



**FCC CFR47 PART 95 REQUIREMENT
CLASS II PERMISSIVE CHANGE
CERTIFICATION REPORT**

FOR

WMTS TRANSMITTER

MODEL: ZM-930PA

FCC ID: B6BZM-930PA

REPORT NUMBER: 07J11228-1

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Prepared for
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1-31-4, NISHIOCHIAI SHINJUKU-KU
TOKYO 161-8560, JAPAN**

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	8/20/07	Initial Issue	T. Chan

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS 4

2. TEST METHODOLOGY 5

3. FACILITIES AND ACCREDITATION 5

4. CALIBRATION AND UNCERTAINTY 5

 4.1 MEASURING INSTRUMENT CALIBRATION 5

 4.2 MEASUREMENT UNCERTAINTY 5

5. EQUIPMENT UNDER TEST 6

 5.1 DESCRIPTION OF EUT 6

 5.2 CLASS II PERMISSIVE CHANGE DESCRIPTION 6

 5.3 MAXIMUM OUTPUT POWER 6

 5.4 SOFTWARE AND FIRMWARE 6

 5.5 WORST-CASE CONFIGURATION AND MODE 6

6. TEST AND MEASUREMENT EQUIPMENT 7

7. SETUP OF EQUIPMENT UNDER TEST 8

8. EMISSION BANDWIDTH 9

9. SETUP PHOTOS 13

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: NIHON KOHDEN CORPORATION
1-31-4, NISHIOCHIAI SHINJUKU-KU
TOKYO 161-8560, JAPAN

EUT DESCRIPTION: WMTS TRANSMITTER

MODEL: ZM-930PA

SERIAL NUMBER: 96001

DATE TESTED: AUGUST 8, 2007

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 95 SUBPART H	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



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COMPLIANCE CERTIFICATION SERVICES

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603C (2004), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 95.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1 DESCRIPTION OF EUT

- | | |
|--------------------------------|--|
| a). Type of EUT: | WMTS TRANSMITTER |
| b). Brand Name: | NIHON KOHDEN |
| c). Model No: | ZM-930PA |
| d). FCC ID: | B6BZM-930PA |
| e). Power Supply: | 3 VDC (2xAA) |
| f). Number of Channels: | 477 Channels |
| g). Frequency Range: | 608.0250 ~ 613.9750 MHz. |
| h). RF Conducted Output Power: | Same as previous original grant |
| i). Channel Spacing: | 50kHz or 37.5kHz (12.5kHz when interleave) |
| j). Type of Modulation: | FSK |
| k). Antenna Type: | The shielded part of an Electro lead BR-906PA is used as antenna |

5.2 CLASS II PERMISSIVE CHANGE DESCRIPTION

The number of channels has been increased from 239 to 477 channels.

5.3 MAXIMUM OUTPUT POWER

The transmitter has same maximum peak conducted output power as previous grant on November 06, 2002.

5.4 SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Channel Writer Application rev. 1.0.1.0.

The EUT driver software installed in the host support equipment during testing was QI-901PK, rev. 02_01.

The test utility software used during testing was Channel.exe.

5.5 WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined at low channel with the highest output power.

This test is only performed on the Emissions Bandwidth and Output Power of RF conducted measurement.

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent / HP	E4446A	US42070220	11/26/07
Peak Power Meter	Agilent / HP	E4416A	GB41291160	12/02/07

7. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

TEST PERIPHERALS				
Device Type	Manufacturer	Model Number	Serial Number	FCC ID
Channel Writer	Nihon Kohden	QI-901PK	1444	N/A
Laptop	HP	ZE 4205	N/A	DoC

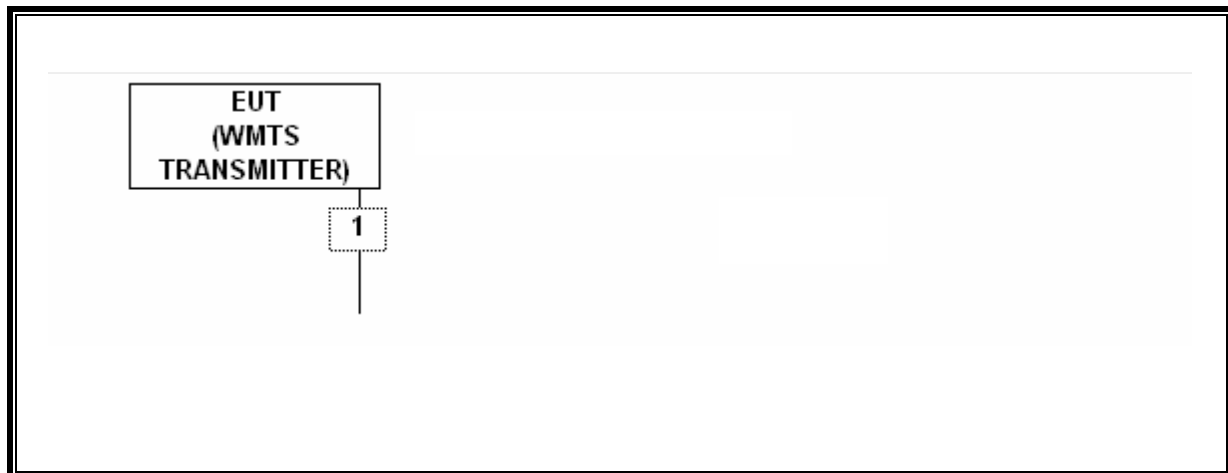
I/O CABLES

TEST I / O CABLES								
Cable No	I/O Port	# of I/O Port	Connector Type	Type of Cable	Cable Length	Data Traffic	Bundled	Remark
1	ECG	1	ECG	Un-shielded	.8m	Yes	No	Unterminated

TEST SETUP

During the testing process the EUT was installed with two 1.5VDC batteries (periodically changed to ensure 3.0 VDC output).

SETUP DIAGRAM FOR TEST



8. EMISSION BANDWIDTH

PROVISIONS APPLICABLE

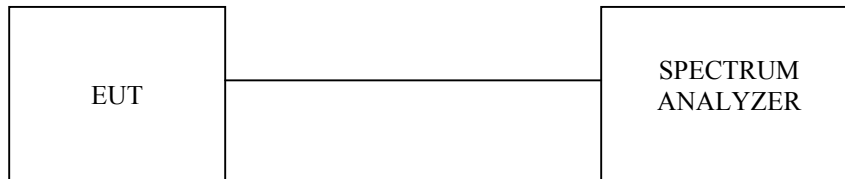
According to CFR 47 section 2.1049

LIMIT

The 26 dB bandwidth shall be less than 20 kHz (F1D).

TEST PROCEDURE

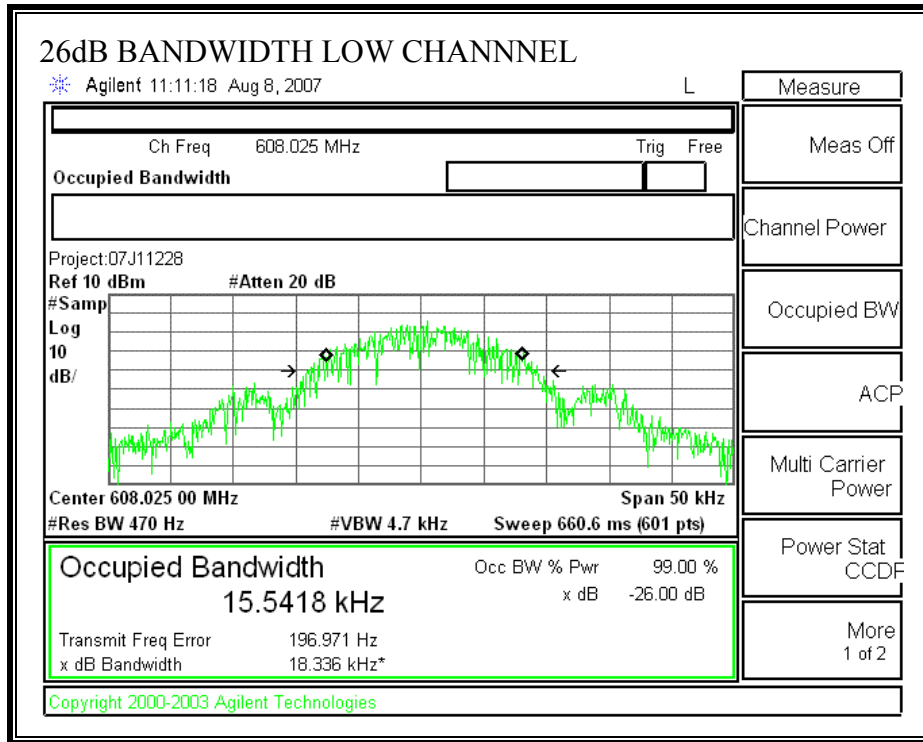
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 26dB bandwidth. The VBW is set to \geq the RBW. The sweep time is coupled. The spectrum analyzer internal 26dB bandwidth function is utilized.

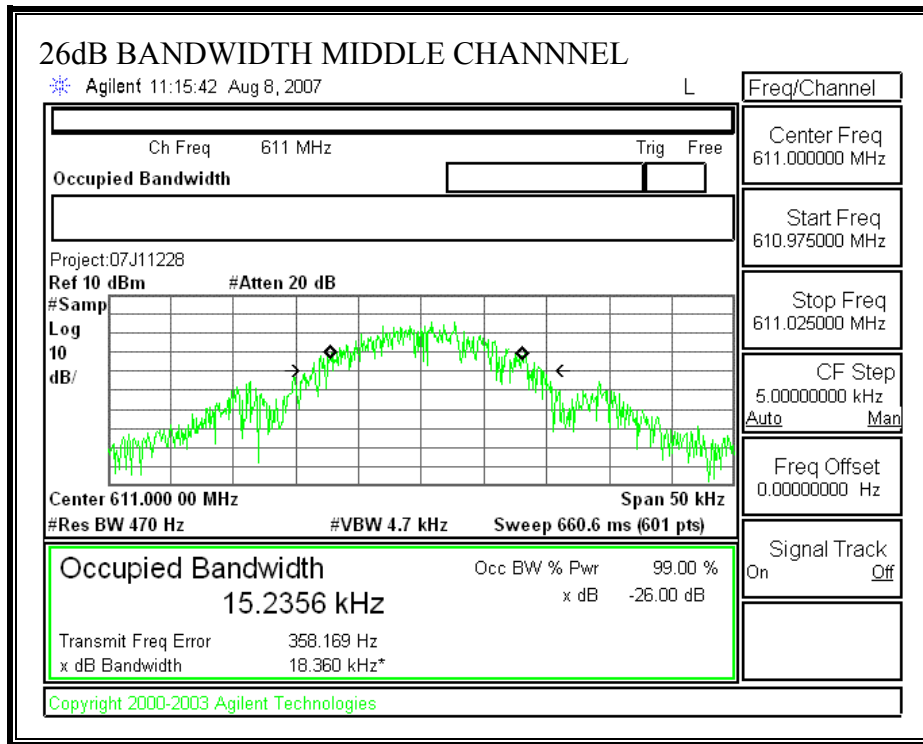


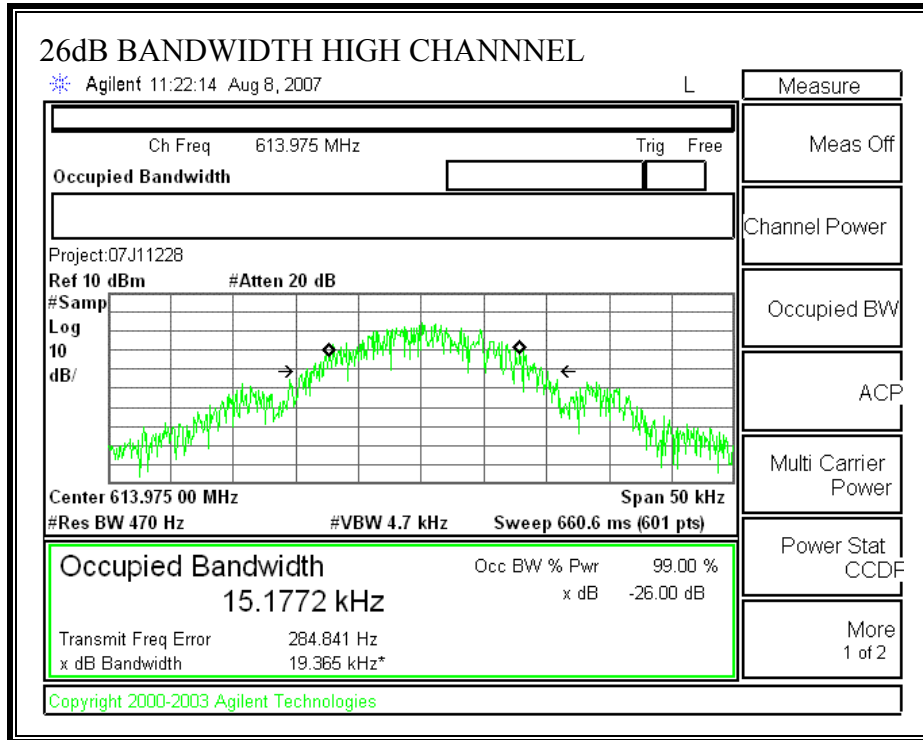
RESULTS

No non-compliance noted:

CHANNEL	FREQUENCY (MHz)	26 dB BANDWIDTH (KHz)	99% BANDWIDTH (KHz)
LOW	608.025	18.336	15.5418
MIDDLE	611	18.360	15.2356
HIGH	613.975	19.365	15.1772

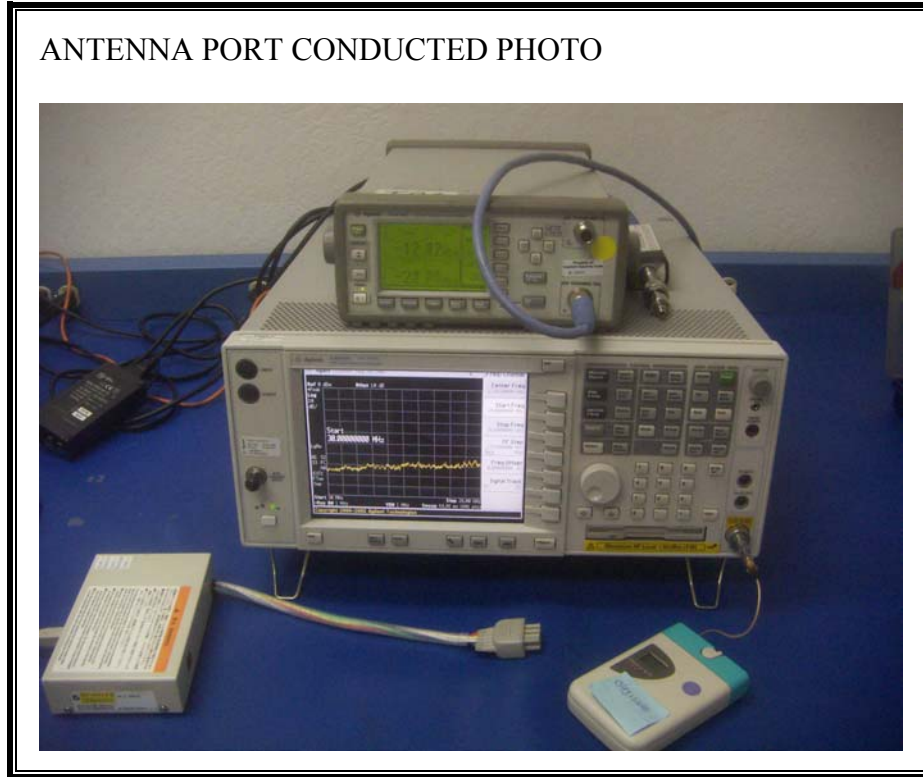






9. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP



END OF REPORT