbits/s



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Plot 32- Ratio of Peak Excursion of the Modulation Envelope EUT operating on Ch 161 (5805 MHz) at a Transmission rate of 54 Mbits/s

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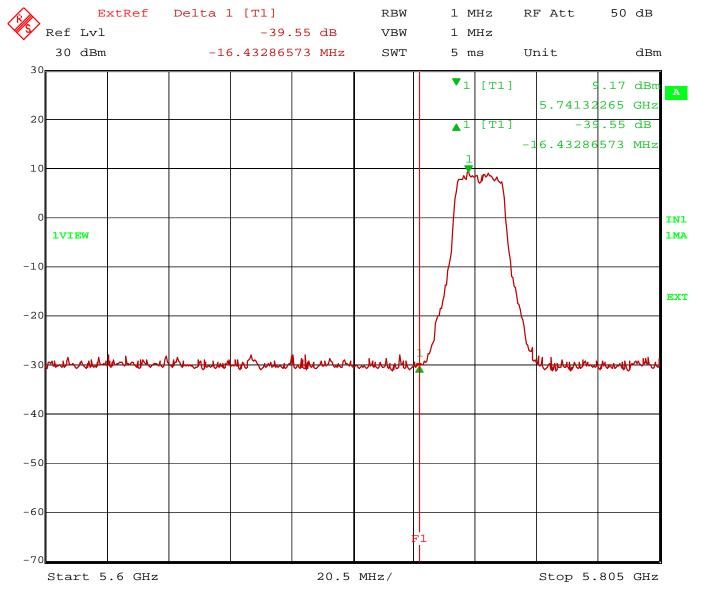
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4.7 Band Edge

In accordance with 47 CFR Part 15.407(b) All emissions outside of the 5.725 – 5.825 GHz Band shall not exceed an EIRP of -27dBm/MHz.



Date: 18.FEB.2010 16:12:47

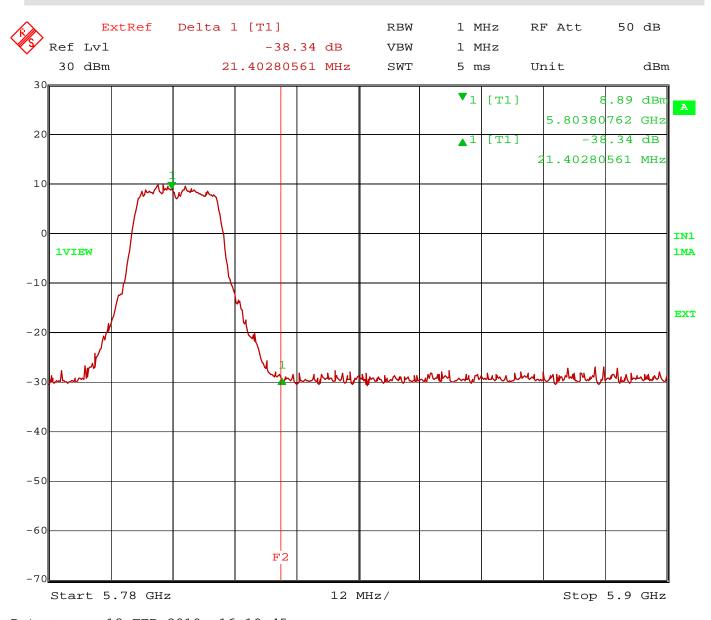
Plot 33 – Lower Band edge at 5725 MHz



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Date: 18.FEB.2010 16:10:45

Plot 34 – Upper Band edge at 5805 MHz

4.7.1 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

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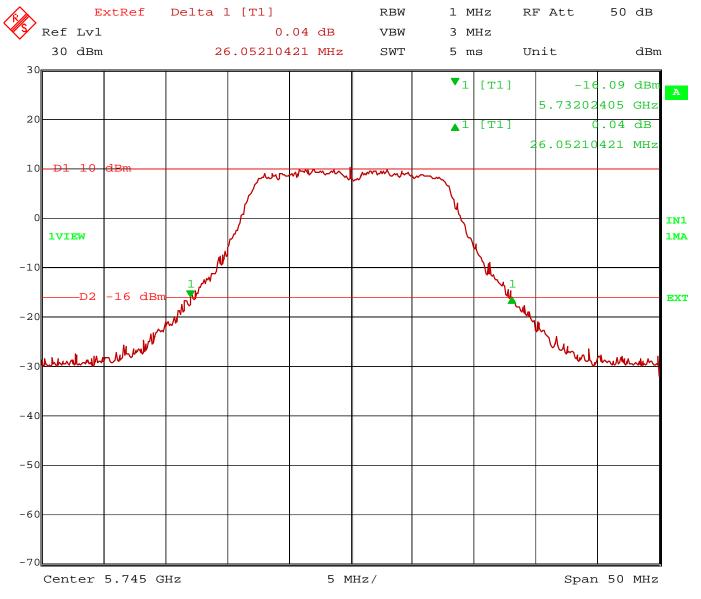
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4.8 -26 dB Bandwidth

In accordance with 47 CFR Part 15.407(a) (3)



Date: 18.FEB.2010 15:55:38

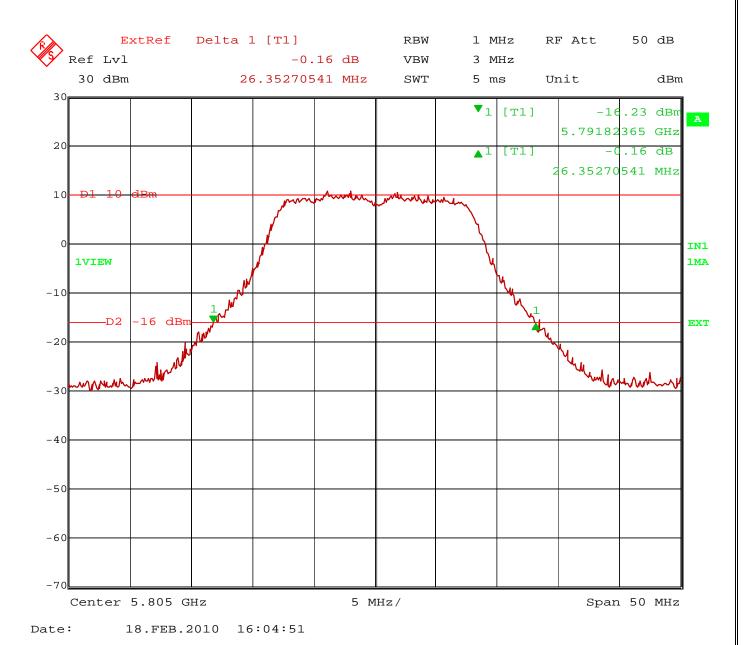
Plot 35 – (-26) dB Bandwidth of EUT operating on Ch 149

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Plot 36 – (-26) dB Bandwidth of EUT operating on Ch 161

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4.8.1 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

4.9 Restricted Bands of Operation

In accordance with 47 CFR Part 15.407(b)(7) Intentional radiators need to comply with the provisions of 47 CFR Part 15.205. The results of these measurements can be found in section 4.1

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4.10 Discontinuance of transmission in absence of Information

In accordance with 47 CFR part 15.407(c) applicants shall include in their application of how this requirement is met.



Carestream Health, Inc. 150 Verona Street Rachester, NY 14608

TO: TUV Rheinland of N.A.

336 Initiative Dr.

Rochester, New York 14624

From: Ronald L. Cain

Carestream Health, Inc. 1049 West Ridge Rd. Rochester, N.Y. 14615

DATE: March 12, 2010

In my capacity as Electromagnetic Compliance Engineer, Carestream Health, Inc., I confirm that the Carestream DRX1-4 radio meets the requirements for discontinuance of transmission contained in 47 CFR 15.407 C.

The Carestream DRX1-4 radio functions as a station (slave) to a wireless access point. The DRX1-4 radio is programmed to respond to the access point and will not transmit unless requested to do so.

Regards,

Ronald L. Cain

Ronald h. Pain

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4.11 Frequency Stability

In accordance with 47 CFR Part 15.407(g) the frequency stability of U-NII devices must be such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual. The Manufacturer calls out operating temperature ranges of $+10^{\circ}$ to $+30^{\circ}$ C

4.11.1 Test results

Тетр	Start -26 dB(GHz)	Start +26dB (GHz)	30Min -26 dB (GHz)	30Min +26dB (GHz)	Permitted Band Edge (GHz)	Results
-10° C	5.7320	5.7918	5.7320	5.7918	5.725 - 5.825	Complies
0° C	5.7320	5.7918	5.7320	5.7918	5.725 – 5.825	Complies
+30° C	5.7320	5.7918	5.7320	5.7918	5.725 - 5.825	Complies

Table 4 – Frequency Stability

4.11.2 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

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4.12 Antenna Requirements

In accordance with 47 CFR Part 15.203 an intentional radiator shall be designed to ensure that no antenna other then that furnished by the responsible party shall be used with the device.



Carestream Health, Inc. 150 Verona Street Rochester, NY 14608

TO: TUV Rheinland of N.A.

336 Initiative Dr.

Rochester, New York 14624

From: Ronald L. Cain

Carestream Health, Inc. 1049 West Ridge Rd. Rochester, N.Y. 14615

DATE: March 12, 2010

In my capacity as Electromagnetic Compliance Engineer, Carestream Health, Inc., I confirm that only the antennas furnished with the Carestream DRX1-4 radio will be used with the device as specified in CFR 47 15.203.

The DRX1-4 radio antennas are installed inside the case of a wireless X-Ray detector and are accessible only to authorized service personnel.

Regards,

Ronald L. Cain

Ronald h. Cain

IC: 7027A-DRX1-4

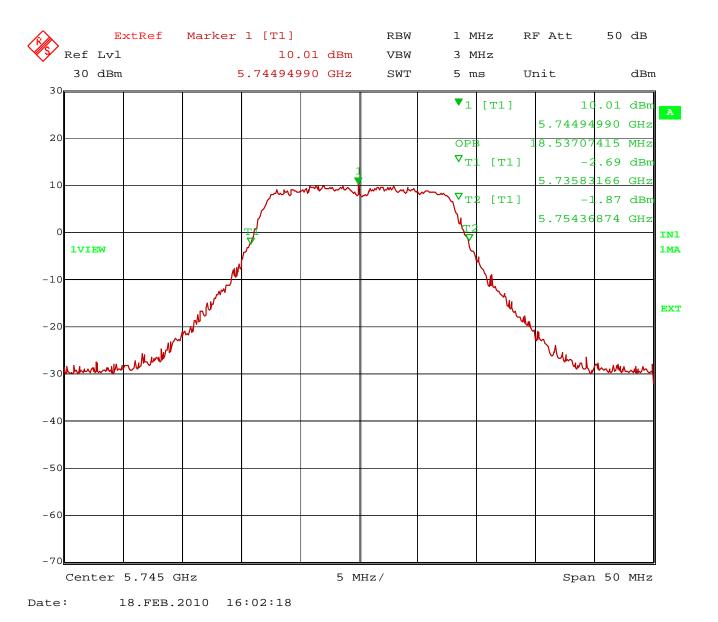
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4.13 99% Bandwidth

In accordance with Industry Canada's RSS-210 Issue 7 Annex 9.2(1)



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Plot 37-99% Bandwidth Ch 149

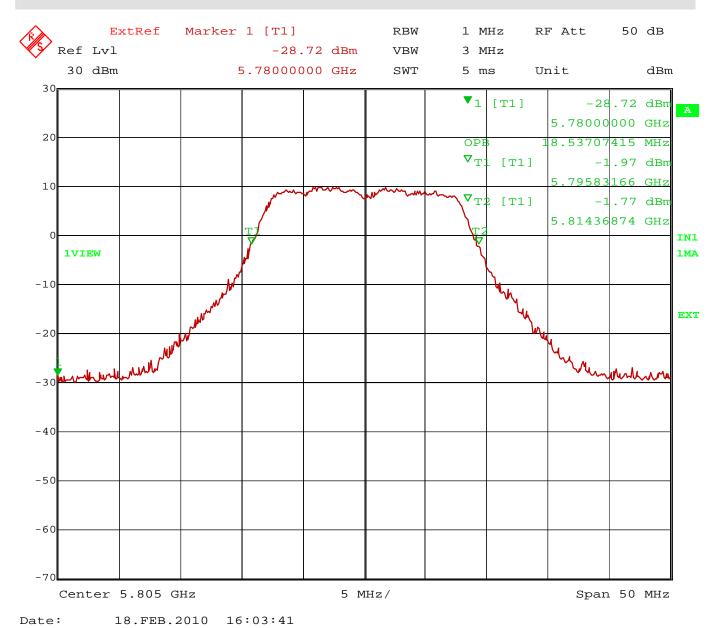
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Plot 38–99% Bandwidth Ch 161

4.13.1 Final Test

The EUT met the performance criteria requirement as specified in the test plan of this report and in the standards.

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Appendix A

5 Test Plan

This test report is intended to follow this test plan outlined here in unless other wise stated in this here report. The following test plan will give details on product information, standards to be used, test set ups and refer to TUV test procedures. The test procedures will give the steps to be taken when performing the stated test. The product information below came via client, product manual, product itself and or the internet.

5.1 General Information

Client	Carestream Health Inc.
Address	150 Verona St
Address	Rochester NY, 14608
Contact Person	Ronald Cain
Telephone	585-627-8321
Fax	585-477-2718
e-mail	ronald.cain@carestreamhealth.com

5.2 Model(s) Name

DRX1-4

5.3 Type of Product

DRX1-4 Radio

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5.4 EUT Electrical Powered Information

5.4.1 Electrical Power Type

\square AC \square DC		
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5.5 Electrical Support Equipment

Type	Manufacture	Model	Connected To
Laptop	IBM	Thinkpad T30	Radio

5.6 EUT Test Program

ART V80 – Revision 8.0 Build #39 ART_11N Customer Version (ANWI Build)