Nemko USA, Inc.
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CERTIFICATION TEST REPORT

Report Number:	2011 05175152 FCC
Project Number:	1028680
Nex Number:	175152
Applicant:	MICROPOWER TECHNOLOGIES 4225 EXECUTIVE SQUARE, SUITE 430 La Jolla, CA 92037
Equipment Under Test (EUT):	WIRELESS DIGITAL CAMERA SYSTEM
Model:	MPT-2500
FCC ID:	ZHXMPT2500
In Accordance With:	FCC Part 15 Subpart C, 15.247
Tested By:	Nemko USA Inc. 11696 Sorrento Valley Road, Suite F San Diego, CA 92121
Authorized By:	ALAN LAUDANI, EMC/RF Test Engineer
Date:	MAY 11, 2011
Total Number of Pages:	41

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Section1: Summary of Test Results

1.1 General

All measurements are traceable to national standards

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15; Subpart C.. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

The assessment summary is as follows:

Apparatus Assessed:	Wireless Digital Camera System
Model:	MPT-2500
Specification:	FCC Part 15 Subpart C, 15.247
Date Received in Laboratory:	May 5, 2011
Compliance Status:	Complies
Exclusions:	None
Non-compliances:	None

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1.2 Report Release History

Revision	Date	Comments
-	May 11, 2011	Prepared By: Alan Laudani
-	May 11, 2011	Initial Release: Alan Laudani

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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TESTED BY:  Date: May 11, 2011

ALAN LAUDANI, EMC Test Engineer

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Section 2: Equipment Under Test

2.1 Product Identification

The Equipment Under Test was identified as follows:

DEVICE	MANUFACTURER MODEL # SERIAL #	POWER CABLE
EUT - Wireless Digital Camera System Camera	MicroPower Technologies Model: MPT-2500 Serial #: E48174C000009	NA

Connection	I/O Cable
No connections	

2.2 Theory of Operation

The MPT-2500 and MPT-2700 comprise a Wireless Digital Camera System. Control commands communicate through the 902 to 928 MHz band radio and the Camera Data communicate through the 2400 to 2483.5 MHz band radio. The camera MPT-2500 is powered by a battery charged by Solar panels and the Hub MPT-2500 is powered by the AC mains (120 VAC 60 Hz) and connects to a network via Ethernet. The hub may have a display, mouse and serial cable when in setup or operation.

The EUT's performance during test was evaluated against the performance criterion specified by applicable test standards. Performance results are detailed in the test results section of this report.

This test report is for the MPT-2500 Camera section of the system. The camera's transmitters were set into a test mode for testing.

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2.3 Technical Specifications of the EUT

Manufacturer:	MicroPower Technologies
Operating Frequencies:	909.798 MHz to 920.596 MHz in the 902 -928 MHz Band 2412.0 MHz to 2462.0 MHz in the 2400 -2483.5 MHz Band
Rated Power:	Low band: 0.014 W High band: 0.641 W
Modulation:	Low band: GFSK, High band: Digital
Antenna Connector:	Type N, professionally installed Type “Reverse SMA”, professionally installed.
Power Source:	3 solar panels, 6 VDC battery

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Section 3: Test Conditions

3.1 Specifications

The apparatus was assessed against the following specifications:

FCC Part 15 Subpart C, 15.247
Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0-24.25 GHz bands.

3.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range	16-22ºC
Humidity range	39-45%
Pressure range	102.0 – 102.3 kPa
Power supply range	6VDC nominal

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3.4 Test Equipment

Nemko ID	Device	Manufacturer	Model	Serial Number	Cal Date	Cal Due Date
--	DC power supply	Micronta	--	--	NCR	NCR
115	Antenna, Bicon	EMCO	3104	3020	9/28/2010	9/28/2011
317	Preamplifier	HP	8449A	2749A00167	5/7/2010	5/7/2011
625	Antenna, Dbl Ridge Horn	EMCO	3116	2325	2/1/2010	2/1/2012
755	Antenna, LPA	EMCO	3147	1246	7/23/2009	7/23/2011
813	Multimeter	Fluke	111	78130060	9/16/2009	9/16/2011
835	Spectrum Analyzer	Rohde & Schwarz	RHDFSEK	829058/005	7/12/2010	7/12/2011
877	Antenna, DRG Horn, .7-18GHz	AH Systems	SAS-571	688	8/16/2010	8/16/2012
898	EMI Receiver & filter set	HP	8546A	3625A00348	6/22/2010	6/22/2011
899	Filter Section	HP	85460A	3448A00288	6/22/2010	6/22/2011
946	Peak Power Sensor	HP	84815A	3318A01726	9/28/2010	9/28/2011
947	Peak Power Analyzer	HP	8991A	3621A00906	9/28/2010	9/28/2011

Registration of the OATS are on file with the Federal Communications Commission, and are also registered with Industry Canada under Site Numbers 2040B-1 and 2040B-2.

Section 4: Observations

4.1 Modifications Performed During Assessment

No modifications were performed during assessment.

4.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

4.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

4.4 Deviations From Laboratory Test Procedures

No deviations from Laboratory Test Procedure

4.5 Test Deleted

No Tests were deleted from this assessment.

4.6 Additional Observations

There were no additional observations made during this assessment.

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Section 5: Results Summary

This section contains the following:

FCC Part 15 Subpart C:

The column headed “Required” indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

N No: not applicable / not relevant
Y Yes: Mandatory i.e. the apparatus shall conform to these tests.
N/T Not Tested, mandatory but not assessed. (See section 4.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

5.1 Test Results

Part 15C	Test Description	Required	Result
15.207 (a)	Conducted Emission Limit	NA	Pass
15.215(c)	20 dB & 99% Bandwidth	Y	Pass
15.247(a)(2)	Minimum 6dB RF Bandwidth	Y	Pass
15.247(b)(3)	Peak Output Power	Y	Pass
15.247(d)	Band-edge Compliance of RF Conducted Emissions	Y	Pass
15.247 (d)	Spurious RF Conducted Emissions	Y	Pass
15.247 (d)	Spurious Radiated Emissions	Y	Pass
15.247(e)	Power Spectral Density for Digitally Modulated Devices	Y	Pass

Appendix A: Test Results

Power Line Conducted Emissions

15.207(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

Test Conditions:

Sample Number:	MPT-2500	Temperature:	°C
Date:		Humidity:	%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko SR2

Test Results: EUT does not connect to AC mains

20 dB Bandwidth

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	May 6, 9, 2011	Humidity:	39%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results: See attached plots.

Additional Observations:

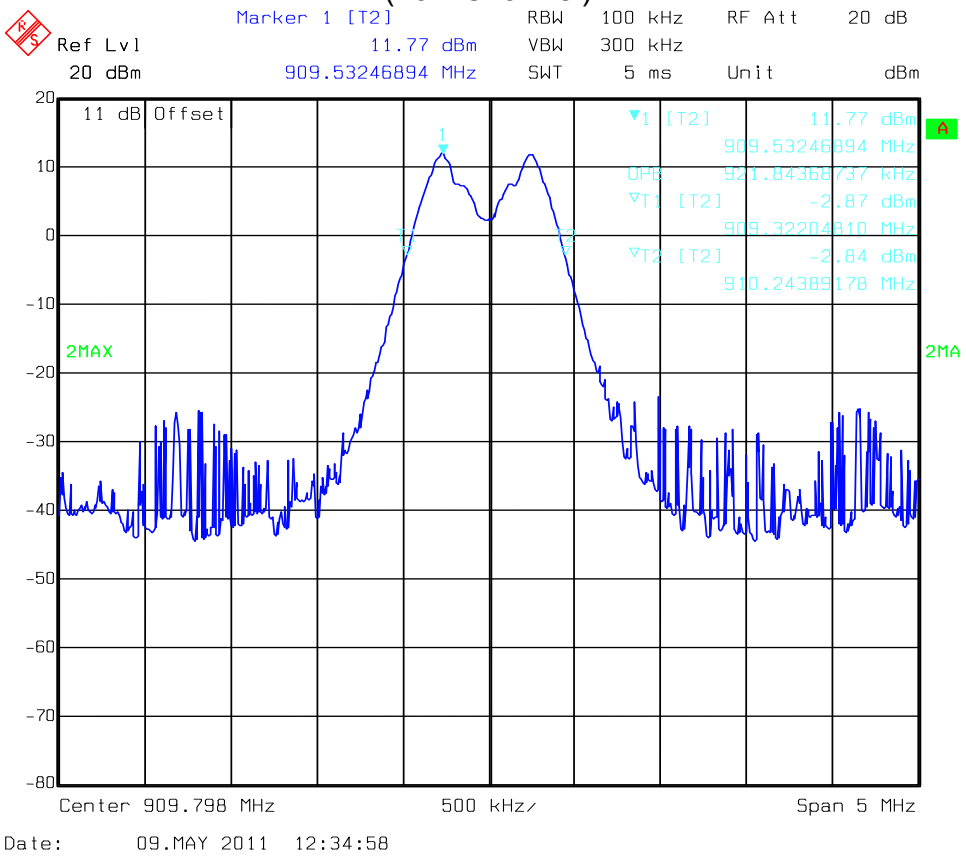
- This was a conducted test.
- Span is wide enough to capture the channel transmission
- RBW is 1% of the span
- VBW is 3X RBW
- Sweep is auto, Detector is Peak, Trace is Max Hold
- Used Spectrum Analyzer's programmed function.

Channel Range	Observed 20 dB bandwidth
Low (909.798 MHz)	909.5 kHz
Mid (914.596 MHz)	921.8 kHz
High (920.595 MHz)	931.8 kHz

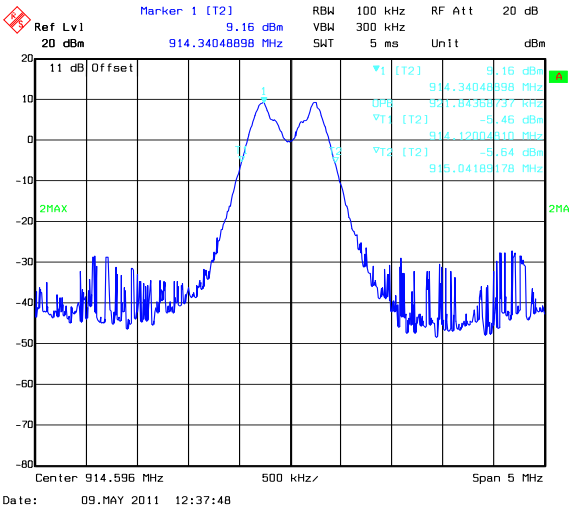
Channel Range	Observed 20 dB bandwidth
Low (2412.0 MHz)	16.4 MHz
Mid (2437.0 MHz)	16.8 MHz
High (2462.0 MHz)	16.6 MHz

Low Band
20 dB Band Width

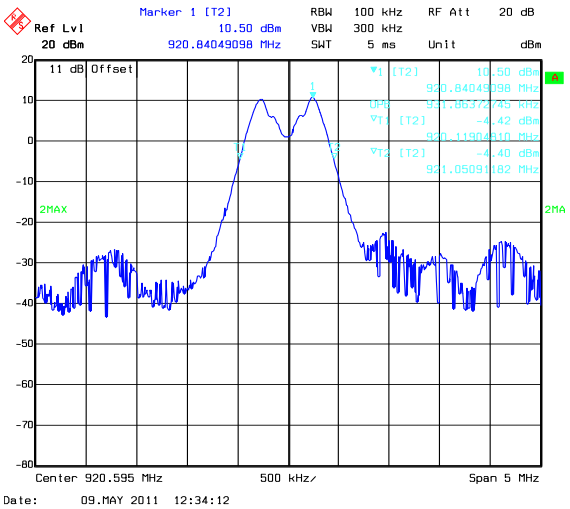
(Low Channel)



(Mid Channel)

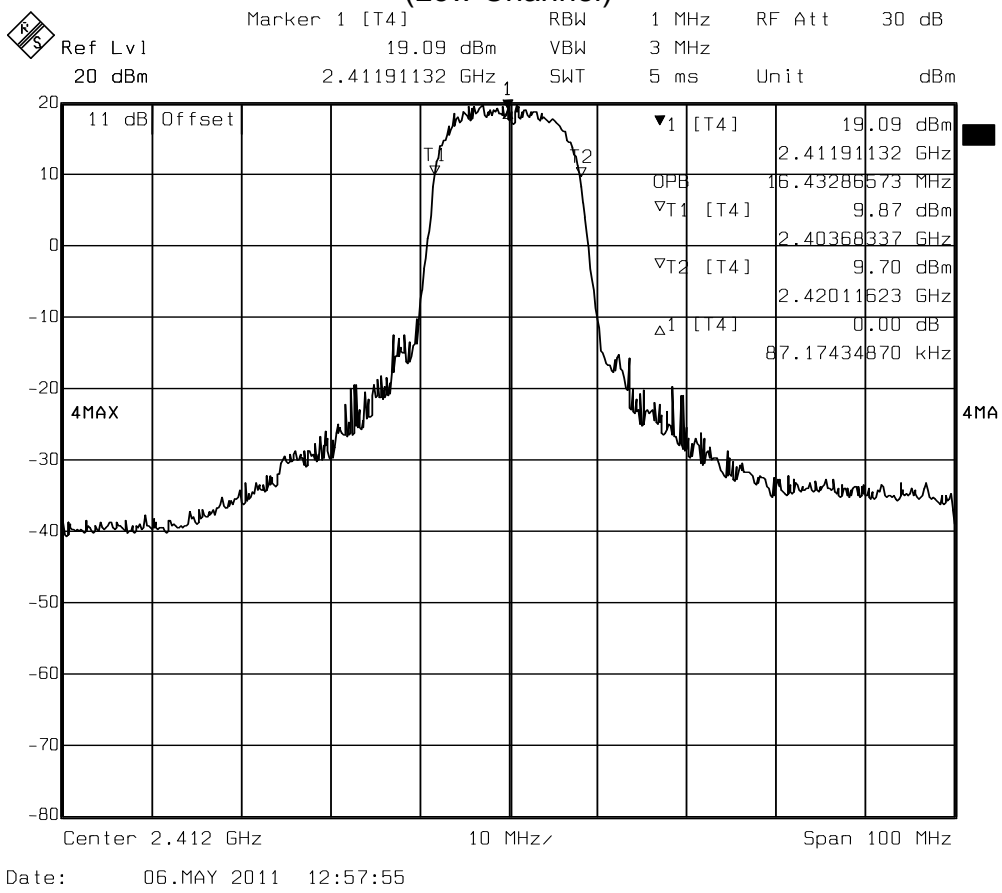


(High Channel)

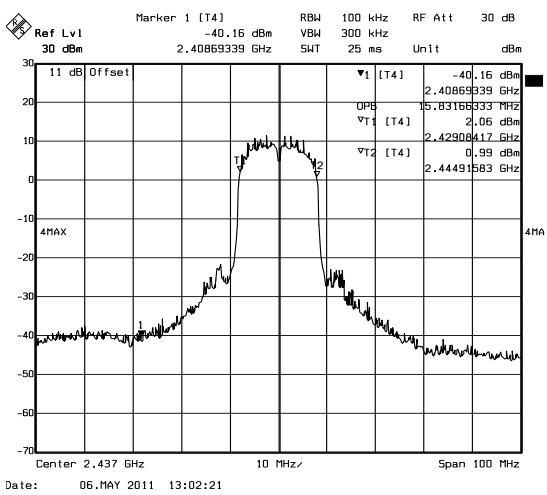


20 dB Band Width

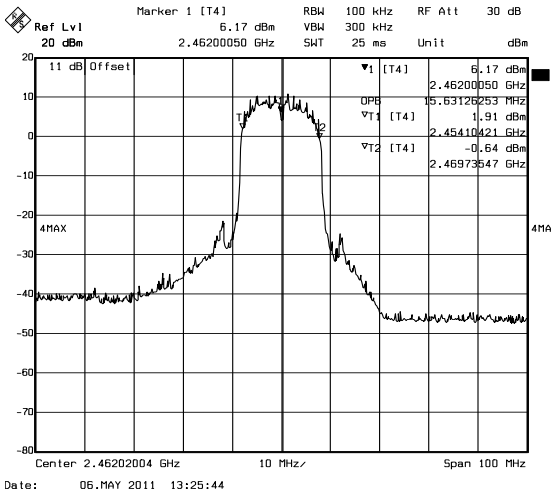
(Low Channel)



(Mid Channel)



(High Channel)



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Minimum 6dB RF Bandwidth

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	February 1, 2011	Humidity:	39%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results: EUT complies, See attached plots.

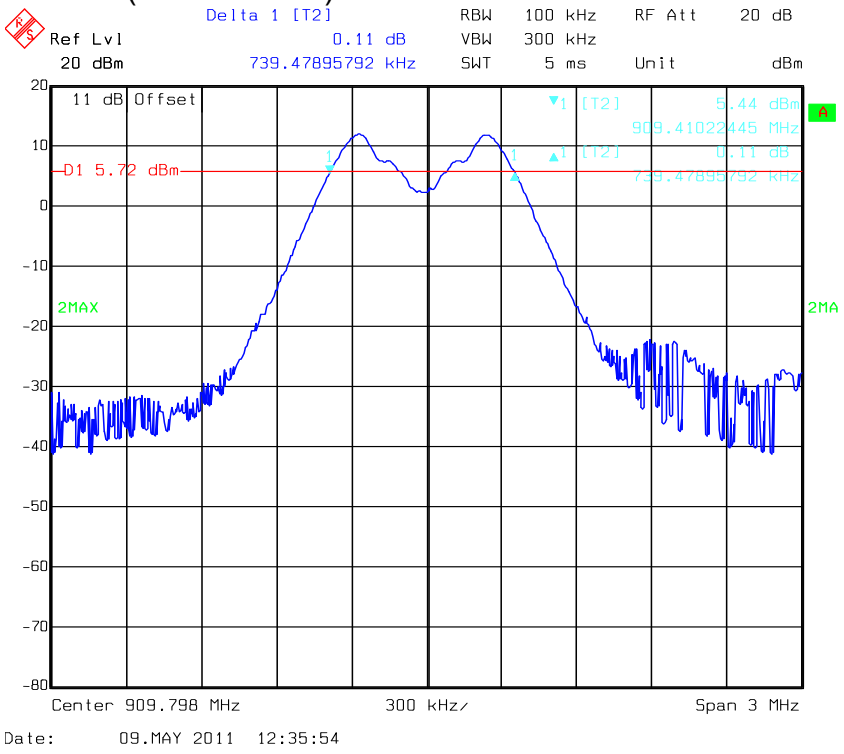
Additional Observations:

- This is a conducted test
- RBW is set to 100kHz
- VBW is 3X RBW
- Sweep is auto
- Detector is Peak
- Trace is Max Hold
- For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was plotted; a DISPLAY line was drawn 6 dB lower than PEAK level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.
- EUT complies as 6 dB BW > 500 kHz

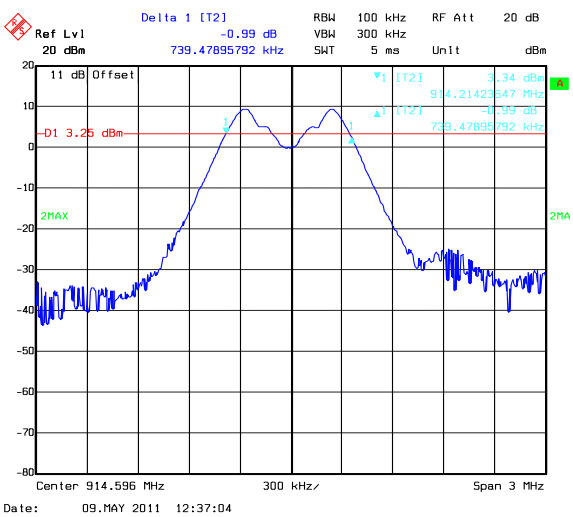
Channel Range	Observed 6 dB bandwidth
Low (909.798 MHz)	739 kHz
Mid (914.596 MHz)	739 kHz
High (920.595 MHz)	739 kHz

Channel Range	Observed 6 dB bandwidth
Low (2412.0 MHz)	15.2 MHz
Mid (2437.0 MHz)	15.2 MHz
High (2462.0 MHz)	15.2 MHz

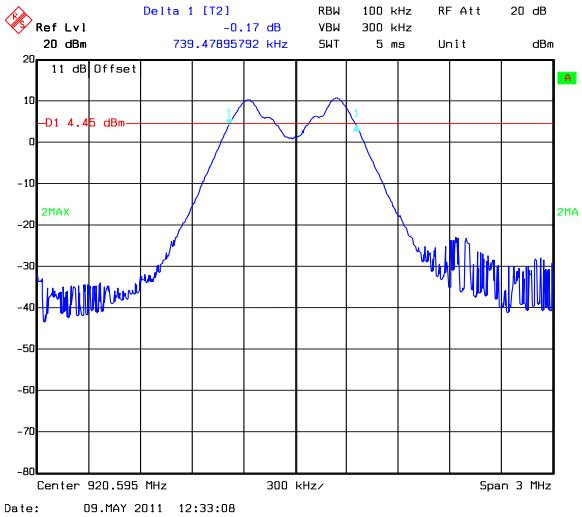
(Low Channel) 6 dB Bandwidth is 739 kHz



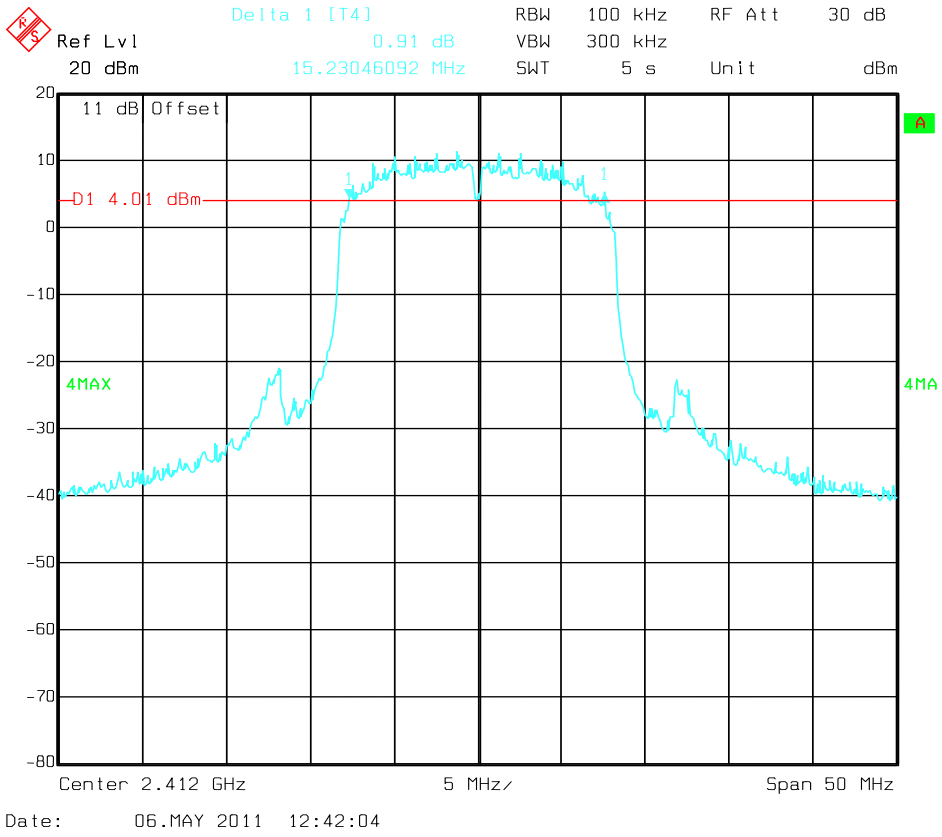
(Mid Channel) 739 kHz



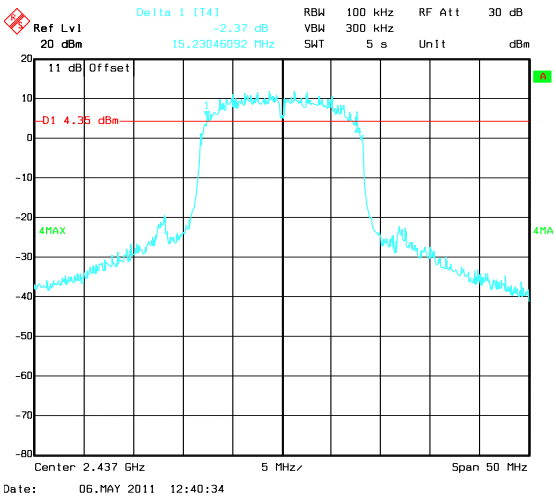
(High Channel) 739 kHz



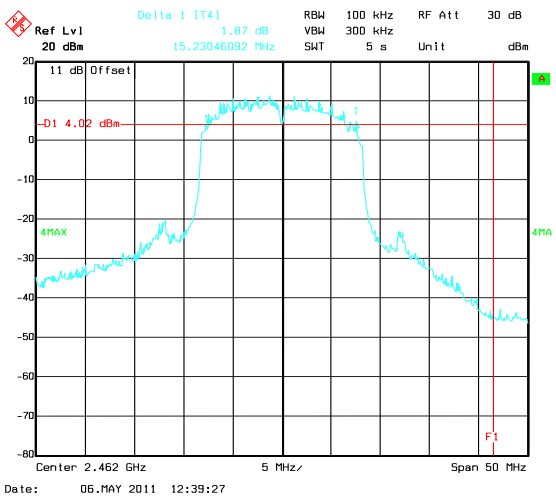
(Low Channel) 6 dB Bandwidth is 15.2 MHz



(Mid Channel) 15.2 MHz



(High Channel) 15.2 MHz



Peak Output Power

(3) For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the *maximum conducted output power* is the highest total transmit power occurring in any mode.

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	May 6, 2011	Humidity:	39%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results: Table below

Additional Observations:

- This is a conducted test. 11 dB was offset for the attenuator and cable used.
- Input voltage to the EUT was varied +/-15%.The solar panel and battery were bypassed and a lab power supply, monitored by a calibrated multimeter, used.
- Peak Power meter used.

Channel Range	Voltage	dBm	Watts
Low (909.798 MHz)	5.1 VDC	11.47	0.014
	6.0 VDC	11.47	0.014
	6.9 VDC	11.47	0.014
Mid (914.596 MHz)	5.1 VDC	9.19	0.008
	6.0 VDC	9.19	0.008
	6.9 VDC	8.98	0.008
High (920.595 MHz)	5.1 VDC	10.19	0.010
	6.0 VDC	10.45	0.011
	6.9 VDC	10.19	0.010
Channel Range	**Voltage**	**dBm**	**Watts**
Low (2412.0 MHz)	5.1 VDC	27.38	0.547
	6.0 VDC	27.61	0.577
	6.9 VDC	27.95	0.624
Mid (2437.0 MHz)	5.1 VDC	28.04	0.637
	6.0 VDC	28.07	0.641
	6.9 VDC	27.95	0.624
High (2462.0 MHz)	5.1 VDC	27.38	0.547
	6.0 VDC	26.91	0.491
	6.9 VDC	27.77	0.598

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Band-edge Compliance of RF Conducted /Radiated Emissions

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	May 6. 2011	Humidity:	44%
Modification State:	Low and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results:

See attached plots and radiated emissions table.

Additional Observations:

- This is a Radiated Emissions test.

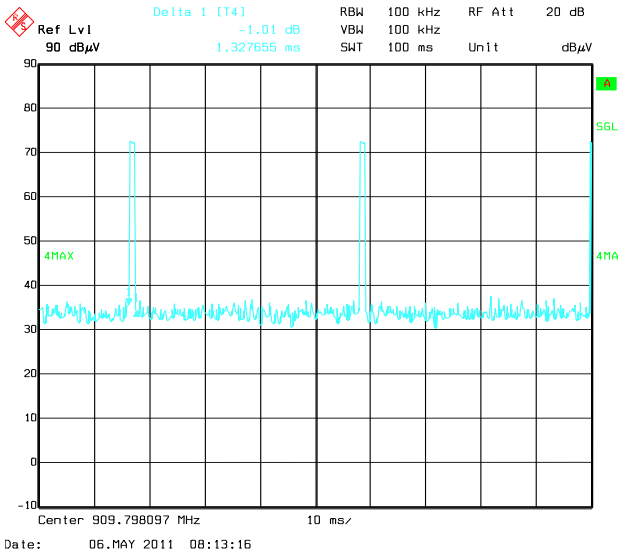
Low Band:

- Span is wide enough to capture the peak level of the emission operating on the channel closest to the band edges (Lower and Upper).
- Band edges were measured with quasi-peak detector.
- Band edge plots show no effect of lowest, highest channel.
- VBW is 3X RBW
- Sweep is auto.
- Detector is Peak, Trace is Max Hold

High Band:

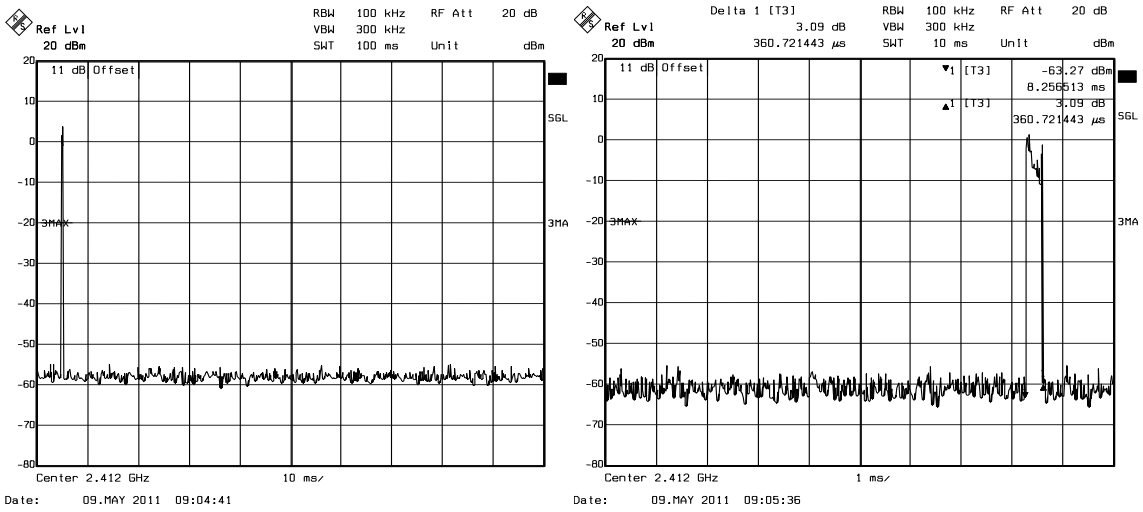
- Span is wide enough to capture the peak level of the emission operating on the channel closest to the band edges (Lower and Upper).
- For Lower bandedge (no restricted zone) RBW is 100kHz
- For Lower bandedge, the peak level reading was taken and a display line was drawn 20 dBc below this level, which will be the limit for this test.
- For Upper bandedge (restricted zone) RBW is 1MHz
- For Upper bandedge (restricted zone) Limit is 74 dBuV/m peak @ 3m
- For Upper bandedge (restricted zone) Limit is 54 dBuV/m average @ 3m
- VBW is 3X RBW
- Sweep is auto.
- Detector is Peak, Trace is Max Hold
- Average = Peak + Duty Cycle Factor

Low band Duty Cycle = -20dB
EUT transmits 1.33 milliseconds x 2 times = 2.66 milliseconds



DCF = 20 x log(2.66/100) < -20dB, limited to –20dB

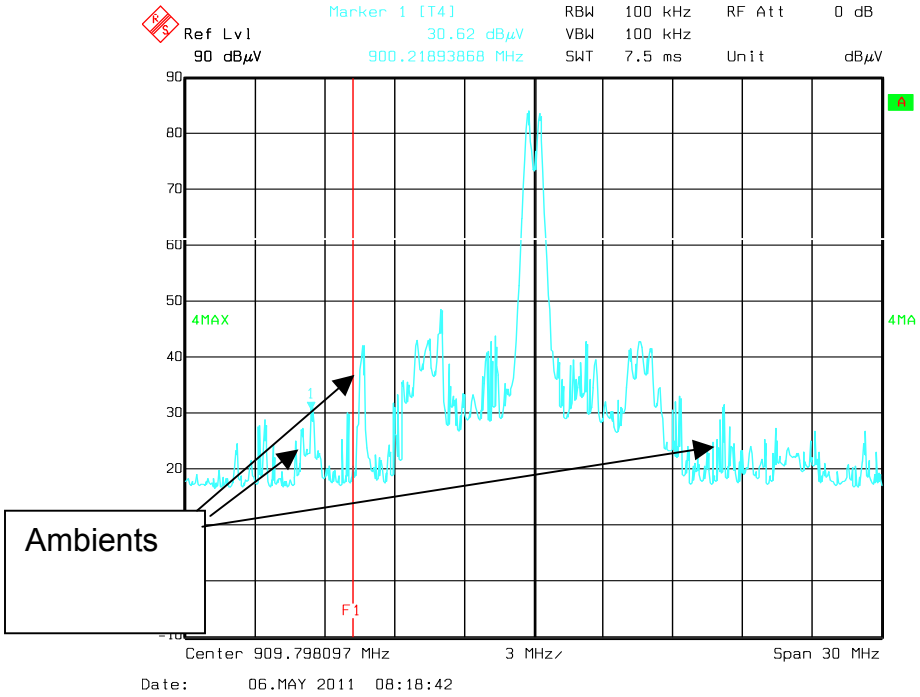
High band Duty Cycle = -20dB
EUT transmits 0.361 milliseconds x 1 times = 0.361 milliseconds



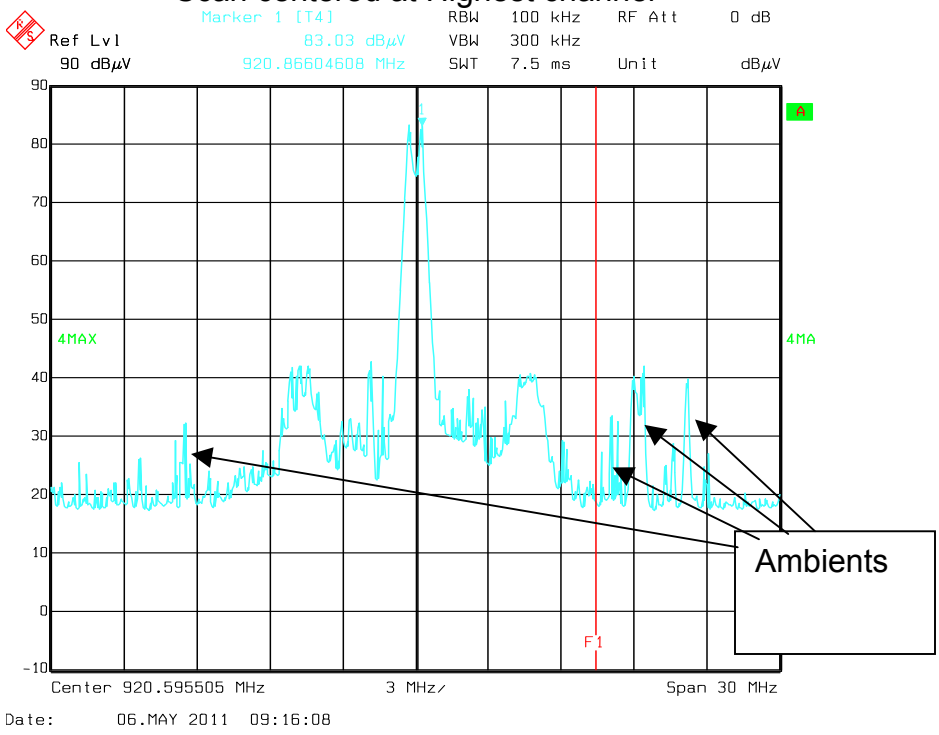
DCF = 20 x log(.036/100) < -20dB, limited to –20dB

Low band:

Scan centered at Lowest channel



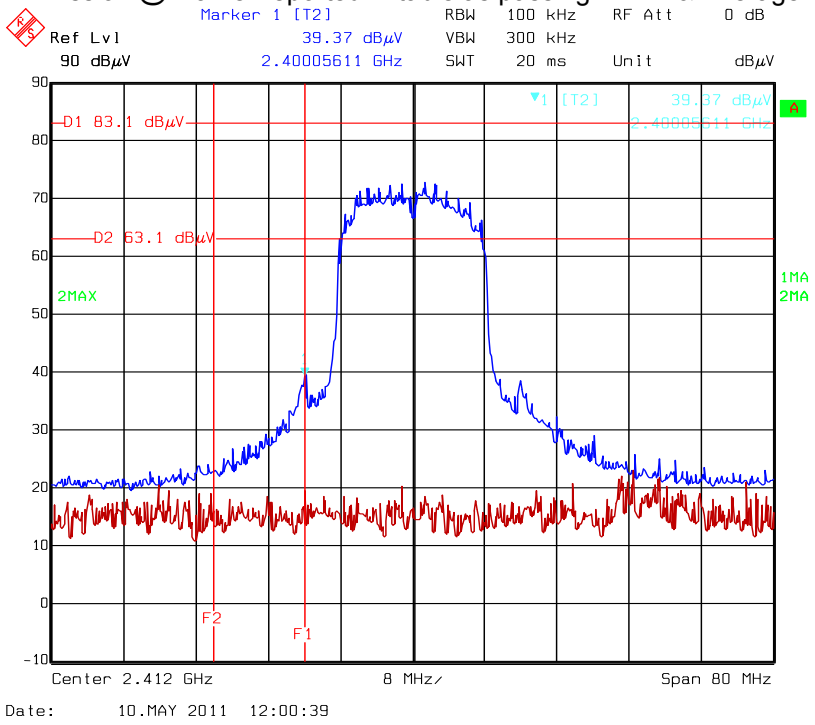
Scan centered at Highest channel



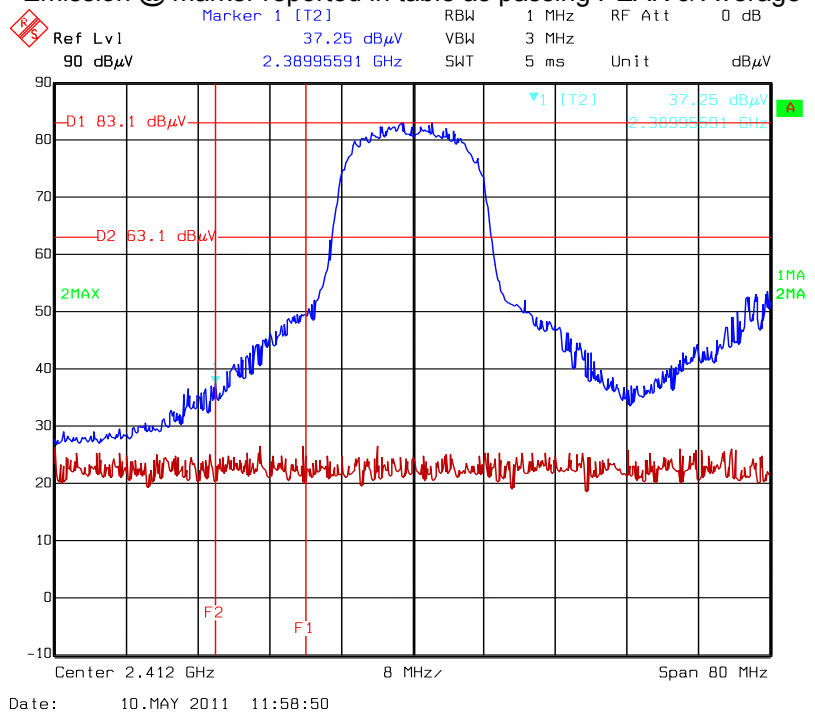
Low Channel centered at 2412 MHz

Higher display line drawn with peak measured at 1 MHz RBW

Emission @ marker reported in table as passing PEAK & Average

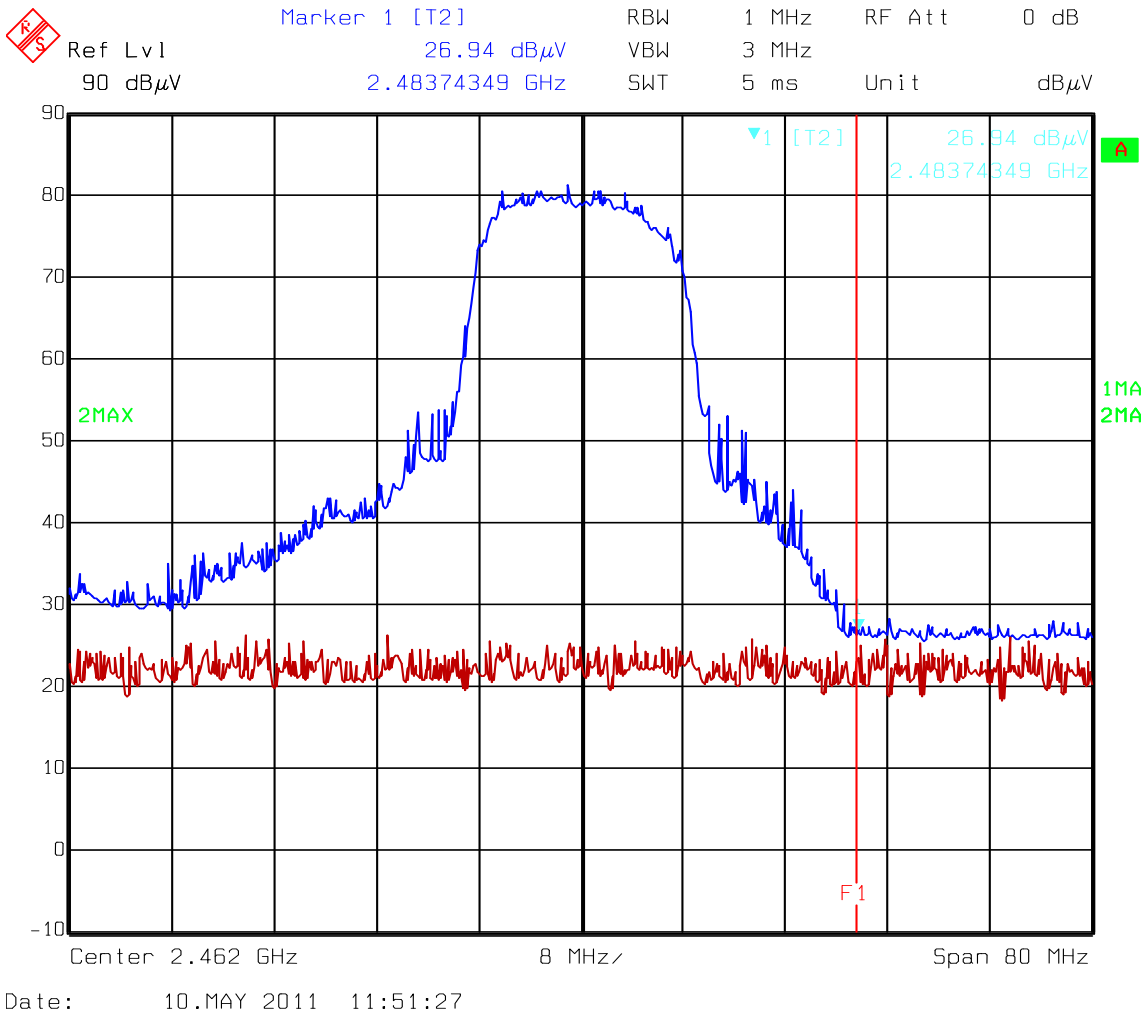


Emission @ marker reported in table as passing PEAK & Average



High Channel centered at 2462 MHz

Emission @ marker reported in table as passing Peak & Average



Emissions Table

Radiated Emissions Data

Job # :	1028680	Date :	5-10-2011	Page 1 of 1	
NEX #:	175152	Time :	PM		
		Staff :	AAL		
Client Name :	MICROPOWER TECHNOLOGIES			EUT Voltage :	solar
EUT Name :	WIRELESS DIGITAL CAMERA			EUT Frequency :	
EUT Model # :	MPT-2500			Phase:	1
EUT Serial # :	NA			NOATS	
EUT Config. :	transmit			SOATS	X
				Distance < 1000 MHz:	3 m
				Distance > 1000 MHz:	3 m
Specification :	CFR47 Part 15, Subpart C				
Loop Ant. #:	NA				
Bicon Ant.#:	115_3m	Temp. (°C) :	19		
Log Ant.#:	110_3m	Humidity (%) :	47		
DRG Ant. #	877	Spec An.#:	898 835		
Cable LF#:	SOATS	Spec An. Display #:	898 835		
Cable HF#:	SOATS	QP #:	898		
Preamp LF#:	NA	PreSelect#:	899		
Preamp HF#	919				

Quasi-Peak	RBW: 120 kHz
	Video Bandwidth 300 kHz
Peak	RBW: 1 MHz
	Video Bandwidth 3 MHz
Average = peak + DCF	

Measurements below 1 GHz are Quasi-Peak values, unless otherwise stated.
Measurements above 1 GHz are Average values, unless otherwise stated.

Meas. Freq. (MHz)	Meter Reading **Vertical**	Meter Reading **Horizontal**	Det.	EUT Side F/L/R/B	Ant. Height m	Max. Reading (dBµV)	Corrected Reading (dBµV/m)	Spec. limit (dBµV/m)	CR/SL Diff. (dB)	Pass Fail	Comment
902.0	11.9	10.7	Q	-	1.0	11.9	39.6	46.0	-6.5	Pass	band edge
928.0	10.6	10.5	Q	-	1.0	10.6	38.3	46.0	-7.8	Pass	band edge
2389.9	37.3	36.9	P	-	1.0	37.3	70.3	74.0	-3.7	Pass	band edge Restricted
2389.9	17.3	16.9	A	-	1.0	17.3	50.3	54.0	-3.7	Pass	band edge Restricted
2400.0	39.4	36.4	P	-	1.0	39.4	74.3	98.0	-23.7	Pass	100 kHz rbw
2400.0	19.4	16.4	A	-	1.0	19.4	54.3	78.0	-23.7	Pass	100 kHz rbw
2412.0	83.1		P	-	1.0	83.1	118.0				1 MHz rbw
2483.5	26.0	25.5	P	-	1.0	26	60.9	74.0	-13.1	Pass	band edge
2483.5	6.0	5.5	A	-	1.0	6	40.9	54.0	-13.1	Pass	DCF= -20

Spurious RF Conducted Emissions

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	May 6, 2011	Humidity:	44%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results:

See attached plots.

Additional Observations:

- This is a conducted test. 11.0 dB was offset for the cable used.
- The peak level reading was taken at the carrier frequency with the peak power meter (blue line), then a display line was drawn 20 dBc below this level (red line) which will be the limit for this test.
- RBW is 100 kHz
- VBW is 3X RBW
- Sweep is auto.
- Detector is Peak, Trace is Max Hold
- Emissions were searched from 30 MHz to 902 MHz and 928 MHz to 9,500 MHz.
- Emissions were searched from 30 MHz to 2400 MHz and from 2483.5 MHz to 25000 MHz.
- EUT complies.

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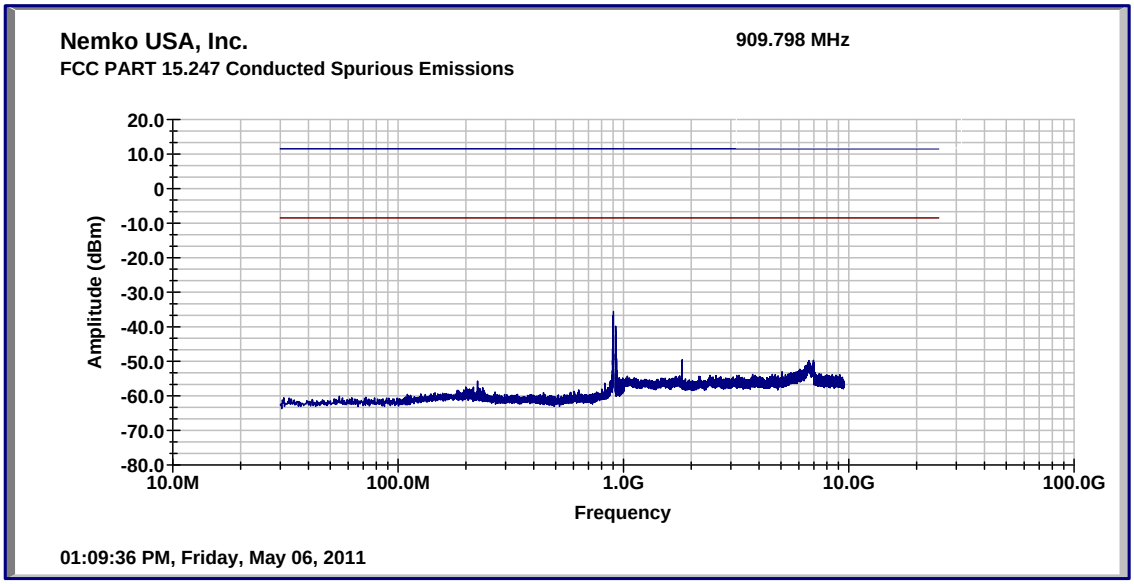
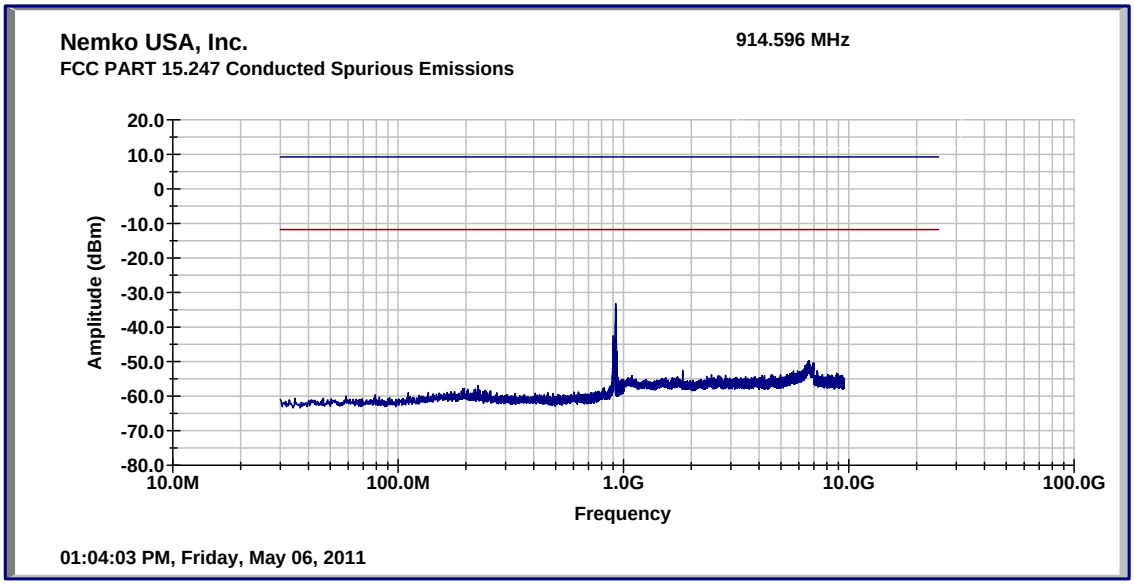
Low band:
Low Channel

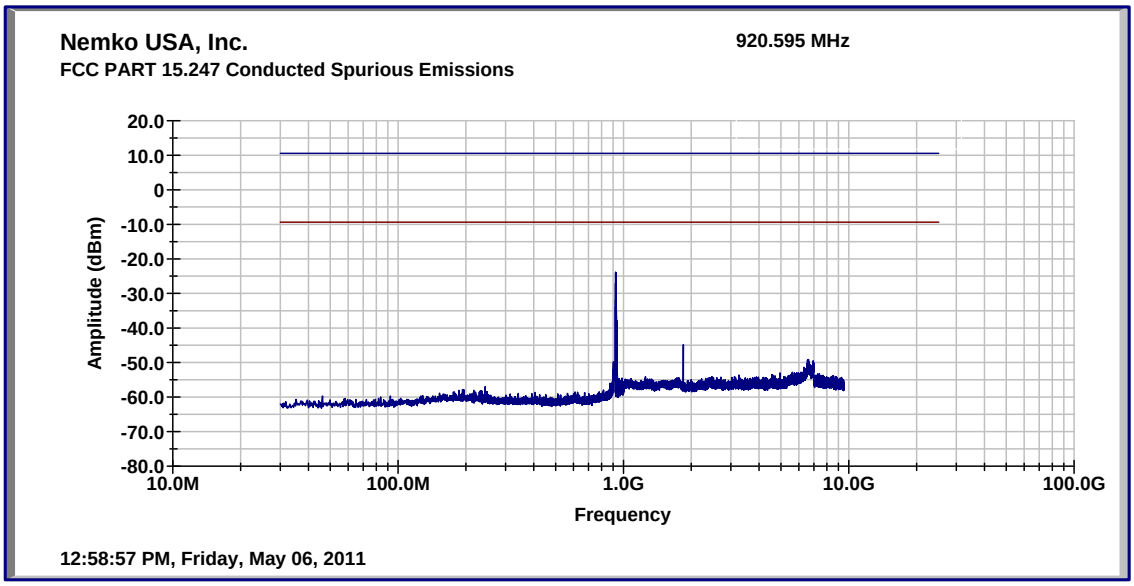


Mid Channel



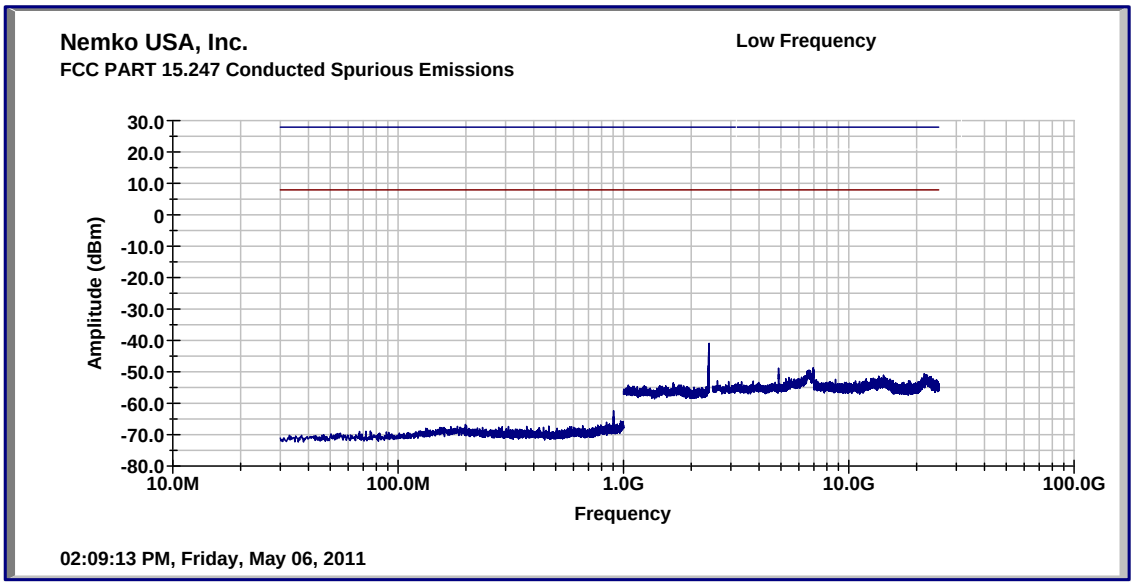
922.4 MHz –58.1 dBm

High Channel



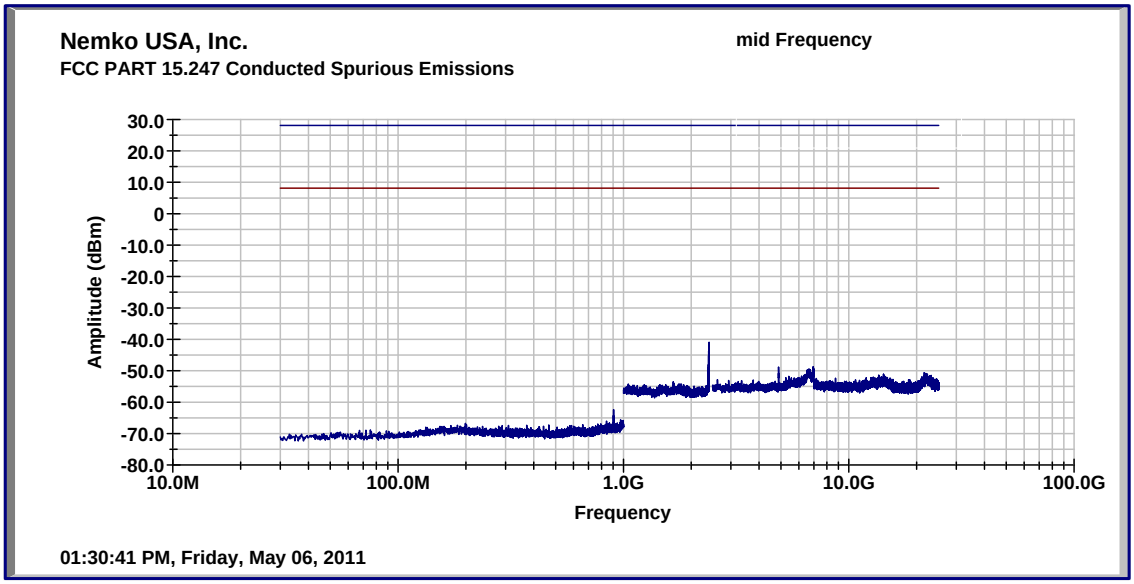
922.8 MHz –23.9 dBm

High Band:
Low Channel



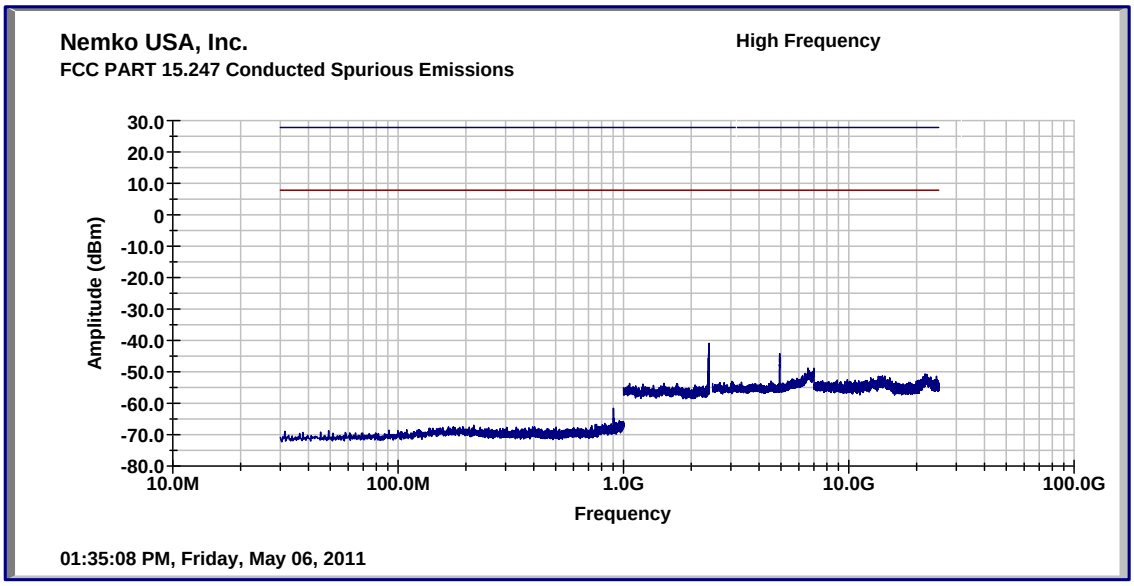
2394.4 MHz –40.9 dBm

Mid Channel



2394.9 MHz –40.8 dBm

High Channel



2398.9 MHz –40.5 dBm

Spurious Radiated Emissions

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Conditions:

Sample Number:	MPT-2500	Temperature:	16°C
Date:	May 6, 2011	Humidity:	44%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results: EUT complies.

- Emissions were searched from 30 MHz to 25000 MHz
- No other emissions within 20 dB of the limit were detected.
- No harmonics of the transmit frequencies were detected.
- The digital emissions did not vary when the transmitter channels were changed.
- Transmitter channels were investigated at low, mid and high channels; low and high band.

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Radiated Emissions Data

Job # :	1028680	Date :	5-10-2011	Page	1 of 1
NEX #:	175152	Time :	PM		
		Staff :	AAL		
Client Name :	MICROPOWER TECHNOLOGIES			EUT Voltage :	solar
EUT Name :	WIRELESS DIGITAL CAMERA			EUT Frequency :	
EUT Model # :	MPT-2500			Phase:	1
EUT Serial # :	E48174C000009			NOATS	
EUT Config. :	transmit			SOATS	X
				Distance < 1000 MHz:	3 m
				Distance > 1000 MHz:	3 m
Specification :	CFR47 Part 15, Subpart C				
Loop Ant. #:	NA				
Bicon Ant.#:	115_3m	Temp. (°C) :	19		
Log Ant.#:	110_3m	Humidity (%) :	47		
DRG Ant. #	877	Spec An.#:	898 835		
Cable LF#:	SOATS	Spec An. Display #:	898 835		
Cable HF#:	SOATS	QP #:	898		
Preamp LF#:	NA	PreSelect#:	899		
Preamp HF#	919				

Quasi-Peak	RBW: 120 kHz
	Video Bandwidth 300 kHz
Peak	RBW: 1 MHz
	Video Bandwidth 3 MHz
Average = peak + DCF	

Measurements below 1 GHz are Quasi-Peak values, unless otherwise stated.

Measurements above 1 GHz are Average values, unless otherwise stated.

Meas. Freq. (MHz)	Meter Reading **Vertical**	Meter Reading **Horizontal**	Det.	EUT Side F/L/R/B	Ant. Height m	Max. Reading (dBµV)	Corrected Reading (dBµV/m)	Spec. limit (dBµV/m)	CR/SL Diff. (dB)	Pass Fail	Comment
											digital emissions
40.0	52.0	46.8	Q	-	1.0	52	30.5	40.0	-9.5	Pass	
80.0	50.7	51.2	Q	-	1.0	51.2	26.7	40.0	-13.3	Pass	
120.0	40.0	36.2	Q	-	1.0	40	21.4	43.5	-22.1	Pass	
400.0	39.8	39.6	Q	-	1.0	39.8	26.8	46.0	-19.2	Pass	
480.0	33.0	37.0	Q	-	1.0	37	25.0	46.0	-21.0	Pass	

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Power Spectral Density for Digitally Modulated Devices

(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Conditions:

Sample Number:	MPT-2500	Temperature:	21°C
Date:	May 9, 2011	Humidity:	44%
Modification State:	Low, Mid and High Channels	Tester:	Alan Laudani
		Laboratory:	Nemko

Test Results:

See attached plots.

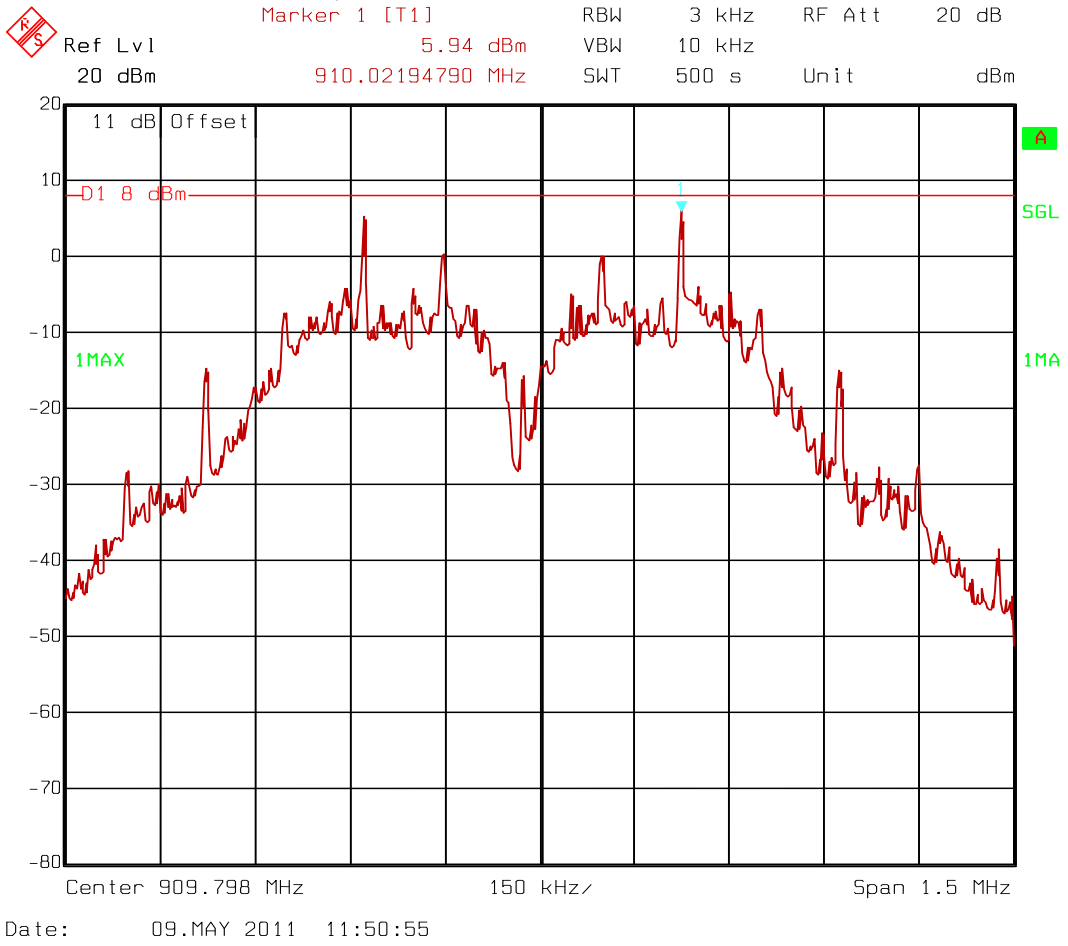
Additional Observations:

- This is a conducted test. 11.0 dB was offset for the attenuator and cable used.
- RBW is 3kHz
- VBW is 10kHz
- Span is set to 1.5 MHz
- Sweep is set to 1.5MHz/3kHz or 500 seconds
- Trace is set to Peak, Max hold.
- Limit is 8 dBm
- EUT complies

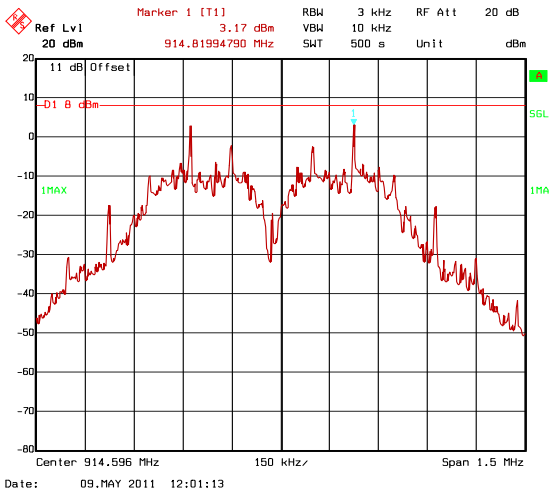
Frequency	PSD (dBM)
910.021948 MHz	5.94
914.819948 MHz	3.17
920.818948 MHz	4.52

Frequency	PSD (dBM)
2411.999323 MHz	-1.50
2436.998500 MHz	-0.69
2462.000058 MHz	-1.84

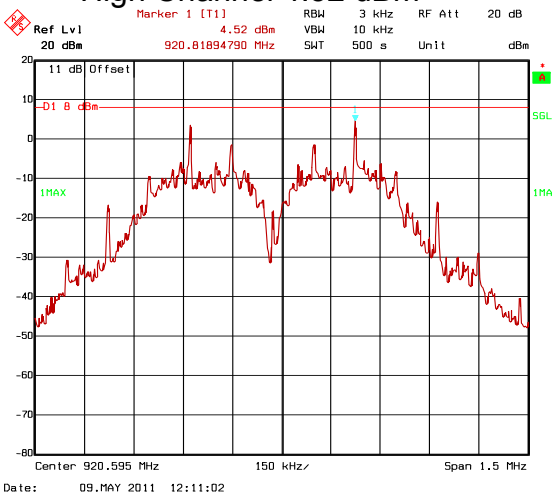
Low Band, Low Channel – Max level is 5.94 dBm



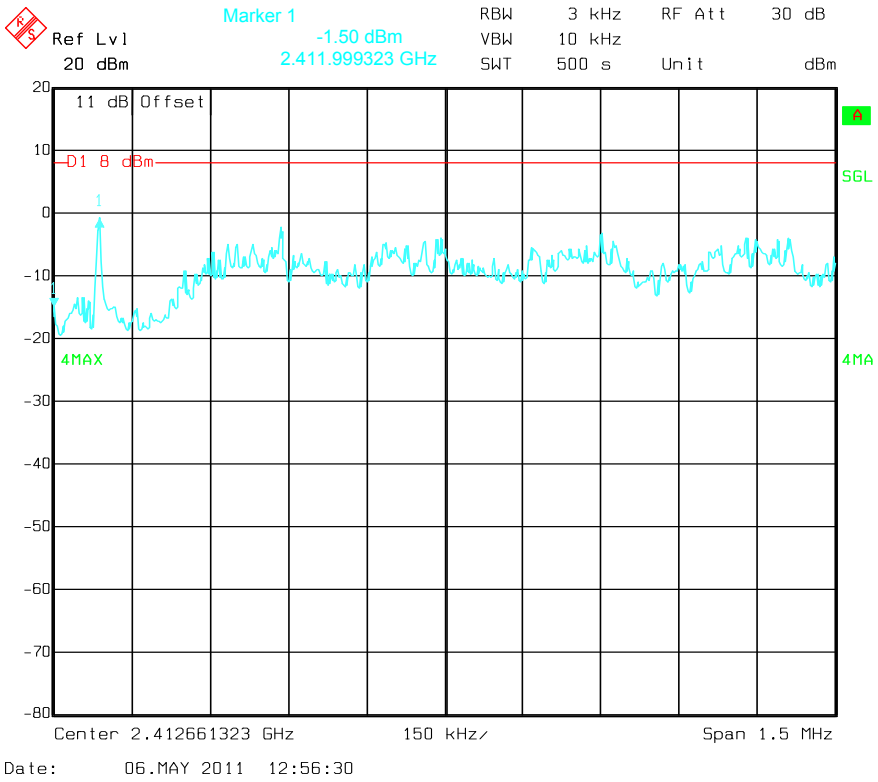
Mid Channel 3.17 dBm



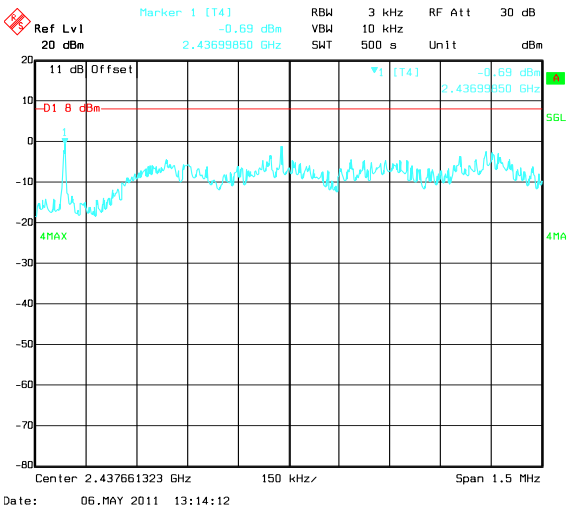
High Channel 4.52 dBm



High Band, Low Channel – Max level is –1.5 dBm



Mid Channel –0.69 dBm



High Channel –1.84 dBm