FRESENIUS MEDICAL CARE - NA TEST REPORT

FOR THE

MEDICAL WETNESS DETECTOR, 190427

FCC PART 15.231 & 15.209 AND RSS-210

COMPLIANCE

DATE OF ISSUE: OCTOBER 2, 2006

PREPARED FOR:

Fresenius Medical Care - NA
2637 Shadelands Drive
Walnut Creek, CA 94598

P.O. No.: 4503290777
W.O. No.: 85642

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: September 20-29, 2006

Report No.: FC06-053

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	September 20-29, 2006
DATE OF RECEIPT:	September 20, 2006
MANUFACTURER:	Fresenius Medical Care - NA 2637 Shadelands Drive Walnut Creek, CA 94598
REPRESENTATIVE:	Mike Owen
TEST LOCATION:	CKC Laboratories, Inc. 5046 Sierra Pines Drive Mariposa, CA 95338
TEST METHOD:	ANSI C63.4 (2003), RSS-210 and RSS GEN
PURPOSE OF TEST:	To demonstrate the compliance of the Medical Wetness Detector, 190427 with the requirements for FCC Part 15.231/15.209 and RSS-210 devices.

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
RSS GEN	7.2.2	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	A1.1.1	47CFR	15.231(a)	General Requirements for Momentary Equipment
RSS 210	A1.1.2	47CFR	15.231(b)	Field Strength Requirements
RSS 210	A1.1.3	47CFR	15.231(c)	Bandwidth Requirements
RSS 210	A1.1.4	47CFR	15.231(d)	Frequency Stability for 40.66 - 40.70 MHz equipment
RSS 210	A1.1.5	47CFR	15.231(e)	Reduced Field Strength Requirements
	IC 3082A-1		784962	Site File No.

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply. Conducted emissions not required for this device.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker
Quality Assurance Administrative Manager

TEST PERSONNEL:

Randy Clark
EMC Engineer

Mike Wilkinson
EMC Engineer/Lab Manager

FCC 15.31(e) Voltage Variations
Not applicable to this device because it is battery powered and fresh batteries were used.

FCC 15.31(m) Number Of Channels
This device operates on a single channel.

FCC 15.33(a) Frequency Ranges Tested
15.231/15.209 Radiated Emissions: 9 kHz – 5 GHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	5 GHz	1 MHz

FCC 15.203 Antenna Requirements
The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

EUT Operating Frequency
The EUT was operating at 433.92 MHz.

Temperature And Humidity During Testing
The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

Medical Wetness Detector

Manuf: Fresenius Medical Care - NA
Model: 190427
Serial: 22
FCC ID: pending

PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.

REPORT OF MEASUREMENTS

The following tables report the worst case emissions levels recorded during the tests performed on the EUT. All readings taken were peak readings unless otherwise stated. The data sheets from which the emissions tables were compiled are contained in Appendix C.

Table 1: FCC 15.231 Carrier Emission Levels

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Amp dB	Ant dB	Cable dB	DTCF dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
433.913	84.3	-27.1	16.1	6.7	-4.8	75.2	80.5	-5.3	V
433.915	85.2	-27.1	16.1	6.7	-4.8	76.1	80.5	-4.4	H
433.915	83.4	-27.1	16.1	6.7	-4.8	74.3	80.5	-6.2	H
433.915	83.1	-27.1	16.1	6.7	-4.8	74.0	80.5	-6.5	V
433.915	69.7	-27.1	16.1	6.7	-4.8	60.6	80.5	-19.9	V
433.916	78.4	-27.1	16.1	6.7	-4.8	69.3	80.5	-11.2	H

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15.231
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: Equipment is a portable wireless wetness detector transmitter operating on a frequency of 433.92 MHz. Data represents maximized emissions in three orthogonal orientations of the EUT. Equipment is battery operated - a fresh battery is used for testing. Frequency Range investigated: Carrier. Temperature: 22ºC, Relative Humidity: 30%.

Table 2: FCC 15.231/15.209 Six Highest Spurious Emission Levels

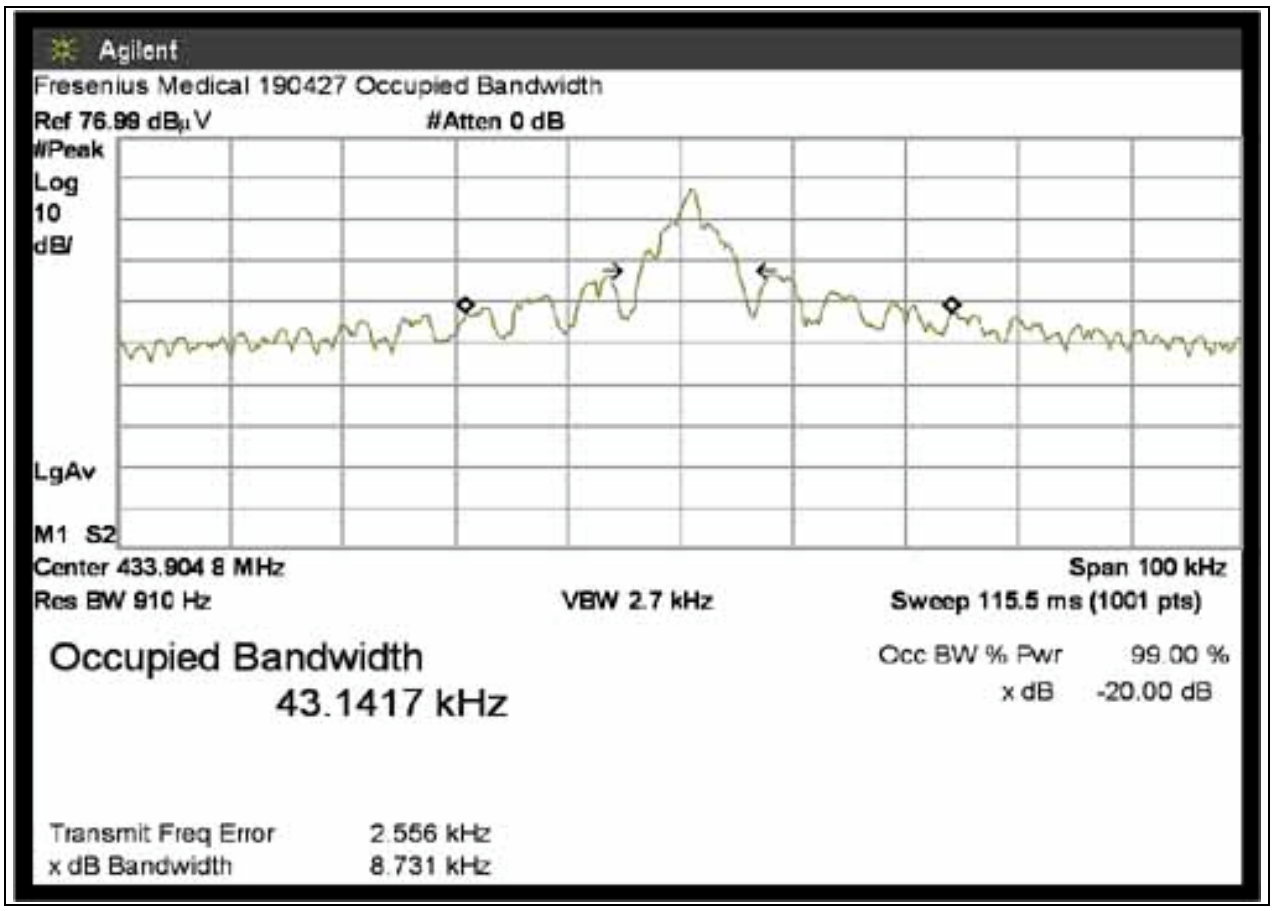
FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Amp dB	Ant dB	Cable dB	DTCF dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
1301.724	54.6	-35.5	25.1	6.7	-4.8	46.1	54.0	-7.9	V
1301.727	61.7	-35.5	25.1	6.7	-4.8	53.2	54.0	-0.8	H
1735.632	61.4	-35.1	27.0	7.7	-4.8	56.2	60.5	-4.3	H
1735.637	58.1	-35.1	27.0	7.7	-4.8	52.9	60.5	-7.6	V
2169.540	49.3	-34.8	28.7	8.9	-4.8	47.3	60.5	-13.2	H
3037.354	39.7	-34.3	31.3	10.6	-4.8	42.5	60.5	-18.0	H

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15.231/15.209
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: Equipment is a portable wireless wetness detector transmitter operating on a frequency of 433.92 MHz. Data represents maximized emissions in three orthogonal orientations of the EUT. Equipment is battery operated - a fresh battery is used for testing. Emissions reported represent worst case orientation of the EUT. Frequency Range investigated: 9 kHz to 5 GHz. Temperature: 22ºC, Relative Humidity: 30%. In the frequency range below 30 MHz, test distance is 10 meters. Test data in this frequency range is corrected for test distance using 40 dB per decade falloff for comparison to the limit at 30 and 300 meters. **No emissions detected within 20dB of the limit 9 kHz to 30 MHz.**

FCC 15.231(c) OCCUPIED BANDWIDTH



PULSE TIMING

Pulse Timing Calculations: The pulse timing of the equipment was measured using a spectrum analyzer in zero frequency span mode. The equipment transmits once every 3 seconds during an alarm condition. During each transmission the pulse burst duration is 110ms. The 110ms pulse was divided into 10ms plots and analyzed for content. The following table lists the results of the analysis for each 10ms plot. The unit used for this test was configured to transmit the maximum representative pulse train by employing all 1's for the unit ID thus representing the worst case pulse timing.

Header Pulse Duration: 1.35
Long Pulse Duration: 0.36
Short Pulse Duration: 0.17

Plot#	# H	# L	# S	Time H (ms)	Time L (ms)	Time S (ms)	Total on time per 10ms (ms)
1	1	15		1.35	5.40		6.75
2		14	5		5.04	0.85	5.89
3		13	5		4.68	0.85	5.53
4		16	2		5.76	0.34	6.10
5		10	8		3.60	1.36	4.96
6		10	7		3.60	1.19	4.79
7		16	3		5.76	0.51	6.27
8		12	6		4.32	1.02	5.34
9		16	2		5.76	0.34	6.10
10		13	5		4.68	0.85	5.53
11		5	13		1.80	2.21	4.01
						Worst case on time in any 100 ms:	**57.26**

The 11th plot was the shortest duration and therefore excluded from the calculation of the worst case on time in any 100ms window. Thus the worst case was measured at 57.26ms in the first 100ms of the pulse.

The Duty Cycle Correction Factor (DCCF) applied to the measurements was calculated as follows:

$$DCCF = 20LOG\left(\frac{T_{on}(ms)}{100ms}\right)$$

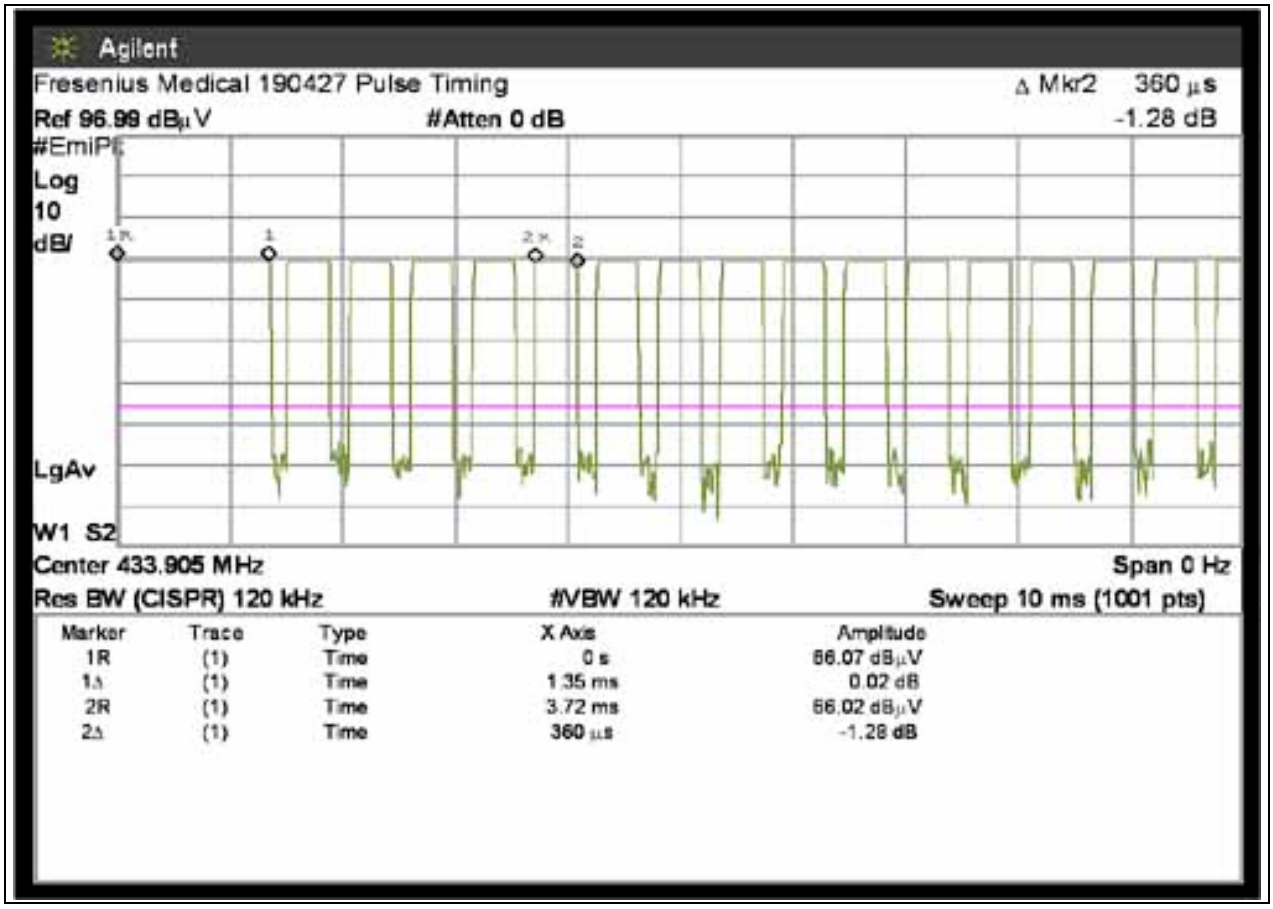
Thus the calculation yields

$$DCCF = 20LOG\left(\frac{57.26ms}{100ms}\right)$$

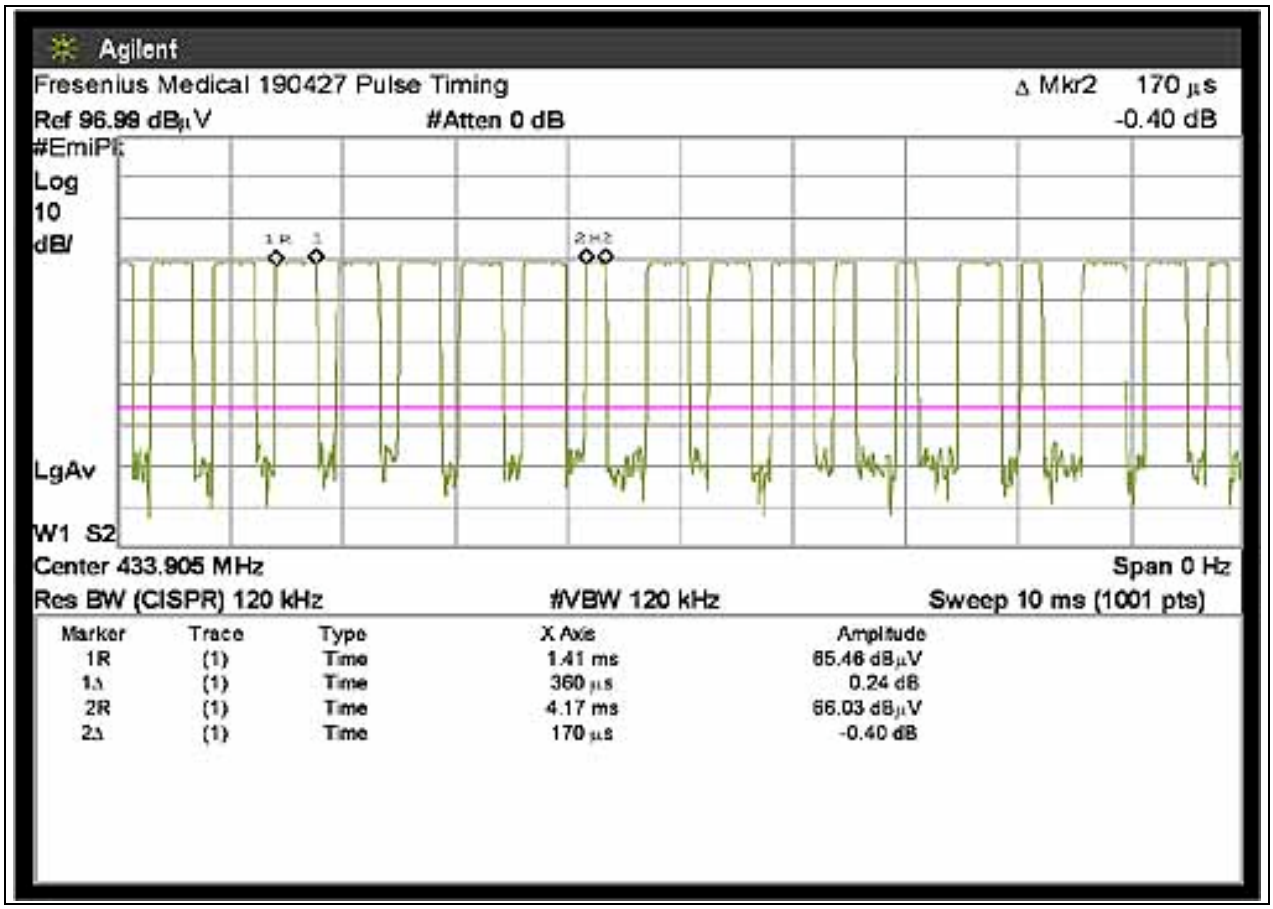
$$DCCF = -4.84dB$$

Peak measurements were taken with the device in 100% duty cycle and then corrected for comparison to the average limit in accordance with 15.35.

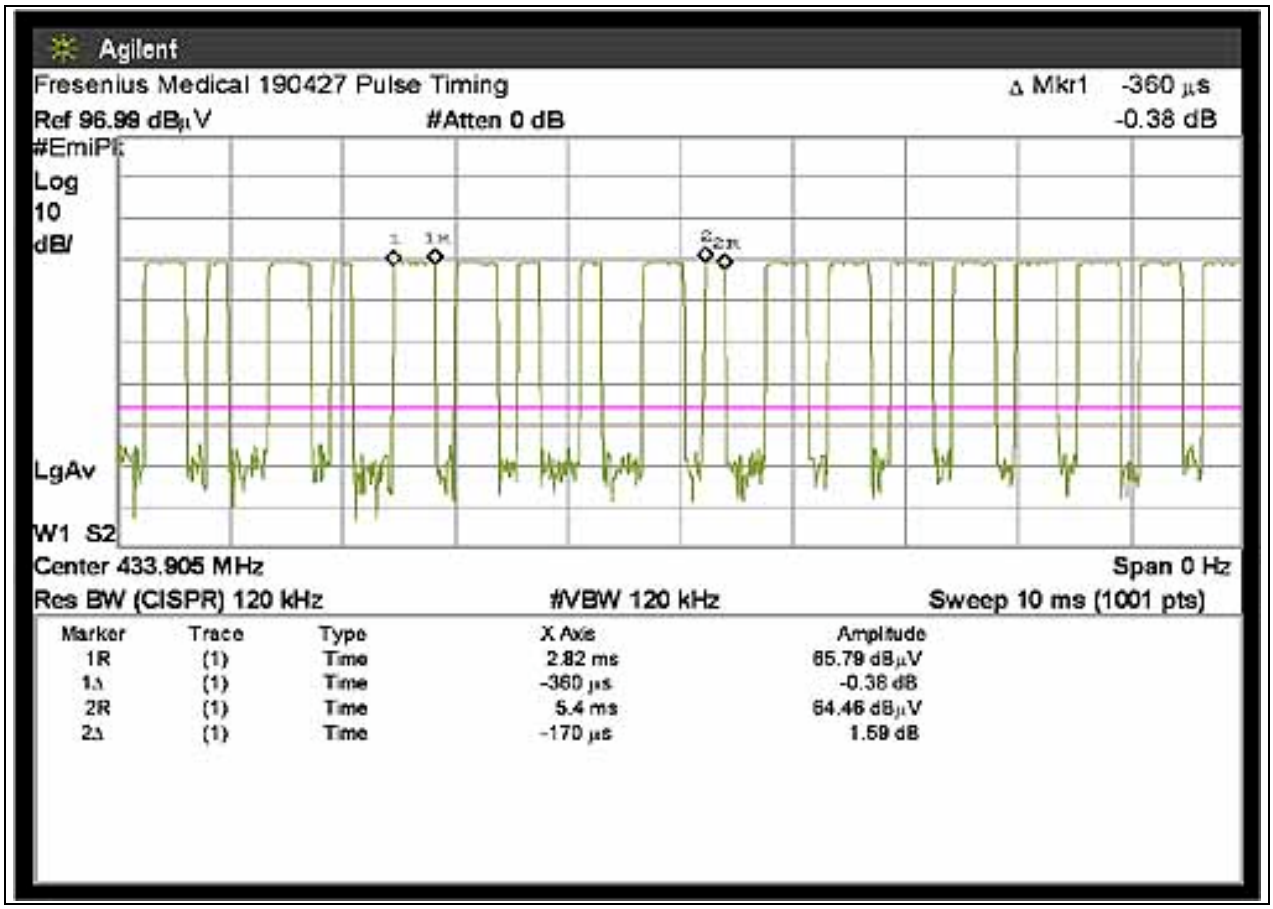
PULSE TIMING - 10ms #1



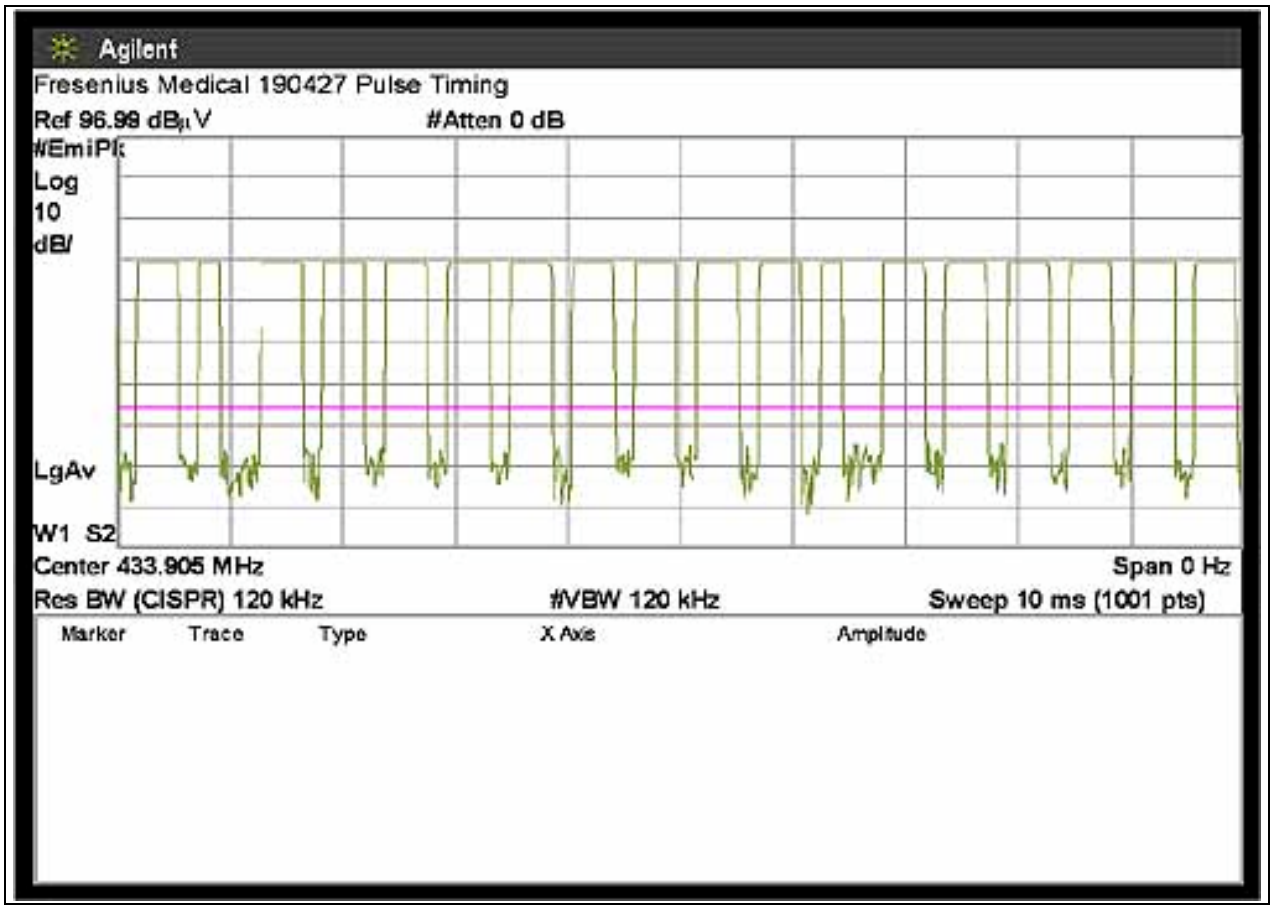
PULSE TIMING - 10ms #2



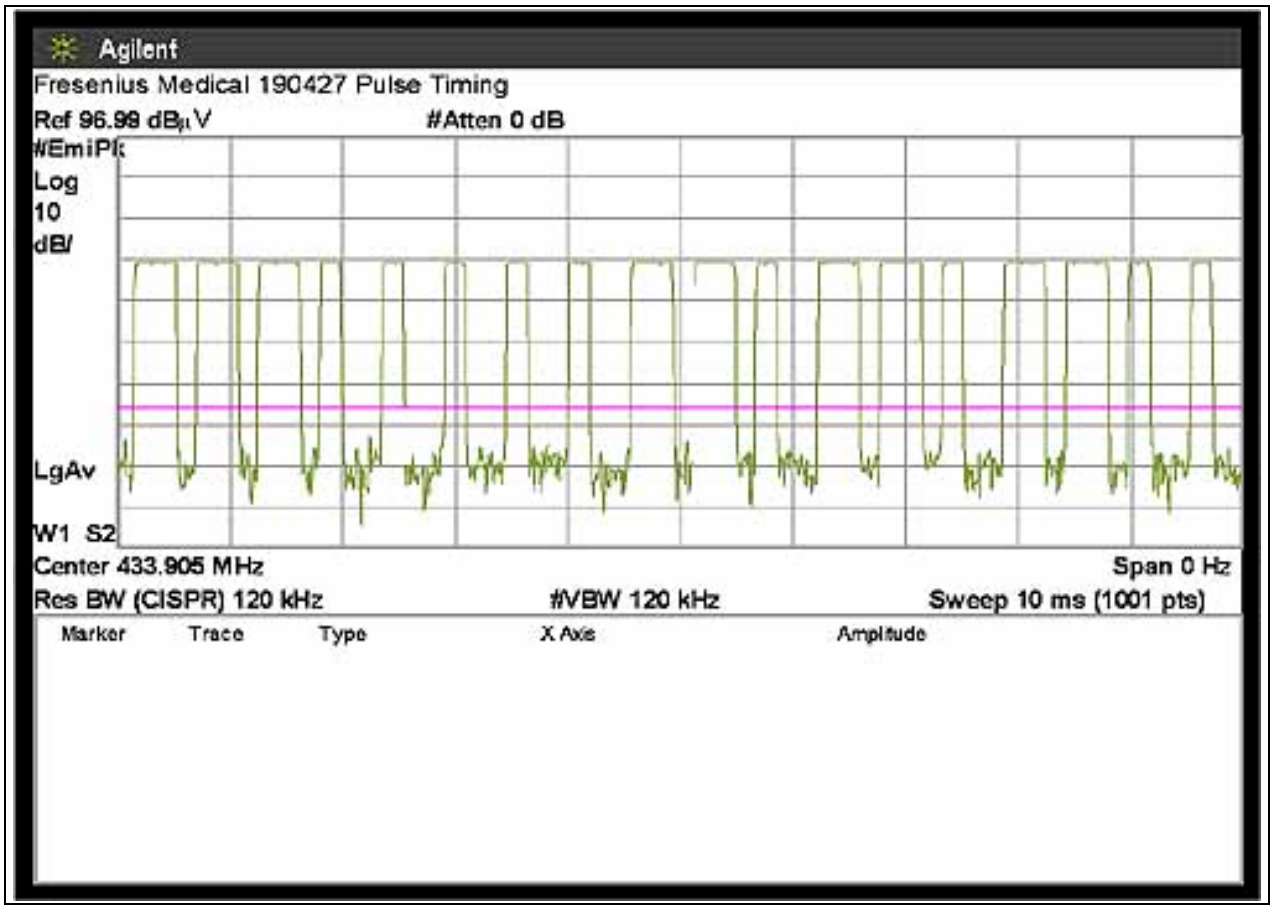
PULSE TIMING - 10ms #3



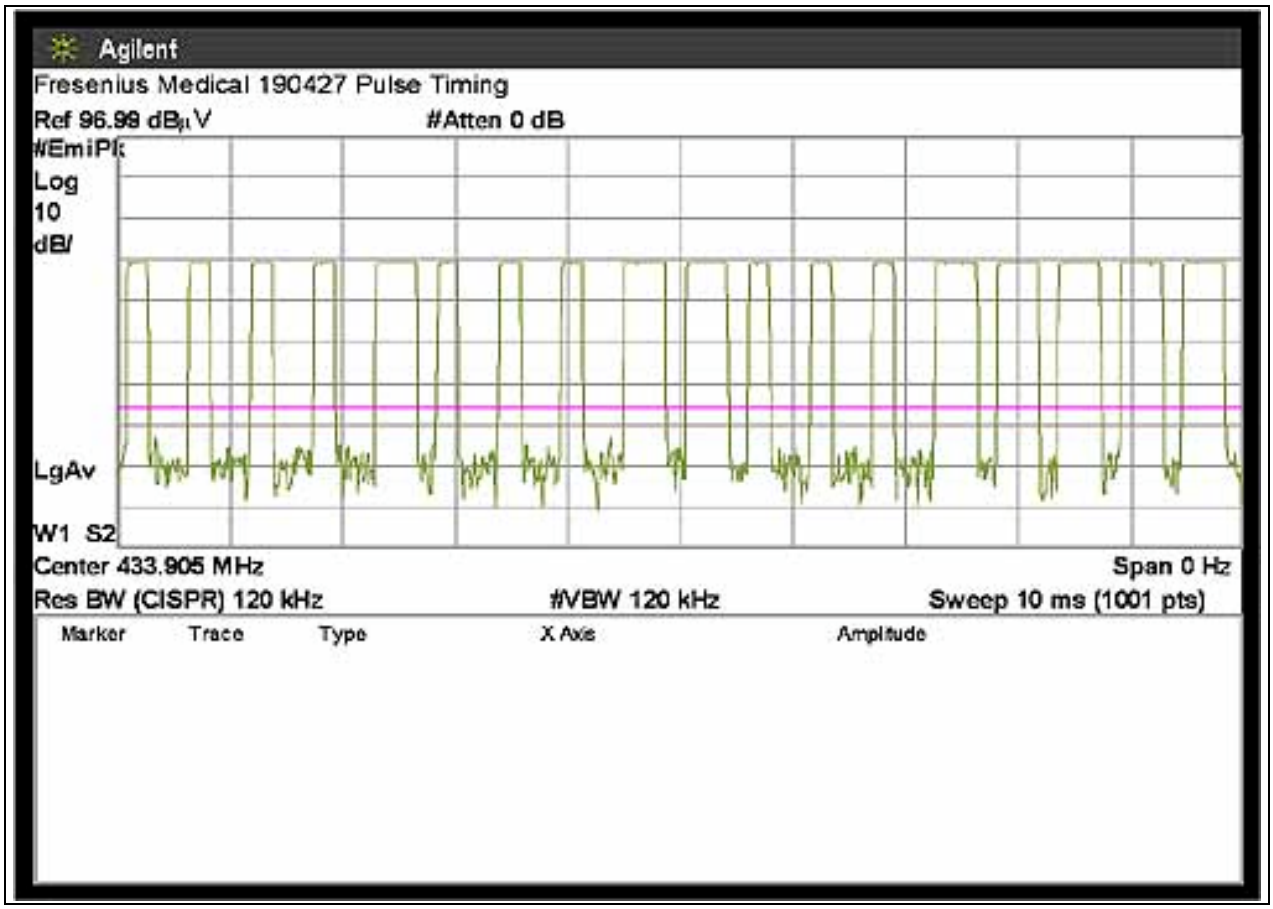
PULSE TIMING - 10ms #4



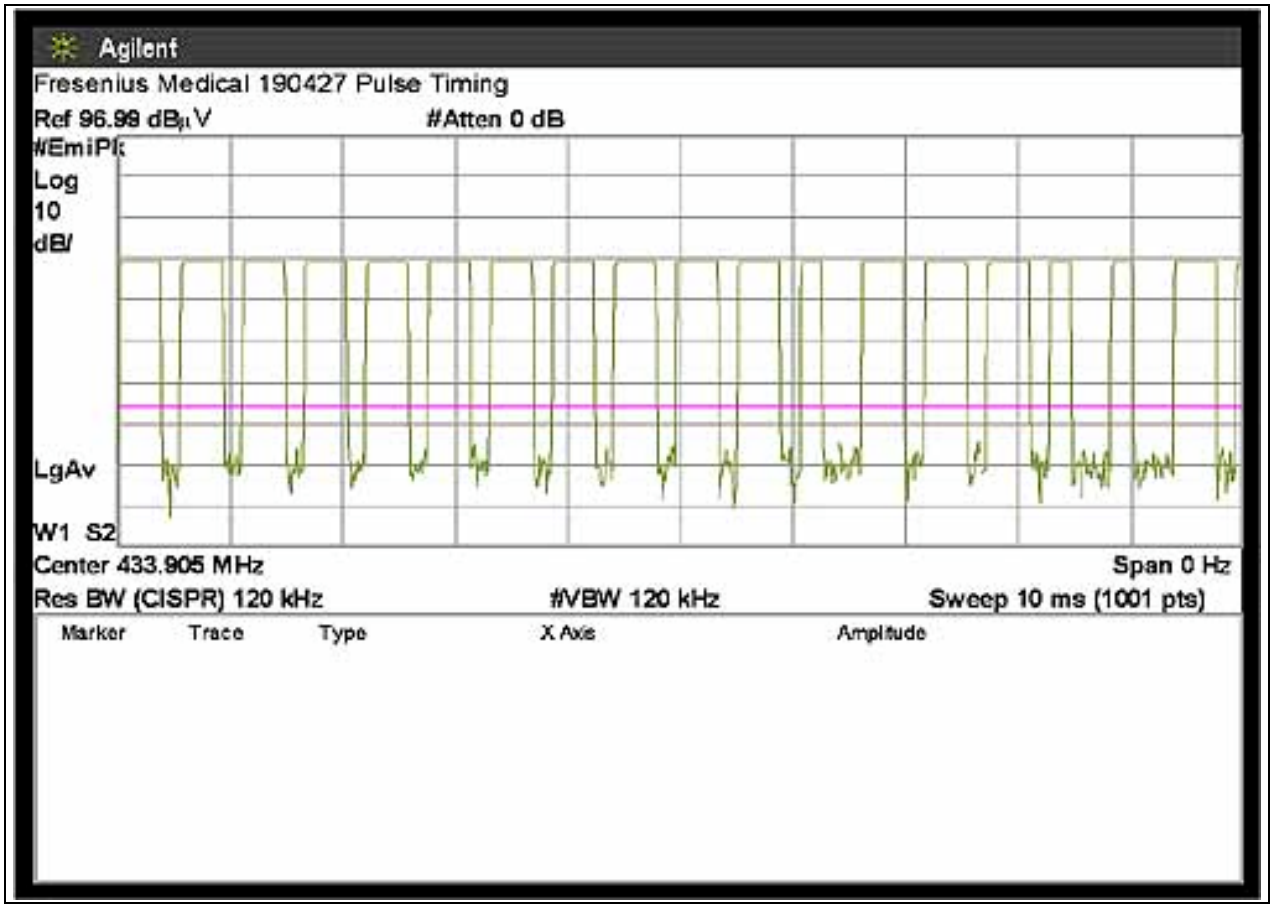
PULSE TIMING - 10ms #5



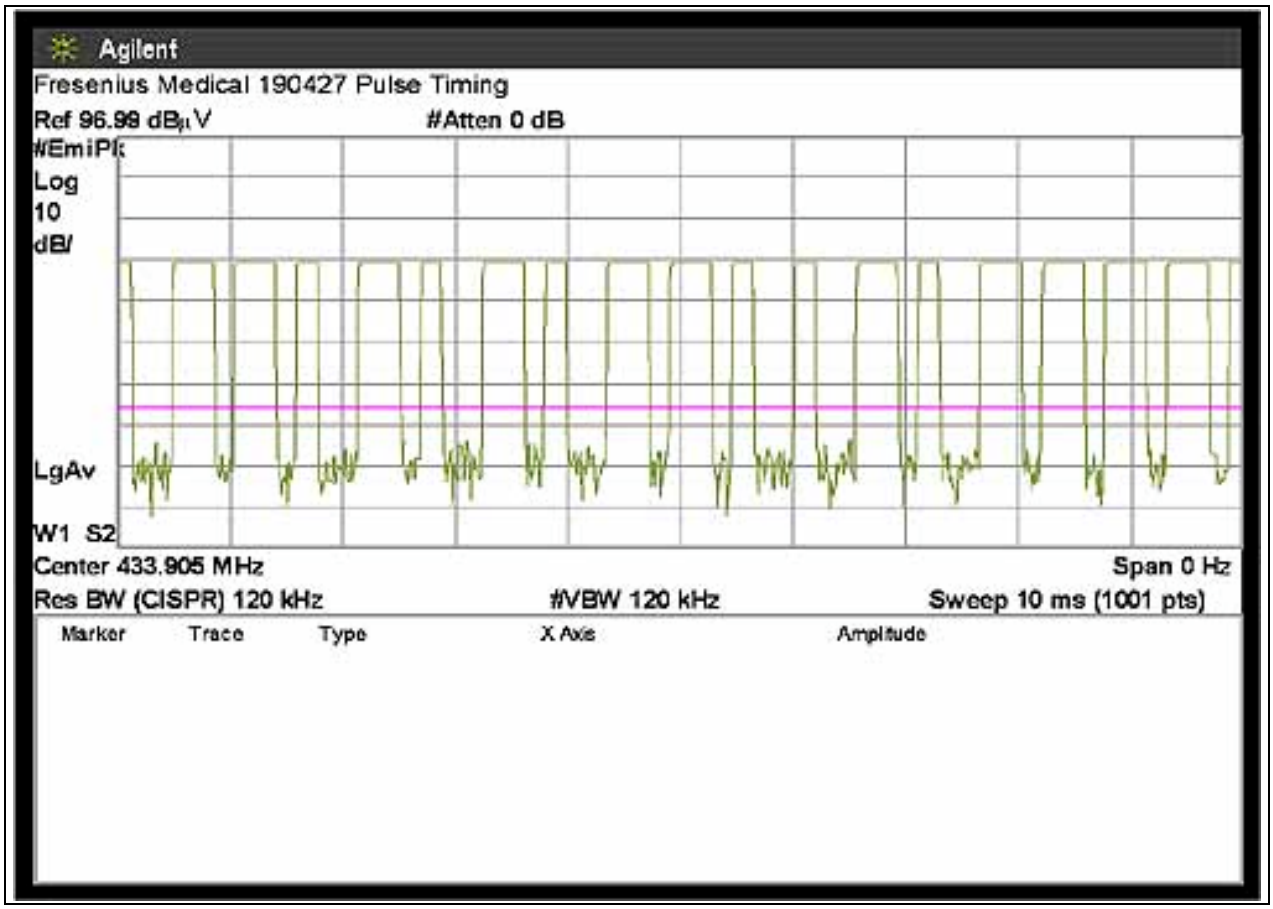
PULSE TIMING - 10ms #6



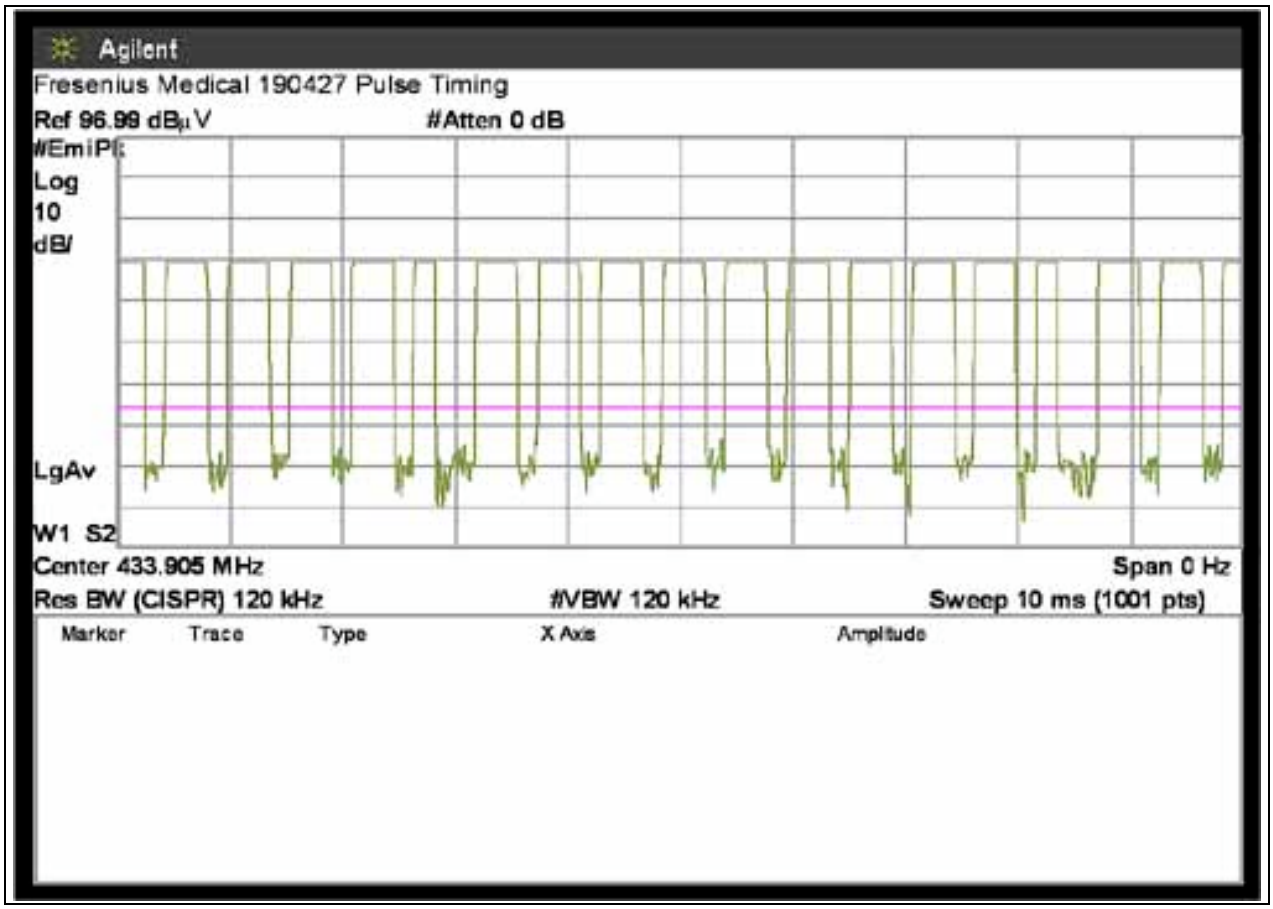
PULSE TIMING - 10ms #7



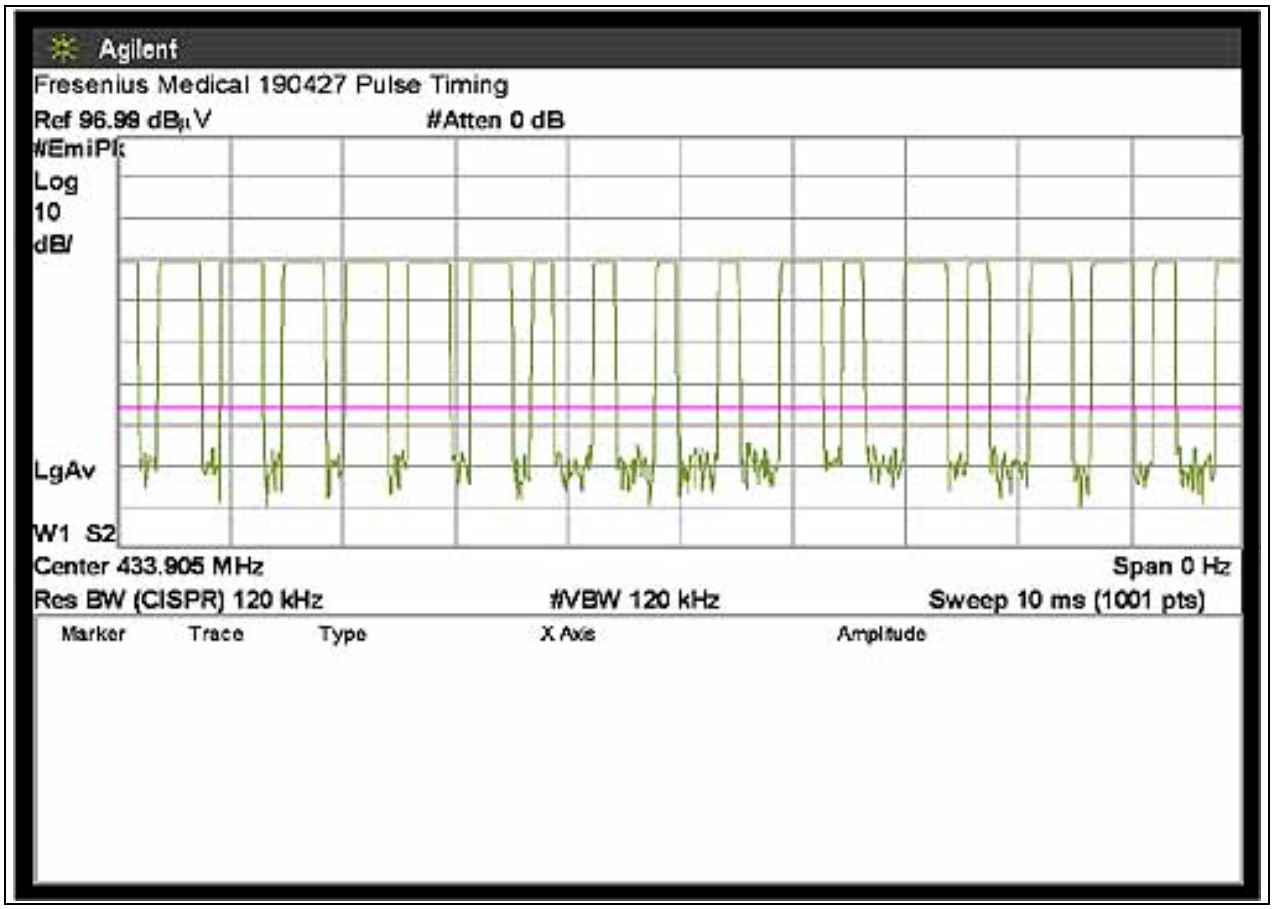
PULSE TIMING - 10ms #8



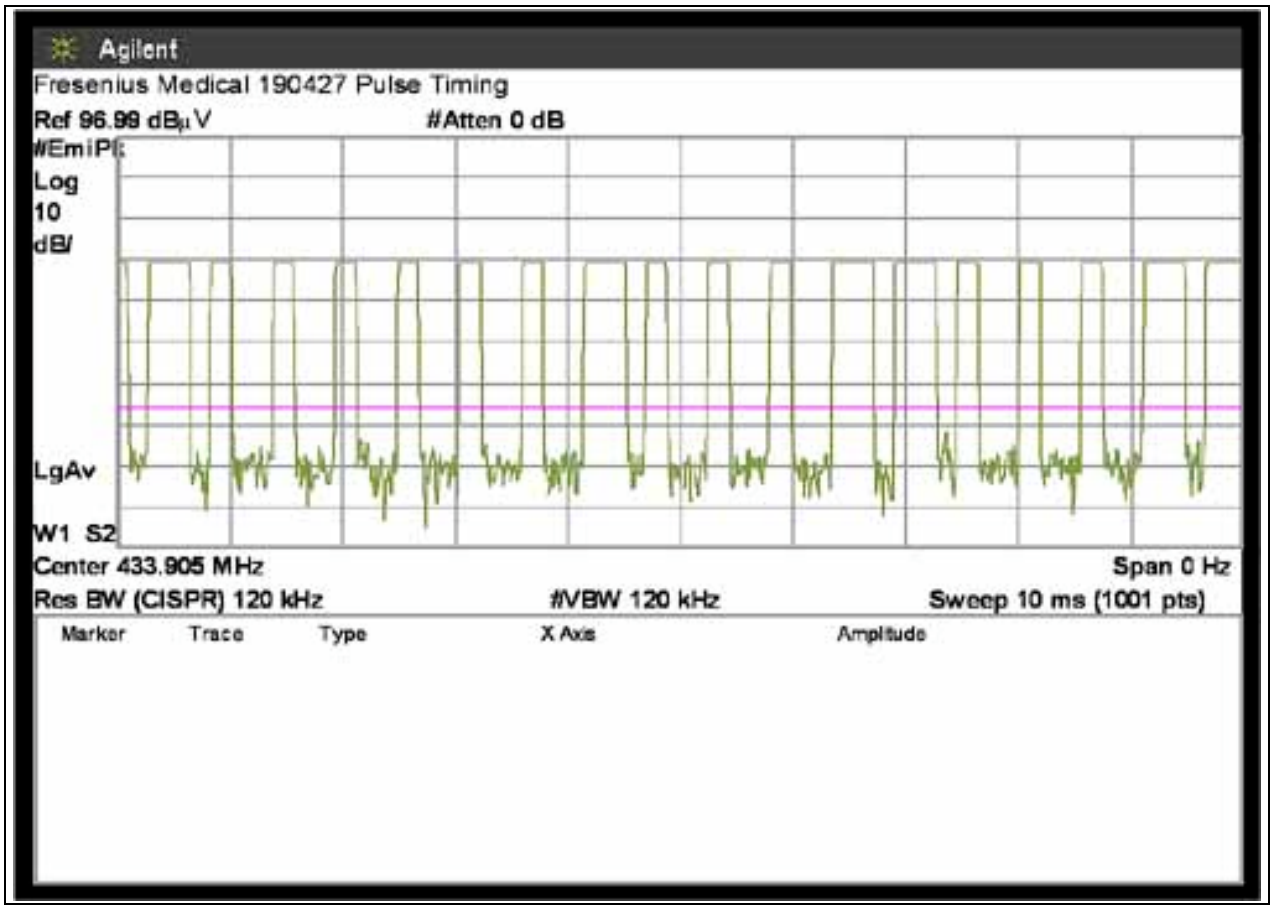
PULSE TIMING - 10ms #9



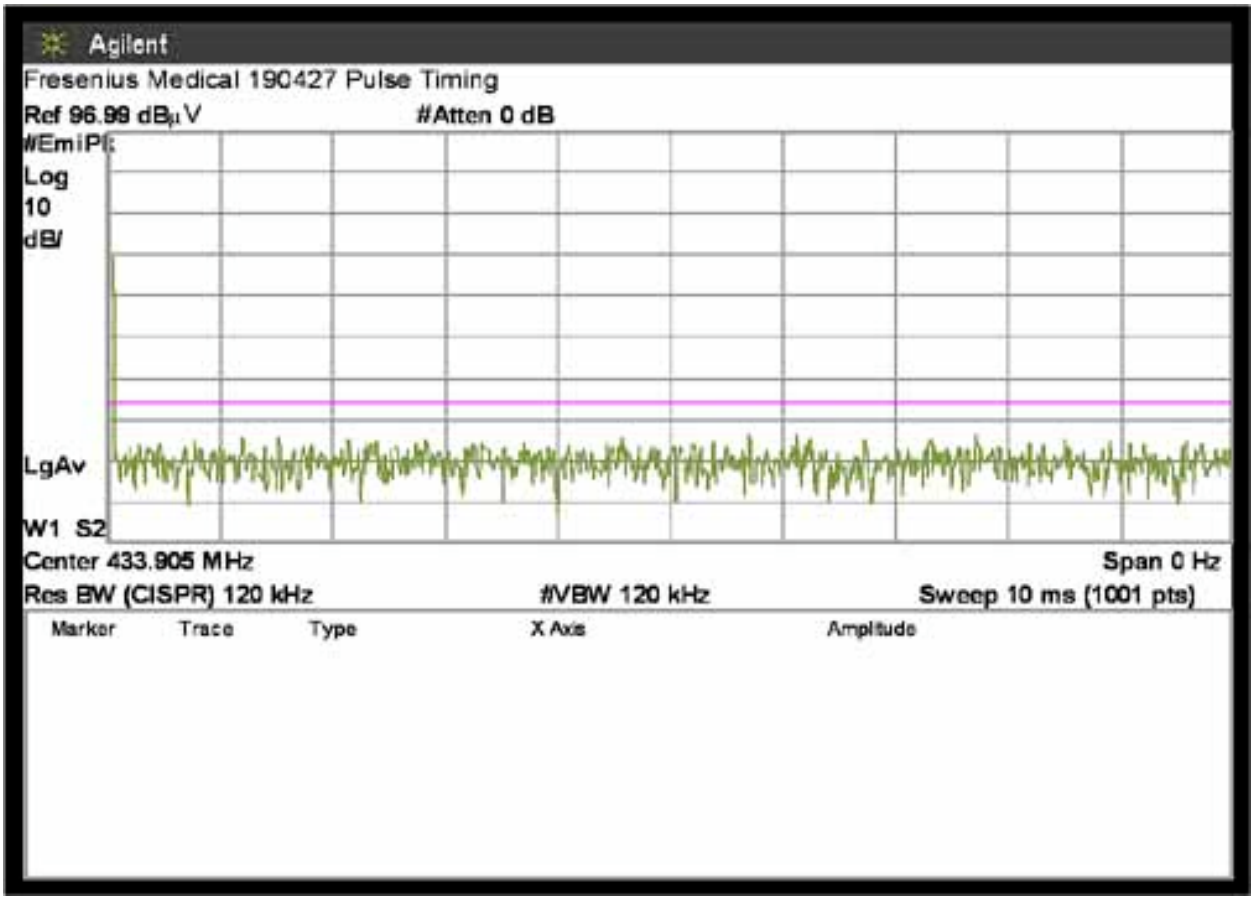
PULSE TIMING - 10ms #10



PULSE TIMING - 10ms #11



PULSE TIMING - 10ms #12



EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS

	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Appendix B were used to collect both the radiated and conducted emissions data. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For frequencies from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBµV, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual was followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meters above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable and raising and lowering the antenna from one to four meters as needed. The test engineer maximized the readings with respect to the table rotation, antenna height, and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

APPENDIX A

TEST SETUP PHOTOGRAPHS

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - X Orientation

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Y Orientation

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Z Orientation

APPENDIX B

TEST EQUIPMENT LIST

FCC 15.231 Carrier

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099

FCC 15.231 Spurious Emissions

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099
EMCO 3115 Horn Antenna	9307-4085	04/29/2005	04/29/2007	00656
EMCO Loop Antenna	1074	05/13/2005	05/13/2007	00226
HP 8449B Preamp	3008A00301	12/14/2004	12/14/2006	2010
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202
Cable, Pasternack 48"	NA	02/08/2005	02/08/2007	P05203
Cable, Andrews Hardline HF-005-20	NA	05/27/2005	05/27/2007	P04275

APPENDIX C:

MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
Specification: **FCC 15.231(b) Fundamental**
Work Order #: **85642** Date: 9/20/2006
Test Type: **Maximized Emissions** Time: 16:05:59
Equipment: **Medical Wetness Detector** Sequence#: 1
Manufacturer: Fresenius Medical Care - NA Tested By: Randal Clark
Model: 190427
S/N: 22

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Medical Wetness Detector*	Fresenius Medical Care - NA	190427	22

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Equipment is a portable wireless wetness detector transmitter operating on a frequency of 433.92 MHz. Data represents maximized emissions in three orthogonal orientations of the EUT. Equipment is battery operated - a fresh battery is used for testing. Frequency Range investigated: Carrier. Temperature: 22ºC, Relative Humidity: 30%.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - Site D 10m 9k-1G	T4=DTCF

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	433.915M	85.2	-27.1	+16.1	+6.7	-4.8	+0.0	76.1	80.5 X	-4.4	Horiz 170
2	433.913M	84.3	-27.1	+16.1	+6.7	-4.8	+0.0	75.2	80.5 Z	-5.3	Verti 115
3	433.915M	83.4	-27.1	+16.1	+6.7	-4.8	+0.0	74.3	80.5 Y	-6.2	Horiz 176
4	433.915M	83.1	-27.1	+16.1	+6.7	-4.8	+0.0	74.0	80.5 Y	-6.5	Verti 212
5	433.916M	78.4	-27.1	+16.1	+6.7	-4.8	+0.0	69.3	80.5 Z	-11.2	Horiz 137
6	433.915M	69.7	-27.1	+16.1	+6.7	-4.8	+0.0	60.6	80.5 X	-19.9	Verti 114

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
Specification: **FCC 15.231 (b) Spurious**
Work Order #: **85642** Date: 9/29/2006
Test Type: **Maximized Emissions** Time: 13:31:11
Equipment: **Medical Wetness Detector** Sequence#: 2
Manufacturer: Fresenius Medical Care - NA Tested By: Randal Clark
Model: 190427
S/N: 22

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Medical Wetness Detector*	Fresenius Medical Care - NA	190427	22

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Equipment is a portable wireless wetness detector transmitter operating on a frequency of 433.92 MHz. Data represents maximized emissions in three orthogonal orientations of the EUT. Equipment is battery operated - a fresh battery is used for testing. Emissions reported represent worst case orientation of the EUT. Frequency Range investigated: 9 kHz to 5 GHz. Temperature: 22ºC, Relative Humidity: 30%. In the frequency range below 30 MHz, test distance is 10 meters. Test data in this frequency range is corrected for test distance using 40 dB per decade falloff for comparison to the limit at 30 and 300 meters. **No emissions detected within 20dB of the limit 9 kHz to 30 MHz.**

Transducer Legend:

T1=Amp - S/N 604	T2=Amp - S/N 301
T3=Bilog Site D	T4=Horn AN 00656 1-18 GHz (Mariposa)
T5=Cable 40 GHz 36"	T6=Cable 40 GHz 48"
T7=Cable P01012	T8=Cable - Site D 10m 9k-1G
T9=Cable - Site D 3m 9k - 20G	T10=DTCF

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	1301.727M	61.7	+0.0 +0.8 +3.2	-35.5 +1.0 -4.8	+0.0 +1.7	+25.1 +0.0	+0.0	53.2	54.0 15.209 Limit	-0.8	Horiz 170
2	1735.632M	61.4	+0.0 +0.9 +3.7	-35.1 +1.1 -4.8	+0.0 +2.0	+27.0 +0.0	+0.0	56.2	60.5	-4.3	Horiz 121
3	1735.637M	58.1	+0.0 +0.9 +3.7	-35.1 +1.1 -4.8	+0.0 +2.0	+27.0 +0.0	+0.0	52.9	60.5	-7.6	Verti 193
4	1301.724M	54.6	+0.0 +0.8 +3.2	-35.5 +1.0 -4.8	+0.0 +1.7	+25.1 +0.0	+0.0	46.1	54.0 15.209 Limit	-7.9	Verti 128

5	2169.540M	49.3	+0.0 +1.0 +4.4	-34.8 +1.3 -4.8	+0.0 +2.2	+28.7 +0.0	+0.0	47.3	60.5	-13.2	Horiz 119
6	3037.354M	39.7	+0.0 +1.2 +5.1	-34.3 +1.6 -4.8	+0.0 +2.7	+31.3 +0.0	+0.0	42.5	60.5	-18.0	Horiz 100
7	867.813M	41.5	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	42.4	60.5 X	-18.1	Verti 113
8	867.817M	41.3	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	42.2	60.5 Z	-18.3	Verti 114
9	867.805M	40.3	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	41.2	60.5 Y	-19.3	Verti 114
10	2169.551M	42.7	+0.0 +1.0 +4.4	-34.8 +1.3 -4.8	+0.0 +2.2	+28.7 +0.0	+0.0	40.7	60.5	-19.8	Verti 140
11	867.814M	38.3	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	39.2	60.5 X	-21.3	Horiz 170
12	867.805M	37.0	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	37.9	60.5 Y	-22.6	Horiz 170
13	2603.454M	37.6	+0.0 +1.1 +4.8	-34.5 +1.4 -4.8	+0.0 +2.4	+29.7 +0.0	+0.0	37.7	60.5	-22.8	Horiz 139
14	867.813M	36.7	-27.2 +0.0 +0.0	+0.0 +0.0 -4.8	+22.4 +0.0	+0.0 +10.5	+0.0	37.6	60.5 Z	-22.9	Horiz 196
15	3037.355M	33.1	+0.0 +1.2 +5.1	-34.3 +1.6 -4.8	+0.0 +2.7	+31.3 +0.0	+0.0	35.9	60.5	-24.6	Verti 133
16	2603.441M	31.1	+0.0 +1.1 +4.8	-34.5 +1.4 -4.8	+0.0 +2.4	+29.7 +0.0	+0.0	31.2	60.5	-29.3	Verti 100