China

FCC - TEST REPORT

Report Number	:	**68.950.15.273.01**	Date of Issue:	October 20, 2015
Model	:	Smart Beauty Instrument		
Product Type	:	MD-CTWL, MD-C62, MD-C6P2, MD-CTBB, MD-CTRB, MD-CTDP		
Applicant	:	Shenzhen Darling Intelligent Technology Co., Ltd		
Address	:	C/16F, Hanking International Building, No.23 Dengliang Road, Nanshan District Shenzhen, Shenzhen City, Guangdong Province, 518109, China		
Manufacture	:	Shenzhen Protruly Electronics Co., Ltd		
Address	:	Floor1-3, Factory Building 9, Huafu Industrial Park, Huachang Road, Lankou Community, Dalang Sub-district, Longhua New District, Shenzhen City, Guangdong Province, 518109, China		
Test Result	:	■ **Positive** ☐ **Negative**		
Total pages including Appendices	:	21		

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1 Table of Contents

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name:	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch Building 12&13, Zhiheng Wisdomland Business Park, Nantou Checkpoint Road 2, Nanshan District, Shenzhen City, 518052, P. R. China
FCC Registration Number:	502708
Telephone:	86 755 8828 6998
Fax:	86 755 8828 5299

Test Site 2

Company name:	Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102
FCC Registration Number:	600491
Telephone:	86 755 2779 8480
Fax:	86 755 2779 8960

Remark: All test items are performed at site 2.

3 Description of the Equipment Under Test

Product:	Smart Beauty Instrument
Model no.:	MD-CTWL, MD-C62, MD-C6P2, MD-CTBB, MD-CTRB, MD-CTDP
FCC ID:	2AF8N-BQL-SC150
Brand Name:	N/A
Options and accessories:	NIL
Rating:	3.8VDC (Supplied by Li-ion rechargeable battery) 5VDC (Charged by USB port)
RF Transmission Frequency:	2402-2480MHz
Modulation:	GFSK
Antenna Type:	PCB Antenna
Antenna Gain:	3dBi
Description of the EUT:	The Equipment Under Test (EUT) is a smart beauty instrument with Bluetooth 4.0 function operated at 2.4GHz.

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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2014 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

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5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C					
Test Condition	Pages	Test Site	Test Result		
			Pass	Fail	N/A
15.207 Conducted emission AC power port	--	--	☐	☐	☒
§15.205(a), §15.209(a), §15.249(a), §15.249(c) Field strength of emissions and Restricted bands	9	Site 2	☒	☐	☐
FCC §15.215(c) 20dB bandwidth	15	Site 2	☒	☐	☐
§15.249(d) Out of band emissions	18	Site 2	☒	☐	☐

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6 General Remarks

Remarks
This submittal(s) (test report) is intended for FCC ID: 2AF8N-BQL-SC150 complies with Section 15.205, 15.209, 15.249 of the FCC Part 15, Subpart C Rules.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

Sample Received Date: October 9, 2015

Testing Start Date: October 10, 2015

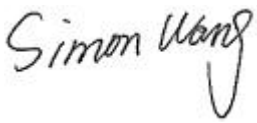
Testing End Date: October 20, 2015

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

Reviewed by:

John Zhi
EMC Project Manager

Prepared by:



Simon Wang
EMC Project Engineer

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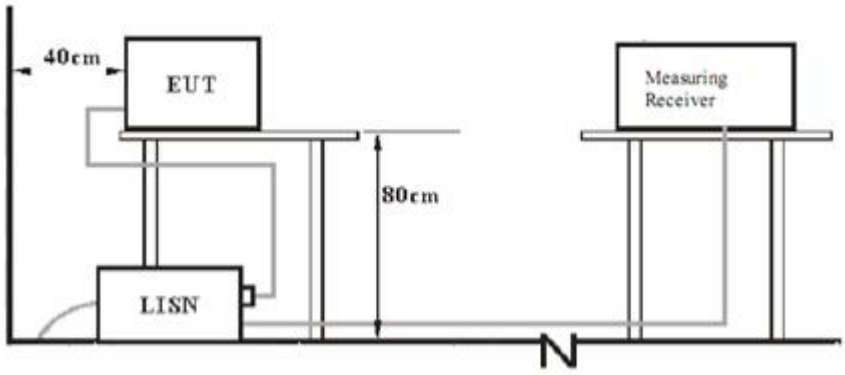
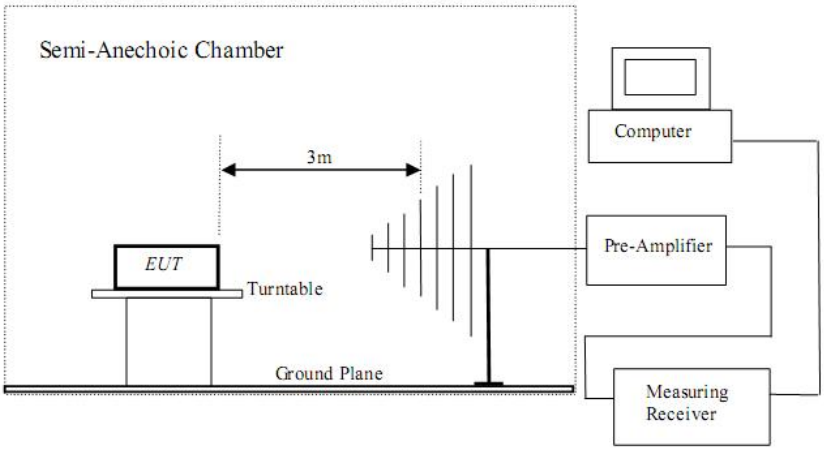
7 Test setups

7.1 AC Power Line Conducted Emission test setups



7.2 Radiated test setups



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8 Technical Requirement

8.1 Field strength of emissions and Restricted bands

Test Method

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
3. Use the following spectrum analyzer settings:
   Span = wide enough to fully capture the emission being measured ,RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz, VBW ≥ RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Follow the guidelines in ANSI C63.4-1992 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc.
   The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the duty cycle per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a “duty cycle correction factor”, derived from 20log(duty cycle/100 ms), in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Limits

According to §15.249 (a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

According to §15.249 (c), Field strength limits are specified at a distance of 3 meters.
According to §15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.
According to §15.205 and Unwanted emissions falling into restricted bands in §15.205 (a) Table 3 shall comply with the limits specified in §15.209.

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Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2402MHz
Ant. Polarity: Horizontal
Comment: 30-1000MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
54.84	35.14	15.02	0.82	29.96	21.02	40.00	-18.98	QP	H
64.66	36.15	12.84	0.90	29.89	20.00	40.00	-20.00	QP	H
161.47	34.26	10.72	1.64	29.35	17.27	43.50	-26.23	QP	H
220.62	33.30	13.20	1.96	29.39	19.07	46.00	-26.93	QP	H
307.83	32.14	15.17	2.40	29.95	19.76	46.00	-26.24	QP	H
689.57	25.79	20.78	4.05	29.21	21.41	46.00	-24.59	QP	H

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2402MHz
Ant. Polarity: Vertical

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
35.88	39.60	14.54	0.62	30.07	24.69	40.00	-15.31	QP	V
51.12	44.20	15.20	0.78	29.99	30.19	40.00	-9.81	QP	V
72.08	44.31	10.26	0.96	29.84	25.69	40.00	-14.31	QP	V
88.34	42.13	13.47	1.10	29.75	26.95	43.50	-16.55	QP	V
127.67	37.03	11.32	1.42	29.52	20.25	43.50	-23.25	QP	V
220.62	32.14	13.20	1.96	29.39	17.91	46.00	-28.09	QP	V

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2440MHz
Ant. Polarity: Horizontal
Comment: 30-1000MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
55.61	33.19	14.97	0.82	29.95	19.03	40.00	-20.97	QP	H
66.03	36.32	12.30	0.91	29.88	19.65	40.00	-20.35	QP	H
183.20	32.67	11.92	1.75	29.26	17.08	43.50	-26.42	QP	H
292.06	32.11	14.89	2.32	29.95	19.37	46.00	-26.63	QP	H
375.94	28.74	16.56	2.75	29.61	18.44	46.00	-27.56	QP	H
616.37	25.76	20.52	3.79	29.28	20.79	46.00	-25.21	QP	H

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Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2440MHz
Ant. Polarity: Vertical
Comment: 30-1000MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
36.51	38.17	14.73	0.62	30.06	23.46	40.00	-16.54	QP	V
50.59	41.98	15.22	0.78	30.00	27.98	40.00	-12.02	QP	V
73.10	43.15	10.13	0.97	29.84	24.41	40.00	-15.59	QP	V
90.54	39.97	14.07	1.11	29.74	25.41	43.50	-18.09	QP	V
160.35	35.47	10.67	1.63	29.36	18.41	43.50	-25.09	QP	V
618.54	25.35	20.52	3.80	29.28	20.39	46.00	-25.61	QP	V

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2480MHz
Ant. Polarity: Horizontal
Comment: 30-1000MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
62.65	34.21	13.63	0.88	29.90	18.82	40.00	-21.18	QP	H
99.53	28.09	15.13	1.19	29.70	14.71	43.50	-28.79	QP	H
213.76	33.36	13.00	1.92	29.34	18.94	43.50	-24.56	QP	H
297.22	31.83	15.00	2.35	29.99	19.19	46.00	-26.81	QP	H
411.82	27.13	17.31	2.91	29.47	17.88	46.00	-28.12	QP	H
747.48	25.30	21.43	4.27	29.20	21.80	46.00	-24.20	QP	H

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2480MHz
Ant. Polarity: Vertical
Comment: 30-1000MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Remark	Polarity
35.38	39.14	14.39	0.61	30.07	24.07	40.00	-15.93	QP	V
48.84	41.73	15.32	0.76	30.00	27.81	40.00	-12.19	QP	V
87.11	41.22	13.03	1.09	29.76	25.58	40.00	-14.42	QP	V
131.76	36.36	10.82	1.45	29.50	19.13	43.50	-24.37	QP	V
212.27	31.91	12.93	1.91	29.32	17.43	43.50	-26.07	QP	V
302.48	28.58	15.08	2.37	29.98	16.05	46.00	-29.95	QP	V

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Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2402MHz
Ant. Polarity: Horizontal
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2402.00	84.69	27.58	5.39	34.01	83.65	114.00	-30.35	Peak	H
4804.00	31.87	31.78	8.60	32.09	40.16	74.00	-33.84	Peak	H
7206.00	27.86	36.15	11.65	32.00	43.66	74.00	-30.34	Peak	H
9608.00	27.27	37.95	14.14	31.62	47.74	74.00	-26.26	Peak	H
12010.00	28.49	39.08	15.03	35.51	47.09	74.00	-26.91	Peak	H
2402.00	74.98	27.58	5.39	34.01	73.94	94.00	-20.06	Average	H
4804.00	21.89	31.78	8.60	32.09	30.18	54.00	-23.82	Average	H
7206.00	17.94	36.15	11.65	32.00	33.74	54.00	-20.26	Average	H
9608.00	18.03	37.95	14.14	31.62	38.50	54.00	-15.50	Average	H
12010.00	18.65	39.08	15.03	35.51	37.25	54.00	-16.75	Average	H

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2402MHz
Ant. Polarity: Vertical
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2402.00	89.50	27.58	5.39	34.01	88.46	114.00	-25.54	Peak	V
4804.00	31.61	31.78	8.60	32.09	39.90	74.00	-34.10	Peak	V
7206.00	29.31	36.15	11.65	32.00	45.11	74.00	-28.89	Peak	V
9608.00	27.98	37.95	14.14	31.62	48.45	74.00	-25.55	Peak	V
12010.00	29.02	39.08	15.03	35.51	47.62	74.00	-26.38	Peak	V
2402.00	79.94	27.58	5.39	34.01	78.90	94.00	-15.10	Average	V
4804.00	21.95	31.78	8.60	32.09	30.24	54.00	-23.76	Average	V
7206.00	19.64	36.15	11.65	32.00	35.44	54.00	-18.56	Average	V
9608.00	18.03	37.95	14.14	31.62	38.50	54.00	-15.50	Average	V
12010.00	18.99	39.08	15.03	35.51	37.59	54.00	-16.41	Average	V

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Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2440MHz
Ant. Polarity: Horizontal
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2440.00	83.99	27.48	5.43	33.96	82.94	114.00	-31.06	Peak	H
4880.00	31.89	31.85	8.66	32.12	40.28	74.00	-33.72	Peak	H
7320.00	28.00	36.37	11.72	31.89	44.20	74.00	-29.80	Peak	H
9760.00	26.89	38.35	14.25	31.59	47.90	74.00	-26.10	Peak	H
12200.00	27.24	38.92	15.14	35.65	45.65	74.00	-28.35	Peak	H
2440.00	73.37	27.48	5.43	33.96	72.32	94.00	-21.68	Average	H
4880.00	21.94	31.85	8.66	32.12	30.33	54.00	-23.67	Average	H
7320.00	18.27	36.37	11.72	31.89	34.47	54.00	-19.53	Average	H
9760.00	17.06	38.35	14.25	31.59	38.07	54.00	-15.93	Average	H
12200.00	17.32	38.92	15.14	35.65	35.73	54.00	-18.27	Average	H

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2440MHz
Ant. Polarity: Vertical
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2440.00	89.85	27.48	5.43	33.96	88.80	114.00	-25.20	Peak	V
4880.00	31.46	31.85	8.66	32.12	39.85	74.00	-34.15	Peak	V
7320.00	28.83	36.37	11.72	31.89	45.03	74.00	-28.97	Peak	V
9760.00	27.71	38.35	14.25	31.59	48.72	74.00	-25.28	Peak	V
12200.00	26.89	38.92	15.14	35.65	45.30	74.00	-28.70	Peak	V
2440.00	79.83	27.48	5.43	33.96	78.78	94.00	-15.22	Average	V
4880.00	21.85	31.85	8.66	32.12	30.24	54.00	-23.76	Average	V
7320.00	19.05	36.37	11.72	31.89	35.25	54.00	-18.75	Average	V
9760.00	17.65	38.35	14.25	31.59	38.66	54.00	-15.34	Average	V
12200.00	17.03	38.92	15.14	35.65	35.44	54.00	-18.56	Average	V

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Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2480MHz
Ant. Polarity: Horizontal
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2480.00	83.36	27.52	5.47	33.92	82.43	114.00	-31.57	Peak	H
4960.00	30.73	31.93	8.73	32.16	39.23	74.00	-34.77	Peak	H
7440.00	28.29	36.59	11.79	31.78	44.89	74.00	-29.11	Peak	H
9920.00	27.13	38.81	14.38	31.88	48.44	74.00	-25.56	Peak	H
12400.00	26.65	38.76	15.27	35.27	45.41	74.00	-28.59	Peak	H
2480.00	73.51	27.52	5.47	33.92	72.58	94.00	-21.42	Average	H
4960.00	20.97	31.93	8.73	32.16	29.47	54.00	-24.53	Average	H
7440.00	18.66	36.59	11.79	31.78	35.26	54.00	-18.74	Average	H
9920.00	17.98	38.81	14.38	31.88	39.29	54.00	-14.71	Average	H
12400.00	16.88	38.76	15.27	35.27	35.64	54.00	-18.36	Average	H

Field strength of emissions and Restricted bands

EUT: Smart Beauty Instrument
M/N: MD-CTWL
Operating Condition: TX 2480MHz
Ant. Polarity: Vertical
Comment: Above 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Remark	Polarity
2480.00	89.09	27.52	5.47	33.92	88.16	114.00	-25.84	Peak	V
4960.00	31.77	31.93	8.73	32.16	40.27	74.00	-33.73	Peak	V
7440.00	28.66	36.59	11.79	31.78	45.26	74.00	-28.74	Peak	V
9920.00	27.74	38.81	14.38	31.88	49.05	74.00	-24.95	Peak	V
12400.00	27.94	38.76	15.27	35.27	46.70	74.00	-27.30	Peak	V
2480.00	78.82	27.52	5.47	33.92	77.89	94.00	-16.11	Average	V
4960.00	21.85	31.93	8.73	32.16	30.35	54.00	-23.65	Average	V
7440.00	18.60	36.59	11.79	31.78	35.20	54.00	-18.80	Average	V
9920.00	17.95	38.81	14.38	31.88	39.26	54.00	-14.74	Average	V
12400.00	18.03	38.76	15.27	35.27	36.79	54.00	-17.21	Average	V

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8.2 20dB Bandwidth

Test Method

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.

Limits:

According to 15.215 (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.

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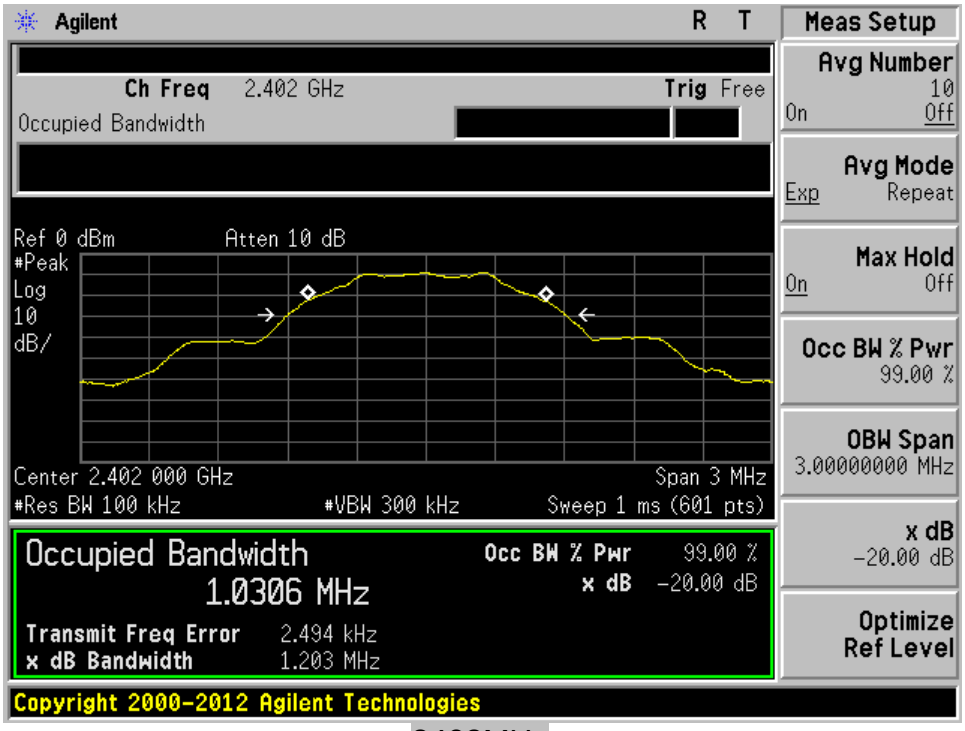
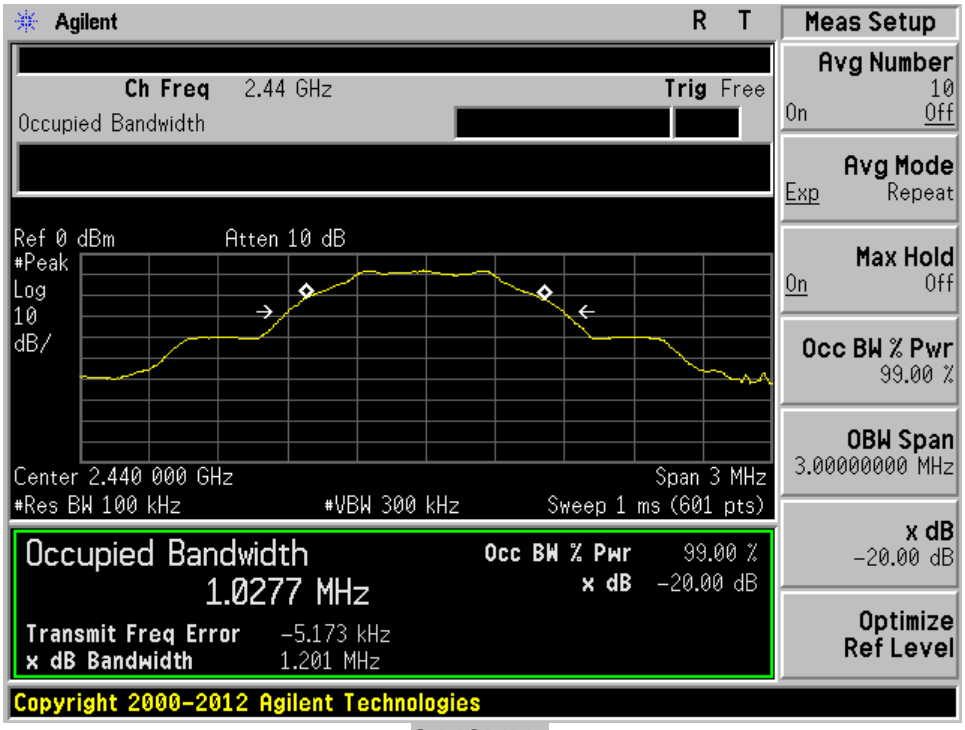
20dB Bandwidth

Frequency MHz	20dB Bandwidth kHz	Limit kHz	Result
2402	1203	500	Pass
2440	1201	500	Pass
2480	1204	500	Pass



2402MHz



2440MHz

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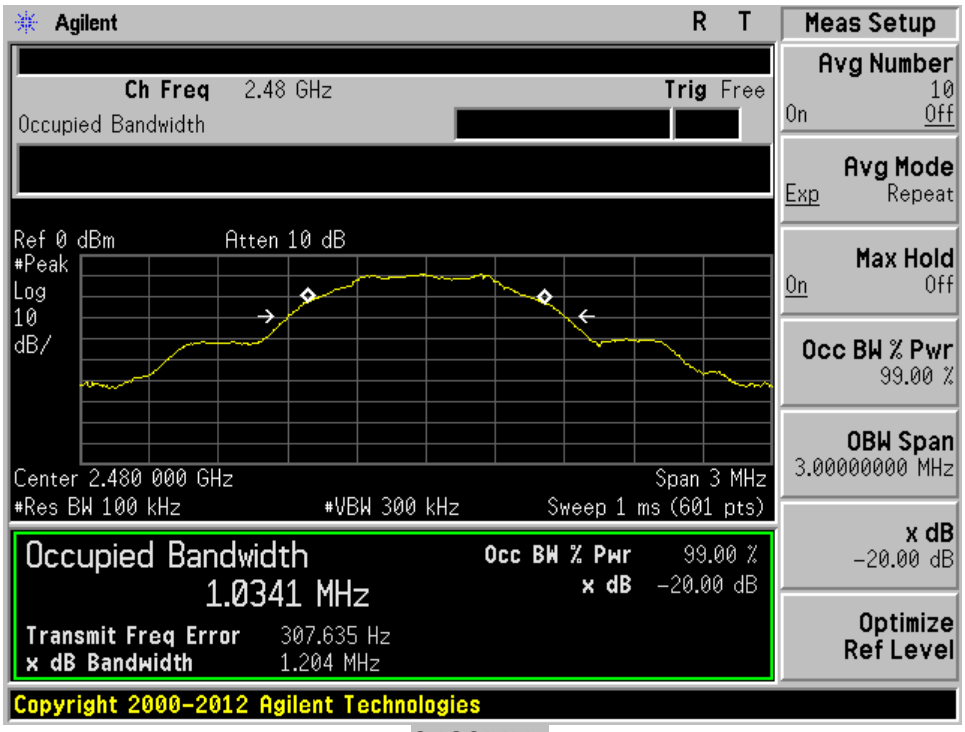

2480MHz

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8.3 Band edge testing

Test Method

1 Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW≥RBW, Sweep = auto, Detector function = peak, Trace = max hold
2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
3 The level displayed must comply with the limit specified in this Section. .
4 Repeat the test at the hopping off and hopping on mode, submit all the plots.

Limit:

According to §15.249(d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

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Band edge testing

Lowest channel										
	Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Polarity	Remark
	2390.00	41.91	27.59	5.38	30.18	44.70	74.00	-29.30	Horizontal	Peak
	2400.00	58.56	27.58	5.39	30.18	61.35	74.00	-12.65	Horizontal	Peak
	2390.00	42.36	27.59	5.38	30.18	45.15	74.00	-28.85	Vertical	Peak
	2400.00	60.49	27.58	5.39	30.18	63.28	74.00	-10.72	Vertical	Peak
	2390.00	32.68	27.59	5.38	30.18	35.47	54.00	-18.53	Horizontal	AV
	2400.00	43.86	27.58	5.39	30.18	46.65	54.00	-7.35	Horizontal	AV
	2390.00	32.55	27.59	5.38	30.18	35.34	54.00	-18.66	Vertical	AV
	2400.00	45.41	27.58	5.39	30.18	48.20	54.00	-5.80	Vertical	AV

Highest channel										
	Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Polarity	Remark
	2483.50	43.90	27.53	5.47	29.93	46.97	74.00	-27.03	Horizontal	Peak
	2500.00	43.25	27.55	5.49	29.93	46.36	74.00	-27.64	Horizontal	Peak
	2483.50	44.58	27.53	5.47	29.93	47.65	74.00	-26.35	Vertical	Peak
	2500.00	44.16	27.55	5.49	29.93	47.27	74.00	-26.73	Vertical	Peak
	2483.50	35.49	27.53	5.47	29.93	38.56	54.00	-15.44	Horizontal	AV
	2500.00	33.63	27.55	5.49	29.93	36.74	54.00	-17.26	Horizontal	AV
	2483.50	36.62	27.53	5.47	29.93	39.69	54.00	-14.31	Vertical	AV
	2500.00	33.47	27.55	5.49	29.93	36.58	54.00	-17.42	Vertical	AV

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China

9 Test equipment list

List of Test Instruments

	DESCRIPTION	MANUFACTURER	MODEL NO.	CAL.DATE (MM-DD-YY)	CAL.DUE DATE (MM-DD-YY)
C	Vector Signal Generator	Agilent	E4438C	June 30 2015	June 29 2016
RE	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	Mar. 27 2015	Mar. 26 2016
	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	N/A	N/A
	Spectrum Analyzer	Agilent	E4440A	Dec. 4 2014	Dec. 3 2015
	EMI Test Receiver	Rohde & Schwarz	ESU26	June 30 2015	June 29 2016
	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	June 30 2015	June 29 2016
	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	June 26 2015	June 25 2016
	Horn Antenna	ETS-LINDGREN	3160	Mar. 27 2015	Mar. 26 2016
	EMI Test Software	AUDIX	E3	N/A	N/A
	Coaxial Cable	GTS	N/A	Mar. 28 2015	Mar. 27 2016
	Coaxial Cable	GTS	N/A	Mar. 28 2015	Mar. 27 2016
	Coaxial cable	GTS	N/A	Mar. 28 2015	Mar. 27 2016
	Coaxial Cable	GTS	N/A	Mar. 28 2015	Mar. 27 2016
	Amplifier(100kHz-3GHz)	HP	8347A	June 30 2015	June 29 2016
	Amplifier(2GHz-20GHz)	HP	8349B	June 30 2015	June 29 2016
	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	June 26 2015	June 25 2016
	Band filter	Amindeon	82346	Mar. 28 2015	Mar. 27 2016
	Power Meter	Anritsu	ML2495A	June 30 2015	June 29 2016
	Power Sensor	Anritsu	MA2411B	June 30 2015	June 29 2016

C - Conducted RF tests
- 20dB bandwidth

RE- Radiated RF tests
- Field strength of emissions and Restricted bands
- Out of band emissions

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10 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty
Radiated Emission	9kHz ~ 30MHz	± 4.34dB
Radiated Emission	30MHz ~ 1000MHz	± 4.24dB
Radiated Emission	1GHz ~ 26.5GHz	± 4.68dB
Bandwidth test	--	1*10-9

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