FCC CFR47 PART 95H REQUIREMENT

TEST REPORT

FOR

TRANSMITTER

MODEL: ZM-530PA

FCC ID: B6BZM-530PAA

REPORT NUMBER: 10989131H-E

ISSUE DATE: October 30, 2015

Prepared for
NIHON KOHDEN CORPORATION
1-31-4, NISHIOCHIAI SHINJUKU-KU
TOKYO 161-8560, JAPAN

Prepared by
UL Japan, Inc.
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NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://japan.ul.com/resources/emc_accredited/

Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/30/15	Initial Issue	T. Hatakeda

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: TRANSMITTER

MODEL: ZM-530PA

SERIAL NUMBER: A00001 (for Spurious emission test)
A00003 (for Antenna terminal conducted tests)

DATE TESTED: OCTOBER 8 TO 22, 2015

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 95 SUBPART H	Pass

UL Japan, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Japan, Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. 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 UL Japan, Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Japan, Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL Japan, Inc. By:

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI/TIA-603-D-2010, FCC CFR 47 Part 2 and FCC CFR 47 Part 95.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN.

UL Japan, Inc. is accredited by NVLAP, Laboratory Code 200572-0
The full scope of accreditation can be viewed at
http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap

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. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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4.3. MEASUREMENT UNCERTAINTY

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

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

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Test site (semi anechoic chamber)	Conducted emission Uncertainty (+/-)			
	No. 1	No. 2	No. 3	No. 4
150 kHz - 30 MHz	3.5 dB	3.5 dB	3.4 dB	3.5 dB

Test site (semi anechoic chamber)	Radiated emission Uncertainty (+/-)						
	Measurement distance: 3 m				1 m		0.5 m
	9 kHz - 30 MHz	30 MHz - 300 MHz	300 MHz - 1 GHz	1 GHz - 10 GHz	10 GHz - 18 GHz	18 GHz - 26.5 GHz	26.5 GHz - 40 GHz
No. 1	4.3 dB	5.1 dB	6.2 dB	5.5 dB	5.8 dB	5.8 dB	4.3 dB
No. 2	4.2 dB	5.1 dB	6.2 dB	5.4 dB	5.7 dB	5.9 dB	5.6 dB
No. 3	4.4 dB	5.1 dB	6.3 dB	5.2 dB	5.5 dB	5.8 dB	5.5 dB
No. 4	4.7 dB	5.3 dB	6.3 dB	5.3 dB	5.7 dB	5.9 dB	5.5 dB

Antenna terminal test Uncertainty (+/-)							
Power meter		Conducted emission and Power density			Conducted emission		Channel power
Below 1 GHz	Above 1 GHz	Below 1 GHz	1 GHz - 3 GHz	3 GHz - 18 GHz	18 GHz - 26.5 GHz	26.5 GHz - 40 GHz	
0.7 dB	1.5 dB	1.5 dB	1.7 dB	2.8 dB	2.8 dB	2.9 dB	2.6 dB

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

a).	Type of EUT:	TRANSMITTER
b).	Brand Name:	NIHON KOHDEN
c).	Model No:	ZM-530PA
d).	FCC ID:	B6BZM-530PAA
e).	Battery Type:	Two AA (LR6)
f).	Channel Number:	608.025 MHz (channel number 9002) and 613.975 MHz (channel number 9478)
g).	Frequency Range:	608.025 MHz 613.975 MHz bands
h).	RF Conducted Output Power:	1mW
i).	Channel Spacing:	50 KHz or 37.5 kHz (12.5 KHz when interleave)
j).	Modulation	Frequency Shift Keying
k).	Type of Modulation:	F1D
l).	Occupied Bandwidth	<20 kHz
m).	Antenna Type:	Internal

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a Helical Monopole antenna, with a maximum gain of 0 dBi.

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was Channel Writer, rev. 01-14.

5.4. WORST-CASE CONFIGURATION AND MODE

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

During emission tests the antenna orientations as X, Y, and Z were investigated to determine the worst-case. The outcome showed that Z-orientation for Horizontal and Y-orientation for Vertical as the worst-case.

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5.5. DESCRIPTION OF TEST SETUP

DESCRIPTION OF EUT

DESCRIPTION OF EUT					
No.	Description	Manufacturer	Model	Serial Number	FCC ID
A	TRANSMITTER	NIHON KOHDEN CORPORATION	ZM-530PA	A00001(RE) / A00003(AT)	DoC

*RE: Spuriouse emission test, AT: Antenna terminal conducted tests

I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identica Ports	Connector Type	Cable Type	Cable Length	Remarks
1	ECG Cable	1	ECG	Shielded	0.8m	N/A

TEST SETUP

Test setup is shown below setup diagram.

SETUP DIAGRAM FOR TESTS

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6. TEST AND MEASUREMENT EQUIPMENT

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

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2015/07/01 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2015/01/13 * 12
MJM-14	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MSA-13	Spectrum Analyzer	Agilent	E4440A	MY46185823	RE	2015/06/02 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2015/09/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2014/10/18 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2014/10/18 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2015/02/06 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2014/11/11 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2015/09/04 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2015/02/05 * 12
MCC-168	Microwave Cable	Junkosha	MWX221	1408S016(1m) / 1409S492(5m)	RE	2015/09/24 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2015/01/28 * 12
MBF-08	Band Pass Filter	M-City	BPF1800-01	UL0003	RE	2015/06/01 * 12
MBF-09	Band Pass Filter	M-City	BPF4250-01	UL0004	RE	2015/06/01 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2014/12/22 * 12
MRENT-124	Spectrum Analyzer	KEYSIGHT	E4440A	MY46187750	AT	2015/06/24 * 12
MCH-06	Temperature and Humidity Chamber	Tabai Espec	PL-1KT	14007630	AT	2015/04/29 * 12
MCC-137	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37954/2	AT	2015/10/08 * 12
MPM-08	Power Meter	Anritsu	ML2495A	6K00003338	AT	2015/10/08 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	011737	AT	2015/10/08 * 12
MAT-10	Attenuator(10dB)	Weinschel Corp	2	BL1173	AT	2014/11/19 * 12
MCC-36	Microwave Cable	Hirose Electric	U.FL-2LP-066-A-(200)	-	AT	2015/09/16 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	AT	2015/05/18 * 12
MAT-24	Attenuator(10dB)(above1GHz)	Agilent	8493C	71389	AT	2015/06/18 * 12

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

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7. ANTENNA PORT TEST RESULTS

7.1. 26 dB AND 99% BW

LIMITS

§2.1049, for reporting purposes only, also the 26dB bandwidth shall be less than 20 KHz (F1D).

TEST PROCEDURE

ANSI C63.4

The transmitter output is connected to the spectrum analyzer.

26dB Bandwidth: The RBW is set to 1% to 5% of the 26dB bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 26dB bandwidth function is utilized.

99% Bandwidth: The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

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RESULTS

26dB Bandwidth

Channel	Frequency (MHz)	26dB Bandwidth (kHz)
9002	608.025	19.340
9478	613.975	19.309

99% Bandwidth

Channel	Frequency (MHz)	99% Bandwidth (kHz)
9002	1395.025	15.161
9478	1399.975	15.244

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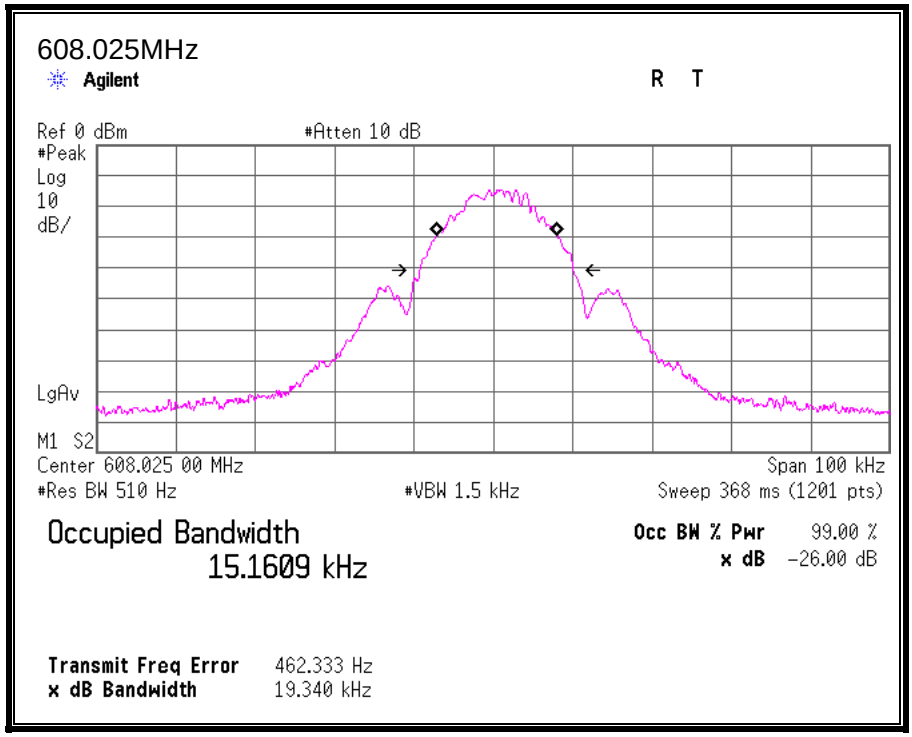
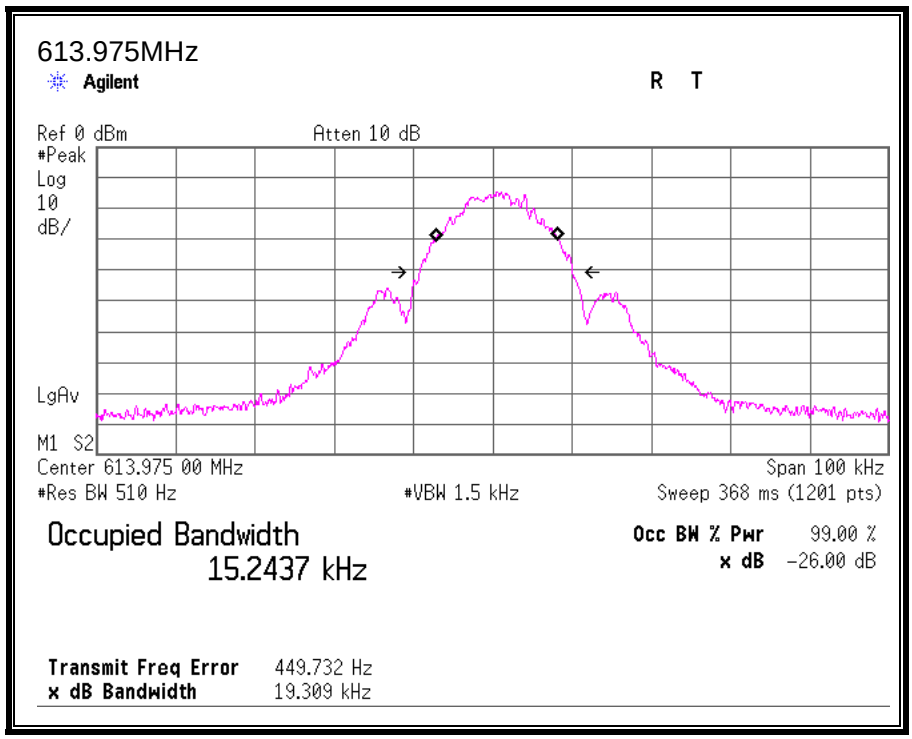
20dB and 99% BANDWIDTH





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7.2. PEAK OUTPUT POWER

LIMITS

§2.1046, for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

PK

Freq.	Reading	Cable Loss	Atten.	Result	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
608.025	-11.03	0.40	9.90	-0.73	0.85
613.975	-10.98	0.40	9.90	-0.68	0.86

Sample Calculation:
Result = Reading + Cable Loss + Attenuator

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7.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

AV

Freq.	Reading	Cable Loss	Atten.	Result	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
608.025	-11.25	0.40	9.90	-0.95	0.80
613.975	-11.20	0.40	9.90	-0.90	0.81

Sample Calculation:
Result = Reading + Cable Loss + Attenuator

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7.4. SPURIOUS EMISSIONS AT ANTENNA TERMINAL

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW=1MHz VBW=3MHz.

The spectrum from 30 MHz to 10th harmonic is investigated with the transmitter set to the lowest and highest channels.

TEST RESULTS

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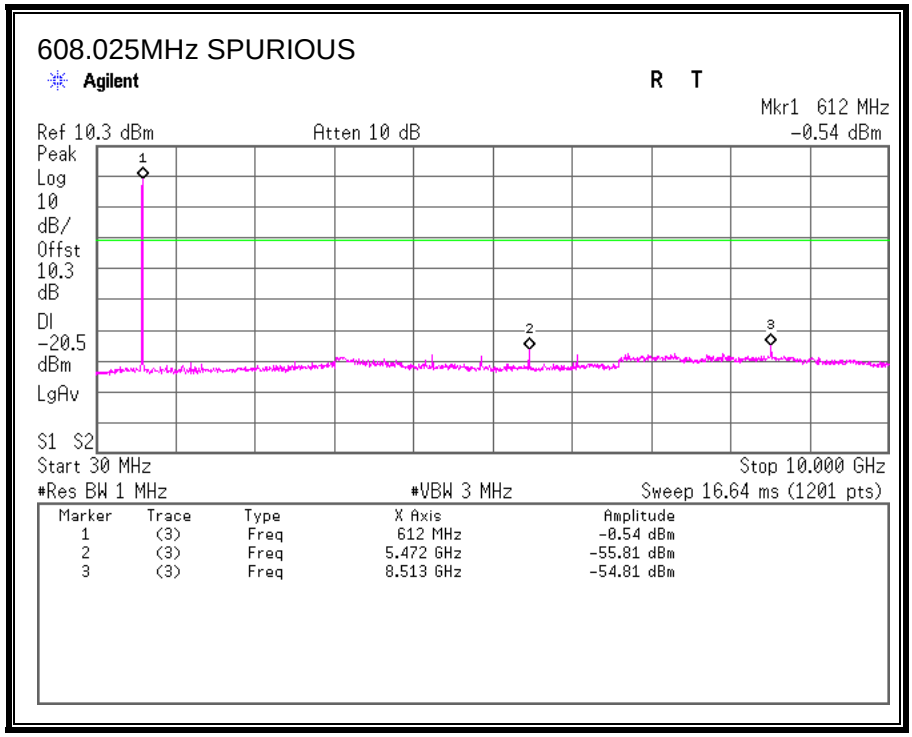
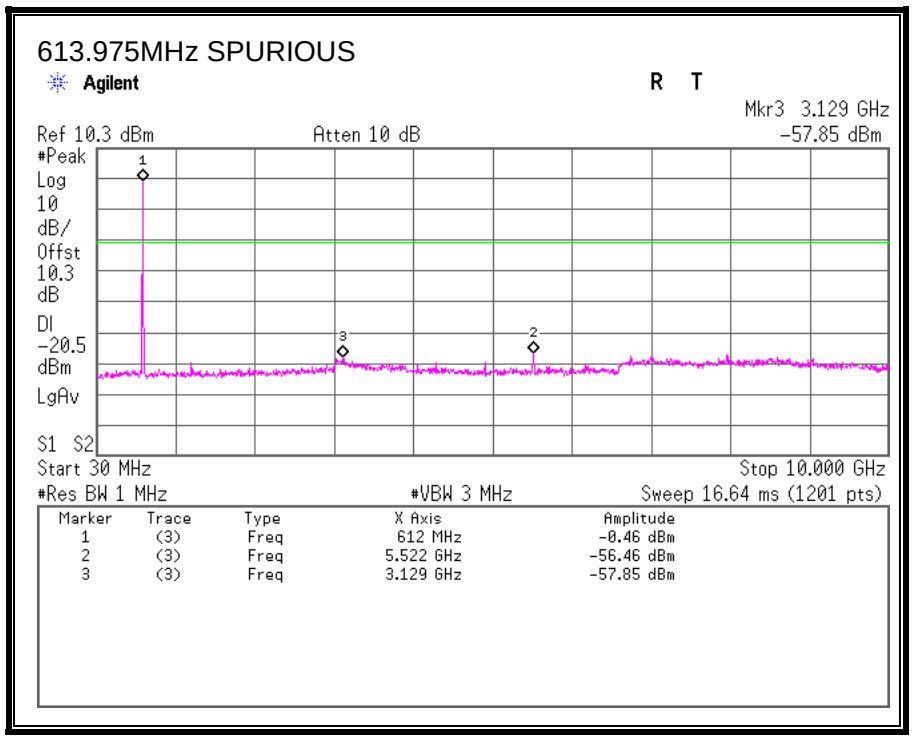
608.025MHz SPURIOUS



613.975MHz SPURIOUS



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7.5. FREQUENCY STABILITY MEASUREMENT

LIMIT

§95.1115 (e) Frequency stability.
Manufacturers of wireless medical telemetry devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all of the manufacturer's specified conditions.

TEST PROCEDURE

Frequency stability versus environmental temperature

1) Set the temperature of chamber to 50°C @ low/high channel. Allow sufficient time (approximately 60 min) for the temperature of the chamber to stabilize. While maintaining a set temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.

2) Set spectrum analyzer Resolution Bandwidth to 300 Hz and Video Resolution Bandwidth to 300 Hz and Frequency Span to 50 KHz. Record this frequency as reference frequency.

3) Repeat step 2 with a 10°C decreased per stage until the lowest temperature -30°C is measured, record all measured frequencies on each temperature step. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.

Frequency stability versus input voltage

1). Setup the configuration as shown below for frequencies measured at temperature if it is 20°C.

2). Set spectrum analyzer center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 300 Hz and Video Resolution Bandwidth to 300 Hz and Frequency Span to 50 KHz. Record this frequency as reference frequency.

3). For battery operated only device, supply the EUT primary voltage at the operating end point which is specified by manufacturer and record the frequency.

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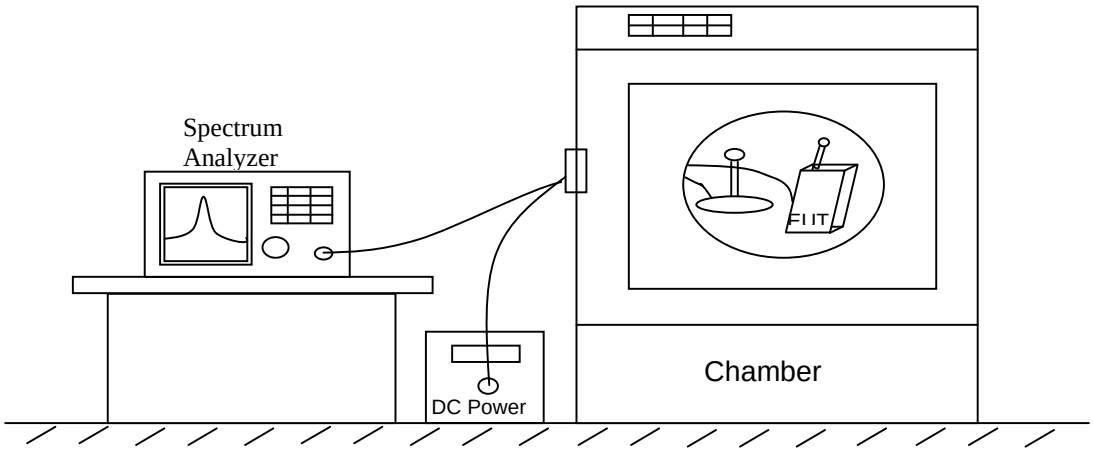

Frequency stability measurement configuration

TEST RESULTS

LOW CHANNEL

20°C Reference Frequency:			608.025000		MHz
Limit: +/-	20	ppm =	0.012161		MHz
Power Supply		Environment	Frequency	Delta (MHz)	Limit +/- (MHz)
VDC		Temperature (°C)	(MHz)		
3.00	Normal (100%)	50	608.026522	0.001522	0.012161
		40	608.026151	0.001151	0.012161
		30	608.025858	0.000858	0.012161
		20	608.024861	-0.000139	0.012161
		10	608.024175	-0.000825	0.012161
		0	608.023138	-0.001862	0.012161
		-10	608.020912	-0.004088	0.012161
		-20	608.018157	-0.006843	0.012161
		-30	608.014161	-0.010839	0.012161
3.00	Normal		608.024861	-0.000139	0.012161
1.64	Low		608.025480	0.000480	0.012161
1.63	End Point				

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HIGH CHANNEL

20°C Reference Frequency:			613.975000		MHz
Limit: +/-	20	ppm =	0.012280		MHz
Power Supply		Environment	Frequency	Delta (MHz)	Limit +/- (MHz)
VDC		Temperature (°C)	(MHz)		
3.00	Normal (100%)	50	613.976595	0.001595	0.012280
		40	613.976041	0.001041	0.012280
		30	613.975827	0.000827	0.012280
		20	613.974869	-0.000131	0.012280
		10	613.974276	-0.000724	0.012280
		0	613.973067	-0.001933	0.012280
		-10	613.970986	-0.004014	0.012280
		-20	613.968152	-0.006848	0.012280
		-30	613.964858	-0.010142	0.012280
3.00	Normal		613.974869	-0.000131	0.012280
1.64	Low		613.975563	0.000563	0.012280
1.63	End Point				

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8. RADIATED EMISSION TEST RESULTS

LIMITS

§95.1115
(a) Field strength limits
(1) In the 608-614 MHz band, the maximum allowable field strength is 200 mV/m, as measured at a distance of 3 meters, using measuring instrumentation with a CISPR quasi-peak detector.

(b) Undesired emissions.
(1) Out-of-band emissions below 960 MHz are limited to 200 microvolts/meter, as measured at a distance of 3 meters, using measuring instrumentation with a CISPR quasi-peak detector.
(2) Out-of-band emissions above 960 MHz are limited to 500 microvolts/meter as measured at a distance of 3 meters, using measuring equipment with an averaging detector and a 1 MHz measurement bandwidth.

TEST PROCEDURE

ANSI/TIA-603-D-2010

RESULTS

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8.1. FUNDAMENTAL OUTPUT POWER

Report No. : 10989131H
Test Place :Ise EMC Lab.
Semi Anechoic Chamber: : No. 2
Date : 2015/10/08
Temperature/Humidity : 26 deg.C / 38 % RH
Engineer: :Tomoki Matsui

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	608.025	QP	86.7	19.8	10.3	28.4	88.4	106.0	17.6	
Vert	608.025	QP	83.9	19.8	10.3	28.4	85.6	106.0	20.4	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	613.975	QP	83.7	19.9	10.3	28.4	85.5	106.0	20.5	
Vert	613.975	QP	82.0	19.9	10.3	28.4	83.8	106.0	22.2	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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8.2. RADIATED EMISSIONS BELOW 960 MHz

SPURIOUS EMISSIONS 30 TO 960 MHz

608.025MHz

Report No. : 10989131H
Test Place :Ise EMC Lab.
Semi Anechoic Chamber: : No. 2
Date : 2015/10/08
Temperature/Humidity : 26 deg.C / 38 % RH
Engineer: :Tomoki Matsui
Mode: : Tx 608.025MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	92.160	QP	26.5	8.9	7.4	28.2	14.6	46.0	31.4	
Hori	171.993	QP	26.1	16.0	8.0	27.8	22.3	46.0	23.7	
Hori	288.006	QP	24.1	19.1	8.8	27.4	24.6	46.0	21.4	
Hori	372.466	QP	21.2	16.8	9.3	28.0	19.3	46.0	26.7	
Hori	572.855	QP	21.9	19.5	10.1	28.5	23.0	46.0	23.0	
Hori	873.496	QP	21.1	22.3	11.2	27.5	27.1	46.0	18.9	
Vert	49.350	QP	22.3	10.9	7.0	28.5	11.7	46.0	34.3	
Vert	169.049	QP	21.8	15.9	8.0	27.9	17.8	46.0	28.2	
Vert	288.006	QP	24.3	19.1	8.8	27.4	24.8	46.0	21.2	
Vert	379.634	QP	21.2	17.0	9.3	28.0	19.5	46.0	26.5	
Vert	495.754	QP	22.0	18.6	9.7	28.5	21.8	46.0	24.2	
Vert	804.972	QP	20.9	21.9	11.0	27.9	25.9	46.0	20.1	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

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SPURIOUS EMISSIONS 30 TO 960 MHz

613.975MHz

Report No. : 10989131H
Test Place :Ise EMC Lab.
Semi Anechoic Chamber: : No. 2
Date : 2015/10/08
Temperature/Humidity : 26 deg.C / 38 % RH
Engineer: :Tomoki Matsui
Mode: : Tx 613.975MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.800	QP	22.4	16.7	6.8	28.5	17.4	46.0	28.6	
Hori	73.200	QP	22.3	6.4	7.2	28.3	7.6	46.0	38.4	
Hori	170.168	QP	26.4	15.9	8.0	27.9	22.4	46.0	23.6	
Hori	422.499	QP	21.6	17.8	9.5	28.3	20.6	46.0	25.4	
Hori	520.498	QP	21.8	18.9	9.9	28.5	22.1	46.0	23.9	
Hori	884.505	QP	21.0	22.4	11.3	27.4	27.3	46.0	18.7	
Vert	48.256	QP	22.3	11.3	7.0	28.5	12.1	46.0	33.9	
Vert	170.210	QP	22.5	15.9	8.0	27.9	18.5	46.0	27.5	
Vert	288.006	QP	24.3	19.1	8.8	27.4	24.8	46.0	21.2	
Vert	516.998	QP	21.8	18.8	9.9	28.5	22.0	46.0	24.0	
Vert	730.502	QP	21.2	21.0	10.7	28.0	24.9	46.0	21.1	
Vert	895.005	QP	21.0	22.5	11.3	27.3	27.5	46.0	18.5	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

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8.3. RADIATED EMISSIONS ABOVE 960 MHz

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 960 MHz

608.025MHz

Report No. : 10989131H
Test Place :Ise EMC Lab.
Semi Anechoic Chamber: : No. 2
Date : 2015/10/09
Temperature/Humidity : 23 deg.C / 39 % RH
Engineer: :Yutaka Yoshida
Mode: : Tx 608.025MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	1216.050	AV	35.4	25.7	3.0	35.8	28.3	54.0	25.7	
Hori	1824.075	AV	40.2	28.4	2.7	35.2	36.1	54.0	17.9	
Hori	2432.100	AV	36.9	29.3	3.1	34.9	34.4	54.0	19.6	
Hori	3040.125	AV	34.1	29.7	3.4	34.7	32.5	54.0	21.5	
Hori	3648.150	AV	39.4	30.3	3.6	34.2	39.1	54.0	14.9	
Hori	4256.175	AV	42.3	31.5	4.0	34.0	43.8	54.0	10.2	
Hori	4864.200	AV	39.7	32.8	4.1	34.2	42.4	54.0	11.6	
Hori	5472.225	AV	41.9	32.9	4.5	33.9	45.4	54.0	8.6	
Hori	6080.250	AV	39.0	34.0	4.7	34.0	43.7	54.0	10.3	
Vert	1216.050	AV	37.5	25.7	3.0	35.8	30.4	54.0	23.6	
Vert	1824.075	AV	41.9	28.4	2.7	35.2	37.8	54.0	16.2	
Vert	2432.100	AV	37.1	29.3	3.1	34.9	34.6	54.0	19.4	
Vert	3040.125	AV	34.1	29.7	3.4	34.7	32.5	54.0	21.5	
Vert	3648.150	AV	39.6	30.3	3.6	34.2	39.3	54.0	14.7	
Vert	4256.175	AV	40.3	31.5	4.0	34.0	41.8	54.0	12.2	
Vert	4864.200	AV	40.4	32.8	4.1	34.2	43.1	54.0	10.9	
Vert	5472.225	AV	39.8	32.9	4.5	33.9	43.3	54.0	10.7	
Vert	6080.250	AV	36.8	34.0	4.7	34.0	41.5	54.0	12.5	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter) - Gain(Amprifier)

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HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 960 MHz

613.975MHz

Report No. : 10989131H
Test Place :Ise EMC Lab.
Semi Anechoic Chamber: : No. 2
Date : 2015/10/09
Temperature/Humidity : 23 deg.C / 39 % RH
Engineer: :Yutaka Yoshida
Mode: : Tx 608.025MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	1227.950	AV	36.4	25.7	3.1	35.8	29.4	54.0	24.6	
Hori	1841.925	AV	39.6	28.5	2.7	35.2	35.6	54.0	18.4	
Hori	2455.900	AV	35.0	29.3	3.2	34.9	32.6	54.0	21.4	
Hori	3069.875	AV	34.2	29.8	3.4	34.7	32.7	54.0	21.4	
Hori	3683.850	AV	40.2	30.3	3.7	34.1	40.1	54.0	13.9	
Hori	4297.825	AV	42.8	31.6	4.0	34.0	44.4	54.0	9.6	
Hori	4911.800	AV	40.3	32.9	4.3	34.2	43.3	54.0	10.7	
Hori	5525.775	AV	40.8	32.9	4.5	33.9	44.3	54.0	9.7	
Hori	6139.750	AV	39.3	34.2	4.8	34.0	44.3	54.0	9.7	
Vert	1227.950	AV	37.0	25.7	3.1	35.8	30.0	54.0	24.0	
Vert	1841.925	AV	40.7	28.5	2.7	35.2	36.7	54.0	17.3	
Vert	2455.900	AV	34.7	29.3	3.2	34.9	32.3	54.0	21.7	
Vert	3069.875	AV	32.6	29.8	3.4	34.7	31.1	54.0	22.9	
Vert	3683.850	AV	38.4	30.3	3.7	34.1	38.3	54.0	15.7	
Vert	4297.825	AV	39.8	31.6	4.0	34.0	41.4	54.0	12.6	
Vert	4911.800	AV	37.3	32.9	4.3	34.2	40.3	54.0	13.7	
Vert	5525.775	AV	39.7	32.9	4.5	33.9	43.2	54.0	10.8	
Vert	6139.750	AV	37.6	34.2	4.8	34.0	42.6	54.0	11.4	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter) - Gain(Amprifier)

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