

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**

Specification: **FCC 15.209**

Work Order #: **86964**

Date: 9/25/2007

Test Type: **Radiated Scan**

Time: 10:04:49

Equipment: **Pulse Rate Monitor**

Sequence#: 19

Manufacturer: Masimo Corp

Tested By: Sep Apahidean

Model: RAD-87

S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Antenna cable	Cable#17	09/19/2006	09/19/2008	P04382
Horn Antenna	9603-4683	06/29/2006	06/29/2008	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/5/2009	00787
Cable Big Blue	12237/4A	11/28/2005	11/28/2007	P05421
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Antenna Cable	Hi Freq	09/18/2006	09/18/2008	P05563

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPNV9

Test Conditions / Notes:

The EUT is on the table and all the probes and cables are connected to the unit. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. Worst case is where the unit is vertical to the table, and 11Mbits data rate. 802.11B, Channel 1, 11Mbits. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807	T2=Preamplifier 83017A 00787
T3=Horn 01646_062908	T4=48' Heliac Cable 091808 P05563
T5=84' Heliac Cable P04382	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	2390.000M	48.9	+1.4	-39.0	+28.3	+3.2	+0.0	48.5	54.0	-5.5	Vert
	Ave		+5.7								
^	2390.000M	60.3	+1.4	-39.0	+28.3	+3.2	+0.0	59.9	54.0	+5.9	Vert
			+5.7								
3	2388.174M	48.8	+1.4	-39.0	+28.3	+3.2	+0.0	48.4	54.0	-5.6	Vert
	Ave		+5.7								
^	2388.170M	60.9	+1.4	-39.0	+28.3	+3.2	+0.0	60.5	54.0	+6.5	Vert
			+5.7								

5	2397.170M	73.2	+1.4 +5.7	-39.0	+28.3	+3.2	+0.0	72.8	80.0	-7.2	Vert
6	2399.200M	73.0	+1.4 +5.7	-39.0	+28.4	+3.2	+0.0	72.7	80.0	-7.3	Vert
7	2400.000M	72.6	+1.4 +5.7	-39.0	+28.4	+3.2	+0.0	72.3	80.0	-7.7	Vert
8	2390.500M	60.4	+1.4 +5.7	-39.0	+28.3	+3.2	+0.0	60.0	80.0	-20.0	Vert

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Customer: **Masimo Corporation**

Specification: **FCC 15.209**

Work Order #: **86964**

Date: 9/25/2007

Test Type: **Radiated Scan**

Time: 09:43:16

Equipment: **Pulse Rate Monitor**

Sequence#: 18

Manufacturer: Masimo Corp

Tested By: Sep Apahidean

Model: RAD-87

S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Antenna cable	Cable#17	09/19/2006	09/19/2008	P04382
Horn Antenna	9603-4683	06/29/2006	06/29/2008	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/5/2009	00787
Cable Big Blue	12237/4A	11/28/2005	11/28/2007	P05421
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Antenna Cable	Hi Freq	09/18/2006	09/18/2008	P05563

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table and all the probes and cables are connected to the unit. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. Worst case is where the unit is vertical to the table, and 11Mbits data rate. 802.11B, Channel 11, 11Mbits. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807	T2=Preamplifier 83017A 00787
T3=Horn 01646_062908	T4=48' Heliac Cable 091808 P05563
T5=84' Heliac Cable P04382	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

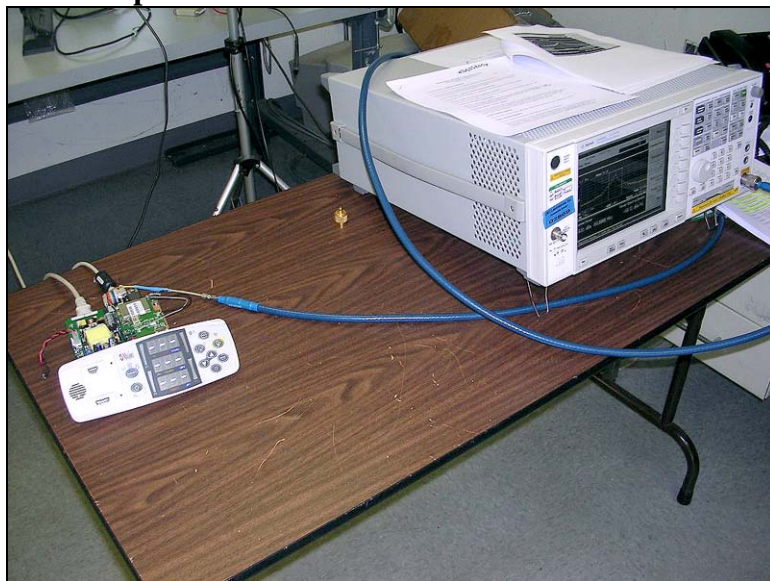
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	2483.917M	53.2	+1.4	-39.0	+28.7	+3.2	+0.0	53.4	54.0	-0.6	Vert
	Ave		+5.9								
2	2483.500M	53.1	+1.4	-39.0	+28.7	+3.2	+0.0	53.3	54.0	-0.7	Vert
	Ave		+5.9								
^	2483.500M	56.0	+1.4	-39.0	+28.7	+3.2	+0.0	56.2	54.0	+2.2	Vert
			+5.9								
4	2484.310M	52.9	+1.4	-39.0	+28.7	+3.2	+0.0	53.1	54.0	-0.9	Vert
	Ave		+5.9								
5	2484.487M	52.7	+1.4	-39.0	+28.7	+3.2	+0.0	52.9	54.0	-1.1	Vert
	Ave		+5.9								

FCC 15.247(a)(2) 6dB BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Cable Huber & Suhner	12237/4A	11/28/2005	11/28/2007	P05421
Programmable Power Source	01695/01696	05/15/07	05/15/09	250 / 245

Test Setup Photos



Test Conditions: The EUT is on the table and all the probes and cables are connected to the unit. Measurements are made by direct connect with the Serial cable connected to the laptop computer, which is used to change the TX characteristics. The bandwidth chosen were accordingly 1-3% of the occupied bandwidth. The data taken with 100kHz would produce results which also demonstrate compliance with the minimum 500kHz requirement. There is a 1.4 dB offset to correct for the cable.

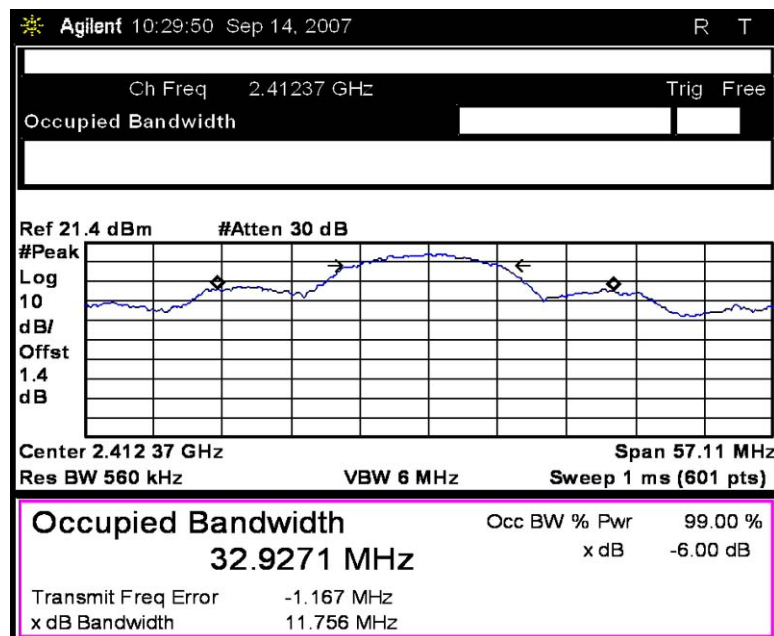
Summary Table

Channel	Mode	Bandwidth MHz	Limit MHz
1	802.11b	11.756	Minimum 500 kHz
7	802.11b	11.714	Minimum 500 kHz
11	802.11b	11.802	Minimum 500 kHz
1	802.11g	16.484	Minimum 500 kHz
7	802.11g	16.880	Minimum 500 kHz
11	802.11g	16.650	Minimum 500 kHz

The minimum 6 dB bandwidth shall be at least 500 kHz.

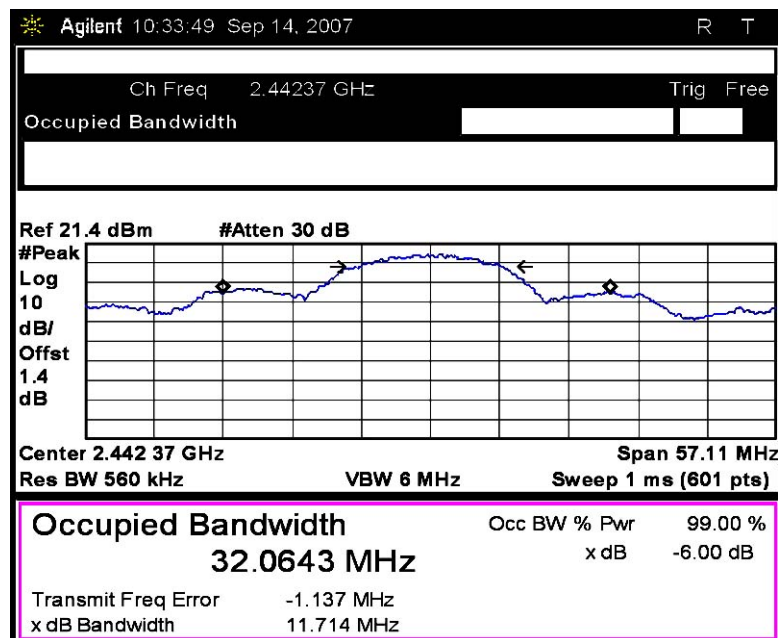
Test Plots

FCC 15.247(a)(2) - CHANNEL 1 - 11 MBit



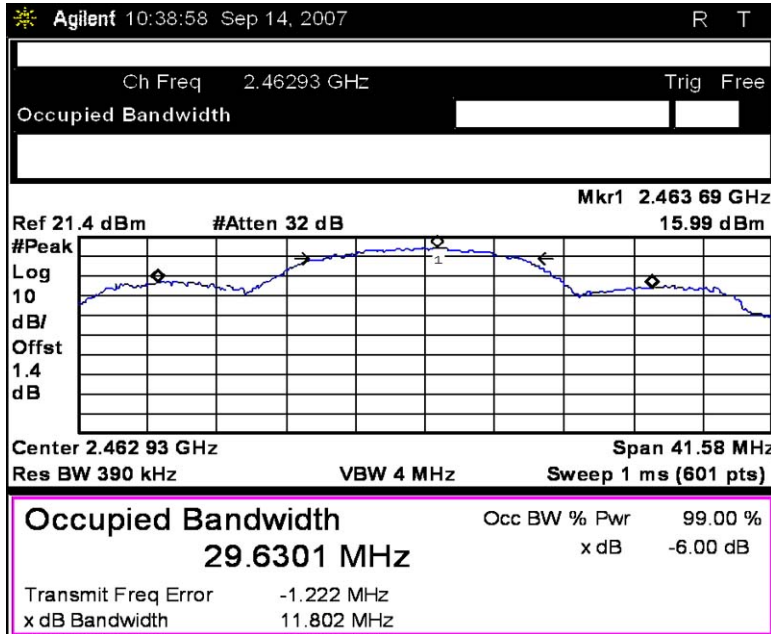
802.11b

FCC 15.247(a)(2) - CHANNEL 7 - 11 MBit



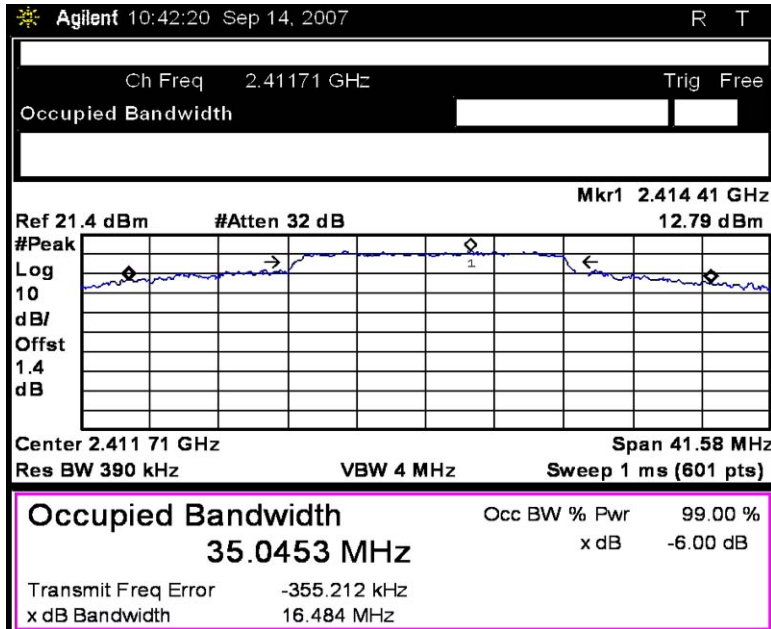
802.11b

FCC 15.247(a)(2) - CHANNEL 11 - 11 MBit



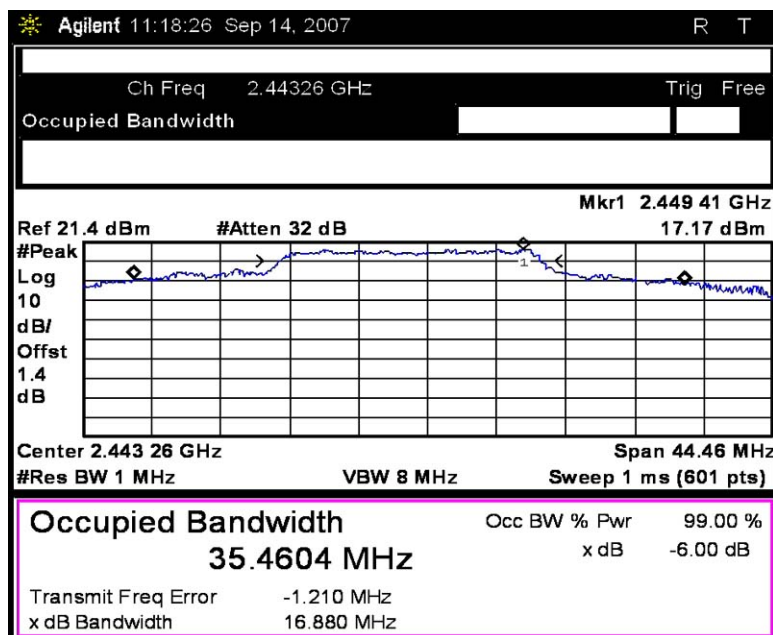
802.11b

FCC 15.247(a)(2) - CHANNEL 1 - 6 MBit



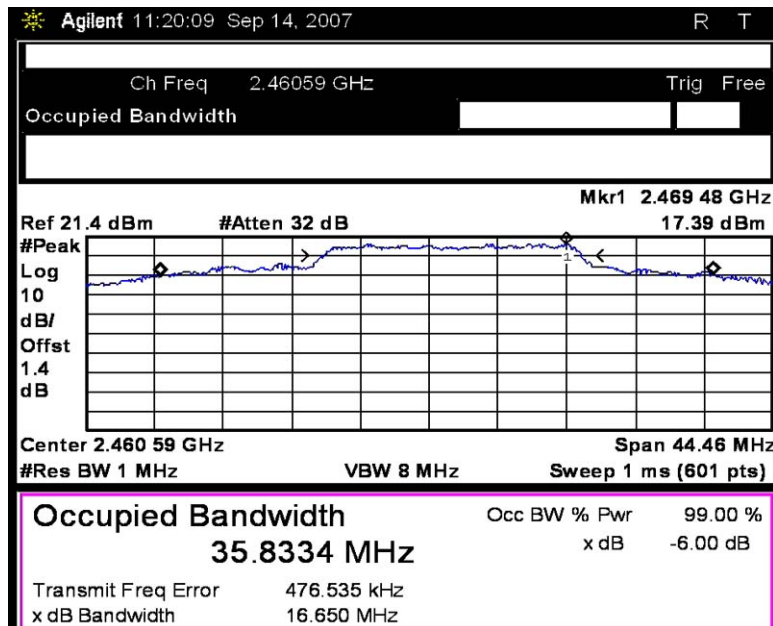
802.11g

FCC 15.247(a)(2) - CHANNEL 7 - 6 MBit



802.11g

FCC 15.247(a)(2) - CHANNEL 11 - 6 MBit



802.11g

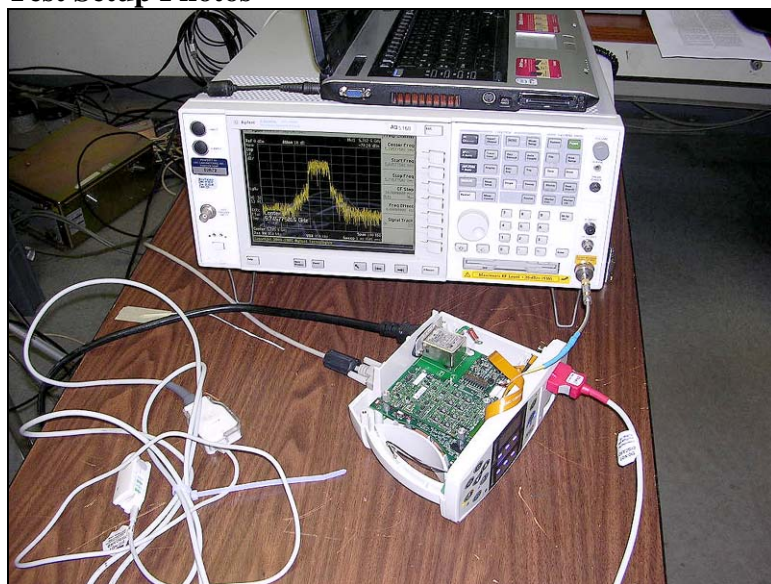
FCC 15.247(b)(3) RF POWER OUTPUT

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Attenuator, 20 dB Pad	01432	09/13/2007	09/13/2009	P01392
Cable Huber & Suhner	12237/4A	11/28/2005	11/28/2007	P05421

Test Conditions: There is a 20db offset in the plot which corrects for the external attenuator used.

Test Setup Photos

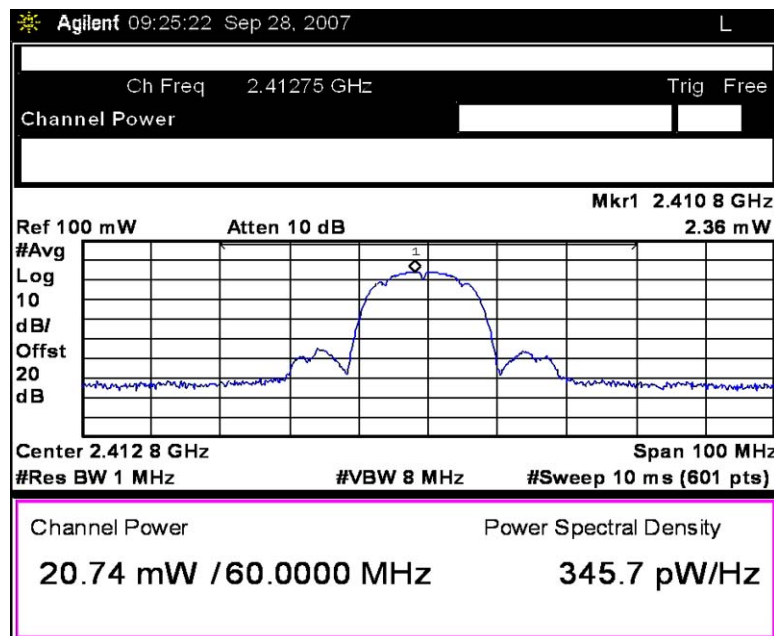


Summary Table

Channel	Mbit	Mode	TX Power	Limit
1	1	802.11b	20.74 mW	1000mW
7	1	802.11b	19.89 mW	1000mW
11	1	802.11b	19.66 mW	1000mW
1	1	802.11g	31.12mW	1000mW
7	1	802.11g	30.68 mW	1000mW
11	1	802.11g	31.59 mW	1000mW

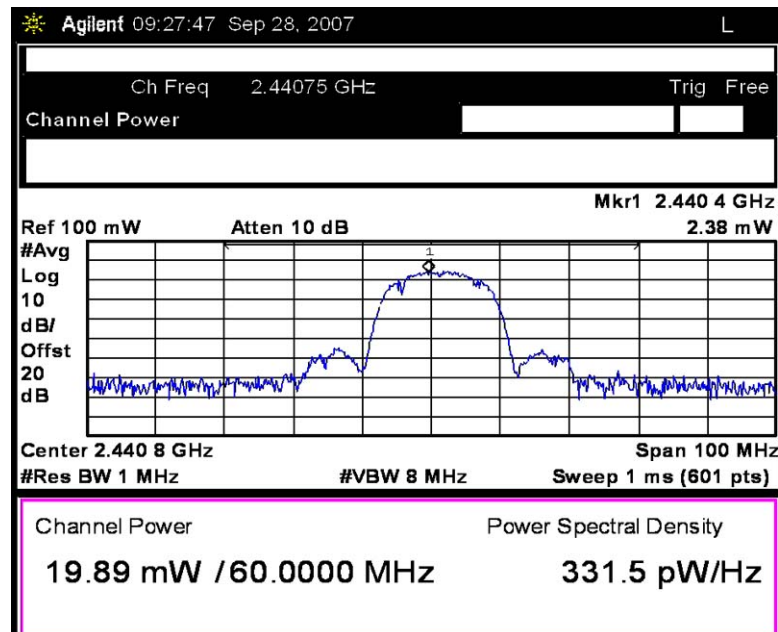
Test Plots

FCC 15.247(b)(3) - CHANNEL 1 - 1 MBit



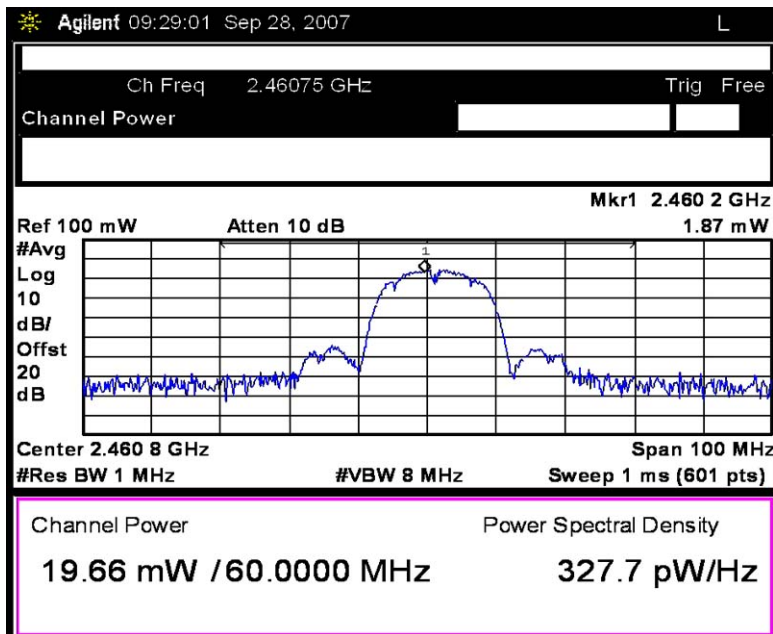
802.11b

FCC 15.247(b)(3) - CHANNEL 7 - 1 MBit



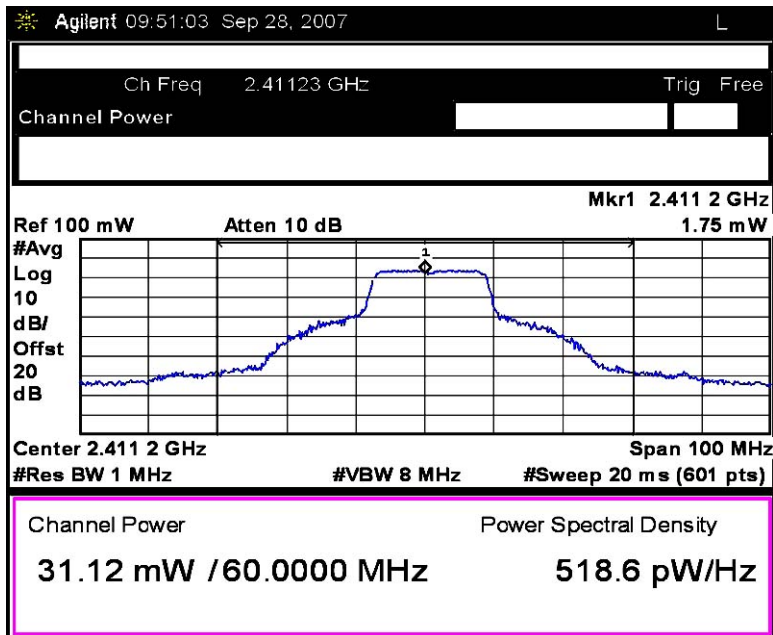
802.11b

FCC 15.247(b)(3) - CHANNEL 11 - 1 MBit



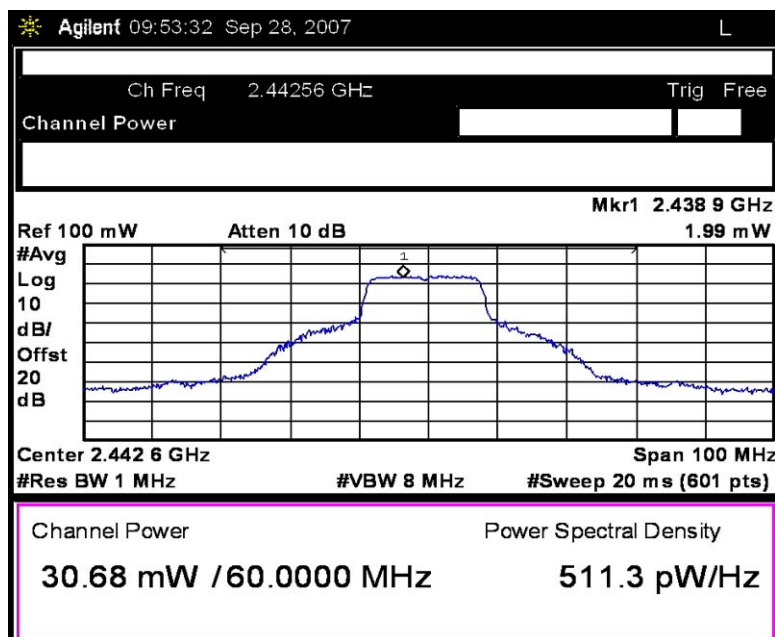
802.11b

FCC 15.247(b)(3) - CHANNEL 1 - 6 MBit



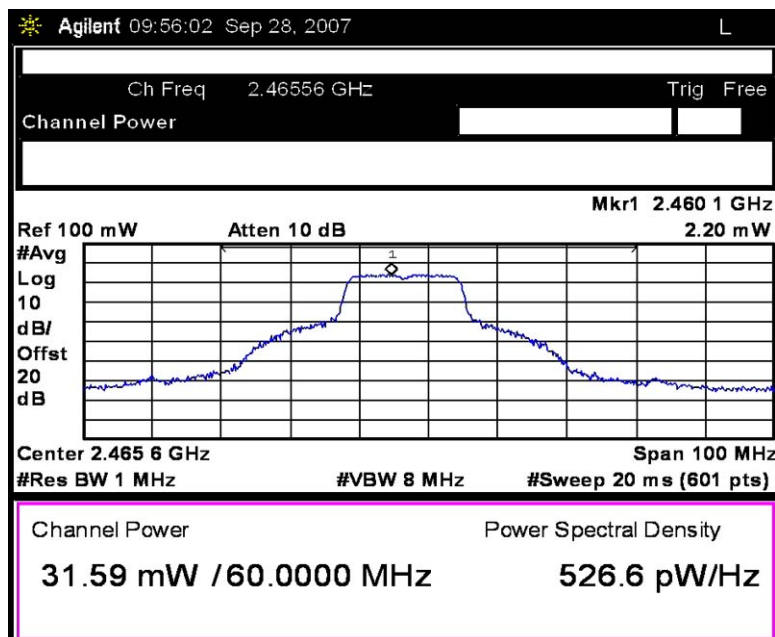
802.11g

FCC 15.247(b)(3) - CHANNEL 7 - 6 MBit



802.11g

FCC 15.247(b)(3) - CHANNEL 11 - 6 MBit



802.11g

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(b)(3) 1 Watt**
 Work Order #: **86964**
 Test Type: **Radiated Scan**
 Equipment: **Pulse Rate Monitor**
 Manufacturer: Masimo Corp
 Model: RAD-87
 S/N: 804173

Date: 9/13/2007
 Time: 11:29:51
 Sequence#: 1
 Tested By: Sep Apahidean

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Horn Antenna	9603-4683	06/29/2006	06/29/2008	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/05/2009	00787
Antenna cable (Heliac)	P05348	09/28/2005	09/28/2007	NA
Antenna cable	Cable#17	09/19/2006	09/19/2008	P04382

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table and all the probes and cables are connected to the unit. The Serial cable is connected to the laptop computer, and is used to change the TX characteristics. 802.11B, 2.41 GHz, 2.44 GHz and 2.46 GHz. RBW 1MHz, VBW 8MHz. T6 = correction factor was calculated value. It is the integration of the spectrum across the 26 dB EBW. Formula used: 10 log (EBW / 1MHz).

Transducer Legend:

T1=Cable_#P5421_112807	T2=Preamplifier 83017A 00787
T3=Horn 01646_062908	T4=48' Heliac Cable 091808 P05563
T5=84' Heliac Cable P04382	T6=20Mhz BW correction 1MBIT

Measurement Data:

#	Freq MHz	Rdng dBμV	Reading listed by margin.				Test Distance: 3 Meters					
			T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant	
1	2462.200M	120.3	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	123.0	125.2	-2.2	Horiz	
Channel 11 - 1Mbits - V orientation												
2	2442.200M	120.4	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	123.0	125.2	-2.2	Horiz	
Channel 7 - 1Mbits - V orientation												

3	2442.200M	120.2	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	122.8	125.2 Channel 7 - 11Mbits - V orientation	-2.4	Vert
4	2462.200M	119.2	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	121.9	125.2 Channel 11 - 11Mbits - V orientation	-3.3	Vert
5	2462.200M	118.6	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	121.3	125.2 Channel 11 - 11Mbits - V orientation	-3.9	Horiz
6	2462.200M	117.9	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	120.6	125.2 Channel 11 - 1Mbits - V orientation	-4.6	Vert
7	2412.200M	118.1	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	120.5	125.2 Channel 1 - 11Mbits - V orientation	-4.7	Vert
8	2462.200M	117.7	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	120.4	125.2 Channel 11 - 1Mbits - H orientation	-4.8	Horiz
9	2442.200M	117.7	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	120.3	125.2 Channel 7 - 11Mbits - V orientation	-4.9	Horiz
10	2442.200M	117.5	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	120.1	125.2 Channel 7 - 1Mbits - H orientation	-5.1	Horiz
11	2412.200M	117.3	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	119.7	125.2 Channel 1 - 11Mbits - V orientation	-5.5	Horiz
12	2442.000M	116.9	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	119.5	125.2 Channel 7 - 11Mbits - H orientation	-5.7	Vert
13	2462.300M	116.6	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	119.3	125.2 Channel 11 - 1Mbits - H orientation	-5.9	Vert
14	2462.200M	116.3	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	119.0	125.2 Channel 11 - 11Mbits - H orientation	-6.2	Vert
15	2442.200M	116.4	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	119.0	125.2 Channel 7 - 1Mbits - V orientation	-6.2	Vert

16	2462.200M	116.2	+1.4 +5.8	-39.0 +2.7	+28.6	+3.2	+0.0	118.9	125.2	-6.3	Horiz
									Channel 11 - 11Mbits - H orientation		
17	2442.200M	116.1	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	118.7	125.2	-6.5	Horiz
									Channel 7 - 11Mbits - H orientation		
18	2412.200M	115.8	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	118.2	125.2	-7.0	Horiz
									Channel 1 - 11Mbits - H orientation		
19	2442.200M	115.5	+1.4 +5.8	-39.0 +2.7	+28.5	+3.2	+0.0	118.1	125.2	-7.1	Vert
									Channel 7 - 1Mbits - H orientation		
20	2413.000M	115.7	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	118.1	125.2	-7.1	Horiz
									Channel 1 - 1Mbits - V orientation		
21	2412.200M	115.4	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	117.8	125.2	-7.4	Horiz
									Channel 1 - 1Mbits - H orientation		
22	2412.200M	115.0	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	117.4	125.2	-7.8	Vert
									Channel 1 - 11Mbits - H orientation		
23	2413.000M	114.2	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	116.6	125.2	-8.6	Vert
									Channel 1 - 1Mbits - V orientation		
24	2413.000M	112.3	+1.4 +5.7	-39.0 +2.7	+28.4	+3.2	+0.0	114.7	125.2	-10.5	Vert
									Channel 1 - 1Mbits - H orientation		

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Customer: **Masimo Corporation**
 Specification: **15.247(b)(3) 1 Watt**
 Work Order #: **86964**
 Test Type: **Radiated Scan**
 Equipment: **Pulse Rate Monitor**
 Manufacturer: **Masimo Corp**
 Model: **RAD-87**
 S/N: **804173**

Date: 9/13/2007
 Time: 14:06:24
 Sequence#: 2
 Tested By: Sep Apahidean

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Horn Antenna	9603-4683	06/29/2006	06/29/2008	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/05/2009	00787
Antenna cable (Heliac)	P05348	09/28/2005	09/28/2007	NA
Antenna cable	Cable#17	09/19/2006	09/19/2008	P04382

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

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Function	Manufacturer	Model #	S/N
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Test Conditions / Notes:

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Transducer Legend:

T1=Cable_#P5421_112807	T2=Preamplifier 83017A 00787
T3=Horn 01646_062908	T4=48' Heliac Cable 091808 P05563
T5=84' Heliac Cable P04382	T6=20Mhz BW correction

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

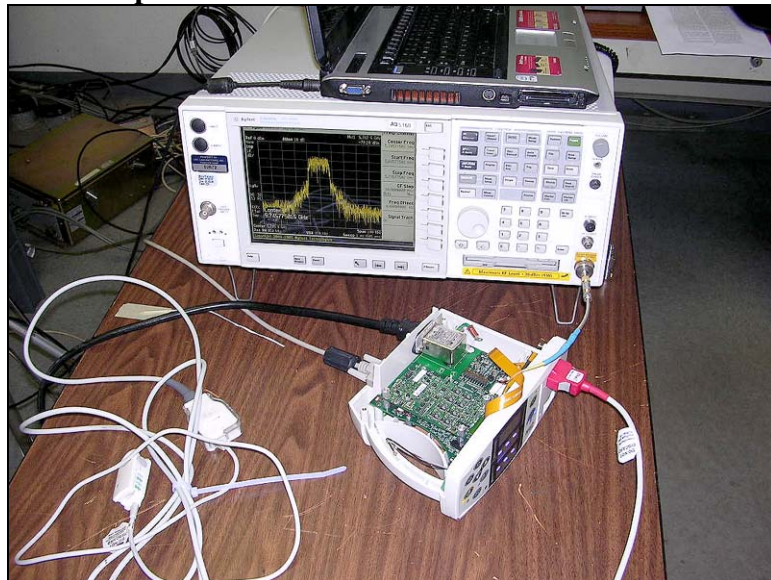
#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2461.000M	119.6	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	123.5	125.2 Channel 11 - 6Mbits - V orientation	-1.7	Horiz
2	2445.700M	119.0	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	122.9	125.2 Channel 7 - 6Mbits - V orientation	-2.3	Horiz
3	2437.000M	118.7	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	122.5	125.2 Channel 1 - 6Mbits - V orientation	-2.7	Horiz

4	2444.500M	117.2	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	121.1	125.2	-4.1	Vert
Channel 7 - 54 Mbits - V orientation											
5	2462.800M	117.0	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	120.9	125.2	-4.3	Vert
Channel 11 - 54 Mbits - V orientation											
6	2444.200M	117.0	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	120.9	125.2	-4.3	Horiz
Channel 7 - 54 Mbits - V orientation											
7	2437.300M	117.1	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	120.9	125.2	-4.3	Horiz
Channel 1 - 6Mbits - H orientation											
8	2462.600M	116.9	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	120.8	125.2	-4.4	Horiz
Channel 11 - 54 Mbits - V orientation											
9	2462.700M	116.6	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	120.5	125.2	-4.7	Vert
Channel 11 - 6Mbits - V orientation											
10	2414.800M	116.8	+1.4 +5.7	-39.0 +3.9	+28.4	+3.2	+0.0	120.4	125.2	-4.8	Horiz
Channel 1 - 54 Mbits - V orientation											
11	2439.900M	116.3	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	120.1	125.2	-5.1	Horiz
Channel 7 - 6Mbits - H orientation											
12	2462.700M	115.7	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	119.6	125.2	-5.6	Vert
Channel 11 - 6Mbits - H orientation											
13	2439.400M	115.4	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	119.2	125.2	-6.0	Vert
Channel 7 - 6Mbits - V orientation											
14	2437.000M	115.3	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	119.1	125.2	-6.1	Vert
Channel 1 - 6Mbits - V orientation											
15	2437.500M	115.2	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	119.0	125.2	-6.2	Vert
Channel 1 - 6Mbits - H orientation											
16	2462.800M	114.6	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	118.5	125.2	-6.7	Vert
Channel 11 - 54 Mbits - H orientation											
17	2414.700M	114.8	+1.4 +5.7	-39.0 +3.9	+28.4	+3.2	+0.0	118.4	125.2	-6.8	Vert
Channel 1 - 54 Mbits - H orientation											

18	2440.300M	114.4	+1.4 +5.8	-39.0 +3.9	+28.5	+3.2	+0.0	118.2	125.2	-7.0	Vert
									Channel 7 - 6Mbits - H orientation		
19	2462.600M	114.0	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	117.9	125.2	-7.3	Horiz
									Channel 11 - 54 Mbits - H orientation		
20	2461.000M	114.0	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	117.9	125.2	-7.3	Horiz
									Channel 11 - 6Mbits - H orientation		
21	2414.800M	114.0	+1.4 +5.7	-39.0 +3.9	+28.4	+3.2	+0.0	117.6	125.2	-7.6	Horiz
									Channel 1 - 54 Mbits - H orientation		
22	2444.200M	113.3	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	117.2	125.2	-8.0	Horiz
									Channel 7 - 54 Mbits - H orientation		
23	2444.500M	112.9	+1.4 +5.8	-39.0 +3.9	+28.6	+3.2	+0.0	116.8	125.2	-8.4	Vert
									Channel 7 - 54 Mbits - H orientation		
24	2414.800M	110.5	+1.4 +5.7	-39.0 +3.9	+28.4	+3.2	+0.0	114.1	125.2	-11.1	Vert
									Channel 1 - 54 Mbits - V orientation		

FCC 15.247(d) ANTENNA CONDUCTED SPURIOUS EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964**
 Test Type: **Radiated Scan**
 Equipment: **Pulse Rate Monitor**
 Manufacturer: **Masimo Corp**
 Model: **RAD-87**
 S/N: **804173**

Date: 9/18/2007
 Time: 09:26:15
 Sequence#: 10
 Tested By: Sep Apahidean

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Antenna cable	12237/4A	11/28/2005	11/28/2007	P5421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPDV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11G, Channel 1, 6Mbps. RBW=100kHz VBW=100kHz. Max peak reading at 2.418GHz = 112.23 dbuV. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data:		Reading listed by margin.					Test Distance: None				
#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	24279.100M	61.8	+4.2				+0.0	66.0	92.3	-26.3	None
2	23325.200M	61.3	+4.2				+0.0	65.5	92.3	-26.8	None
3	468.000k	64.7	+0.0				+0.0	64.7	92.3	-27.6	None
4	14293.500M	61.4	+3.1				+0.0	64.5	92.3	-27.8	None
5	13615.000M	61.0	+3.1				+0.0	64.1	92.3	-28.2	None
6	18401.900M	60.0	+3.5				+0.0	63.5	92.3	-28.8	None
7	20123.900M	59.8	+3.6				+0.0	63.4	92.3	-28.9	None
8	24135.700M	57.9	+4.2				+0.0	62.1	92.3	-30.2	None
9	14481.400M	57.9	+3.0				+0.0	60.9	92.3	-31.4	None
10	21722.200M	56.4	+4.0				+0.0	60.4	92.3	-31.9	None
11	19308.600M	56.7	+3.5				+0.0	60.2	92.3	-32.1	None
12	10731.400M	57.0	+2.7				+0.0	59.7	92.3	-32.6	None
13	16895.000M	55.9	+3.3				+0.0	59.2	92.3	-33.1	None
14	12067.900M	54.4	+2.9				+0.0	57.3	92.3	-35.0	None
15	9654.300M	53.2	+2.5				+0.0	55.7	92.3	-36.6	None
16	7240.700M	53.0	+2.5				+0.0	55.5	92.3	-36.8	None
17	4827.100M	53.4	+2.0				+0.0	55.4	92.3	-36.9	None
18	501.800M	54.3	+0.6				+0.0	54.9	92.3	-37.4	None

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964** Date: 9/18/2007
 Test Type: **Radiated Scan** Time: 08:52:37
 Equipment: **Pulse Rate Monitor** Sequence#: 12
 Manufacturer: Masimo Corp Tested By: Sep Apahidean
 Model: RAD-87
 S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Antenna cable	12237/4A	11/28/2005	11/28/2007	P5421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11B, Channel 7, 1Mbps. RBW=100kHz VBW=100kHz. Max peak reading at 2.442GHz = 114.03 dbuV. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dB μ V	T1 dB	dB			Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2314.000M	66.6	+1.4				+0.0	68.0	94.0	-26.0	None
2	20792.140M	59.4	+3.8				+0.0	63.2	94.0	-30.8	None
3	4884.000M	61.0	+2.0				+0.0	63.0	94.0	-31.0	None
4	24426.700M	58.5	+4.3				+0.0	62.8	94.0	-31.2	None
5	25185.200M	61.9	+0.0				+0.0	61.9	94.0	-32.1	None
6	21983.800M	57.1	+4.2				+0.0	61.3	94.0	-32.7	None
7	26490.300M	61.1	+0.0				+0.0	61.1	94.0	-32.9	None

8	19541.000M	57.2	+3.5	+0.0	60.7	94.0	-33.3	None
9	14655.300M	55.2	+3.1	+0.0	58.3	94.0	-35.7	None
10	17098.200M	54.6	+3.3	+0.0	57.9	94.0	-36.1	None
11	481.300M	57.1	+0.6	+0.0	57.7	94.0	-36.3	None
12	9769.700M	54.2	+2.6	+0.0	56.8	94.0	-37.2	None
13	7326.800M	54.1	+2.6	+0.0	56.7	94.0	-37.3	None
14	12212.500M	52.9	+3.0	+0.0	55.9	94.0	-38.1	None
15	1329.200M	53.6	+1.0	+0.0	54.6	94.0	-39.4	None

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964** Date: 9/18/2007
 Test Type: **Radiated Scan** Time: 09:42:35
 Equipment: **Pulse Rate Monitor** Sequence#: 13
 Manufacturer: Masimo Corp Tested By: Sep Apahidean
 Model: RAD-87
 S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Antenna cable	12237/4A	11/28/2005	11/28/2007	P5421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPDV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11G, Channel 7, 6Mbps. RBW=100kHz VBW=100kHz. Max peak reading at 2.441GHz = 112.91 dbuV. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	dB			Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	24407.700M	60.9	+4.3				+0.0	65.2	92.9	-27.7	None
2	21972.300M	58.8	+4.2				+0.0	63.0	92.9	-29.9	None
3	17433.400M	59.1	+3.2				+0.0	62.3	92.9	-30.6	None
4	12741.500M	59.2	+3.0				+0.0	62.2	92.9	-30.7	None
5	25219.800M	61.7	+0.0				+0.0	61.7	92.9	-31.2	None
6	7327.800M	59.1	+2.6				+0.0	61.7	92.9	-31.2	None
7	990.000k	61.2	+0.0				+0.0	61.2	92.9	-31.7	None

8	19530.700M	57.6	+3.5	+0.0	61.1	92.9	-31.8	None
9	14651.300M	58.0	+3.1	+0.0	61.1	92.9	-31.8	None
10	17095.700M	57.6	+3.3	+0.0	60.9	92.9	-32.0	None
11	11892.900M	56.9	+2.9	+0.0	59.8	92.9	-33.1	None
12	12206.300M	55.8	+3.0	+0.0	58.8	92.9	-34.1	None
13	4884.000M	55.9	+2.0	+0.0	57.9	92.9	-35.0	None
14	9765.000M	54.7	+2.6	+0.0	57.3	92.9	-35.6	None
15	483.000M	53.7	+0.6	+0.0	54.3	92.9	-38.6	None

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964** Date: 9/18/2007
 Test Type: **Radiated Scan** Time: 09:07:22
 Equipment: **Pulse Rate Monitor** Sequence#: 11
 Manufacturer: Masimo Corp Tested By: Sep Apahidean
 Model: RAD-87
 S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Cable Big Blue	12237/4A	11/28/2005	11/28/2007	P05421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11B, Channel 11, 1Mbits. RBW=100kHz VBW=100kHz
 Max peak reading at 2.462GHz = 114.16 dbuV.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	24194.600M	61.9	+4.2				+0.0	66.1	94.0	-27.9	None
2	25185.400M	63.3	+0.0				+0.0	63.3	94.0	-30.7	None
3	4924.000M	60.6	+2.0				+0.0	62.6	94.0	-31.4	None
4	26200.200M	61.9	+0.0				+0.0	61.9	94.0	-32.1	None
5	22162.170M	57.3	+4.2				+0.0	61.5	94.0	-32.5	None
6	14775.170M	57.0	+3.1				+0.0	60.1	94.0	-33.9	None
7	6653.400M	56.7	+2.4				+0.0	59.1	94.0	-34.9	None
8	19700.170M	55.5	+3.5				+0.0	59.0	94.0	-35.0	None

9	7387.670M	56.4	+2.6	+0.0	59.0	94.0	-35.0	None
10	501.260M	57.6	+0.6	+0.0	58.2	94.0	-35.8	None
11	17237.670M	54.4	+3.3	+0.0	57.7	94.0	-36.3	None
12	9850.170M	50.5	+2.6	+0.0	53.1	94.0	-40.9	None

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964** Date: 9/18/2007
 Test Type: **Radiated Scan** Time: 09:54:18
 Equipment: **Pulse Rate Monitor** Sequence#: 14
 Manufacturer: Masimo Corp Tested By: Sep Apahidean
 Model: RAD-87
 S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Antenna cable	12237/4A	11/28/2005	11/28/2007	P5421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11G, Channel 11, 6Mbps. RBW=100kHz VBW=100kHz. Max peak reading at 2.462GHz = 112.87 dbuV. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dB μ V	T1 dB	dB			Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	478.000k	64.8	+0.0				+0.0	64.8	92.9	-28.1	None
2	22172.000M	56.4	+4.2				+0.0	60.6	92.9	-32.3	None
3	14779.000M	57.3	+3.1				+0.0	60.4	92.9	-32.5	None
4	19707.700M	56.3	+3.5				+0.0	59.8	92.9	-33.1	None
5	17243.300M	54.1	+3.3				+0.0	57.4	92.9	-35.5	None
6	12314.700M	53.8	+3.0				+0.0	56.8	92.9	-36.1	None
7	26617.800M	56.7	+0.0				+0.0	56.7	92.9	-36.2	None

8	499.600M	55.5	+0.6	+0.0	56.1	92.9	-36.8	None
9	4921.700M	53.7	+2.0	+0.0	55.7	92.9	-37.2	None
10	7386.000M	52.6	+2.6	+0.0	55.2	92.9	-37.7	None
11	9850.300M	51.9	+2.6	+0.0	54.5	92.9	-38.4	None

Test Location: CKC Laboratories, Inc. • 110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Masimo Corporation**
 Specification: **15.247(d) Transmitter Spurious Emissions**
 Work Order #: **86964** Date: 9/18/2007
 Test Type: **Radiated Scan** Time: 08:45:34
 Equipment: **Pulse Rate Monitor** Sequence#: 12
 Manufacturer: Masimo Corp Tested By: Sep Apahidean
 Model: RAD-87
 S/N: 804173

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Antenna cable	12237/4A	11/28/2005	11/28/2007	P5421

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Pulse Rate Monitor*	Masimo Corp	RAD-87	804173

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	IBM	ThinkPAD 2366	99-TGPV9

Test Conditions / Notes:

The EUT is on the table, connected to the spectrum analyzer. The Serial cable is connected to the laptop computer, which is used to change the TX characteristics. 802.11B, Channel 1, 1Mbps, RBW=100kHz VBW=100kHz. Max peak reading at 2.412GHz = 113.82 dbuV. Frequency range tested: 9 kHz – 40 GHz.

Transducer Legend:

T1=Cable_#P5421_112807

Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4823.920M	62.8	+2.0				+0.0	64.8	93.8	-29.0	None
2	24125.080M	58.5	+4.2				+0.0	62.7	93.8	-31.1	None
3	26940.800M	61.4	+0.0				+0.0	61.4	93.8	-32.4	None
4	14474.170M	57.9	+3.0				+0.0	60.9	93.8	-32.9	None
5	16887.580M	57.4	+3.3				+0.0	60.7	93.8	-33.1	None
6	21712.580M	56.6	+4.0				+0.0	60.6	93.8	-33.2	None
7	19300.080M	56.2	+3.5				+0.0	59.7	93.8	-34.1	None

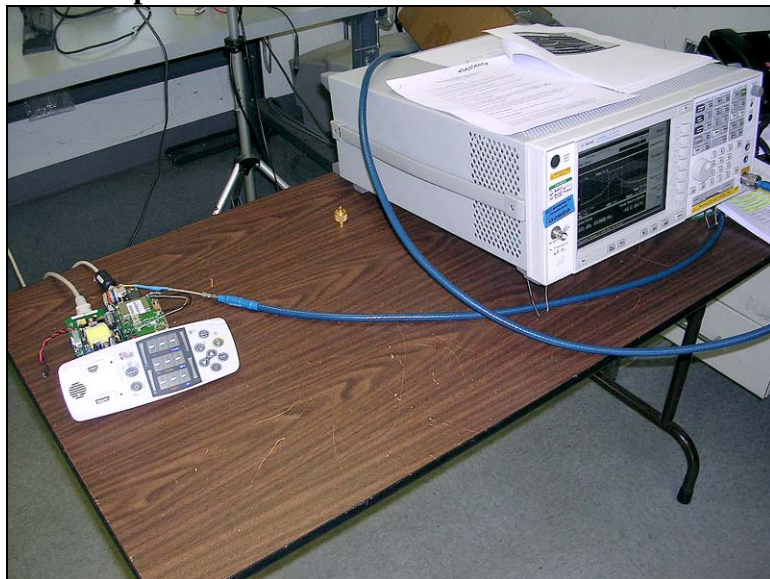
8	12061.920M	55.8	+2.9	+0.0	58.7	93.8	-35.1	None
9	7236.420M	54.3	+2.5	+0.0	56.8	93.8	-37.0	None
10	451.370M	54.9	+0.6	+0.0	55.5	93.8	-38.3	None
11	9648.920M	51.8	+2.5	+0.0	54.3	93.8	-39.5	None

FCC 15.247(e) POWER SPECTRAL DENSITY

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/04/2007	01/04/2009	02672
Cable Huber & Suhner	12237/4A	11/28/2005	11/28/2007	P05421
Programmable Power Source	01695/01696	05/15/07	05/15/09	250 / 245

Test Setup Photos



Test Conditions: The EUT is on the table and all the probes and cables are connected to the unit. Measurements are made by direct connect with the Serial cable connected to the laptop computer, which is used to change the TX characteristics. There is a 1.4 dB offset to correct for the cable.

Summary Table

Channel	Mode	Power Spectral Density dBm	Limit
1	802.11b	-10.35	8 dBm
7	802.11b	-9.53	8 dBm
11	802.11b	-8.63	8 dBm
1	802.11g	-9.31	8 dBm
7	802.11g	-8.20	8 dBm
11	802.11g	-8.77	8 dBm