TECHNICAL REPORT

Report No: FCC1704032-01
File reference No: 2017-04-10

Applicant: King of Fans, Inc.

Product: 52” Windward IV

Model No: 52-WWDIV

Trademark: Home Decorators Collection, or Hampton Bay.

Test Standards: FCC Part 15 Subpart B: 2016

Test result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: April 10, 2017

Results appearing herein relate only to the sample tested
The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China
Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timewaytech.com

Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

Test Report Conclusion

Content

1.0 General Details

1.1 Test Lab Details

Name :	SHENZHEN TIMEWAY TESTING LABORATORIES.
Address:	Room 512-519,5/F., East Tower,Building 4, Anhua Industrial Zone, Futian District,Shenzhen, Guangdong China
Telephone:	(755) 83448688
Fax:	(755) 83442996

Site on File with the Federal Communications Commission – United Sates
Registration Number: 899988
For 3m & 10 m OATS
Site Listed with Industry Canada of Ottawa, Canada
Registration Number: IC: 5205A-02
For 3m & 10 m OATS

1.2 Applicant Details

Applicant:	King of Fans, Inc.
Address:	1951 N.W. 22nd Street, Fort Lauderdale, FL33311, USA
Telephone:	954-484-7500
Fax:	954-784-7602

1.3 Description of EUT

Product:	52” Windward IV
Manufacturer:	Chienluen Industries (zhongshan) Ltd..
Address:	Da Che Industrial Area,Nanlang Town, Zhongshan,Guangdong China 528451
Brand Name:	Home Decorators Collection, or Hampton Bay.
Model Number:	52-WWDIV

Rating: Input:120V, 60Hz, No light 0.5A 60W, with light 1.5A, 180W;
Rx Frequency: 304.25MHz

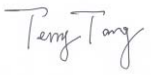
1.4 Submitted Sample: 1 Samples

1.5 Test Duration: 2017-04-07 to 2017-04-10

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB
Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by 

Print Name: Terry Tong

2.0 List of Measurement Equipment

2.1 Conducted Emission Test

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESH3	860905/006	RS	2016.06.11	1Year
Spectrum Analyzer	ESA-L1500A	US37451154	HP	2016.06.11	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2016.06.11	1Year
LISN	ESH3-Z5	100294	RS	2016.06.11	1Year
LISN	ESH3-Z5	100253	RS	2016.06.11	1Year

2.2 Radiated electromagnetic disturbance test

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESVD	100008	RS	2016.06.11	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
Spectrum Analyzer	8595E	3441A00893	HP	2016.06.11	1Year
Amplifier	8447D	2727A05017	HP	2016.06.11	1Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2016.06.11	1Year

2.3 Auxiliary Equipment

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
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3.0 Technical Details

3.1 Investigations Requested

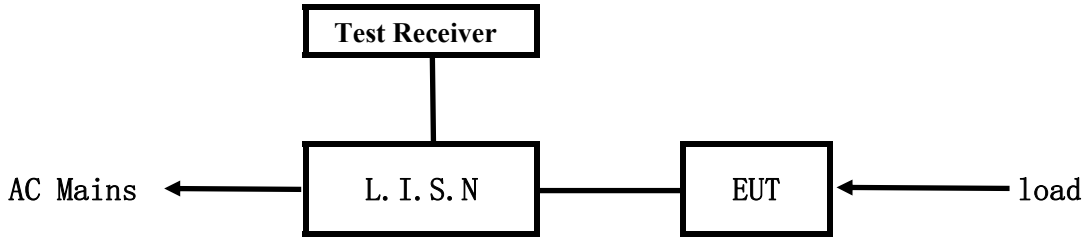
Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

FCC Part 15 Subpart B: 2016

4.0 Conducted Power line Test

4.1 Schematics of the test



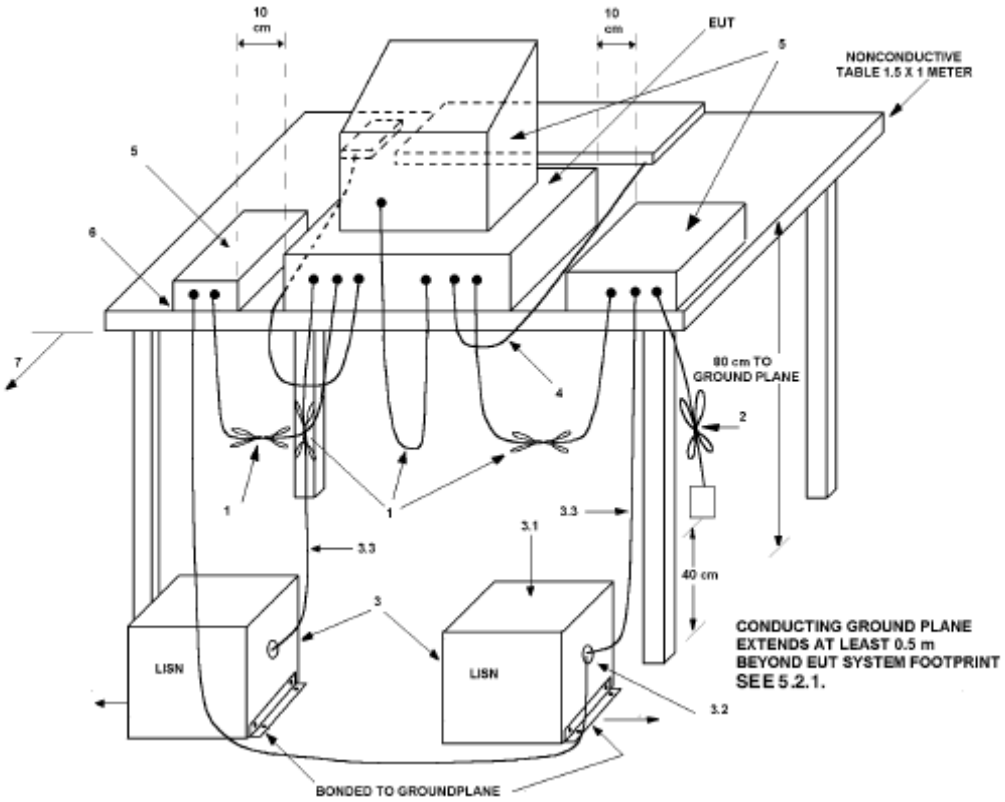
EUT: Equipment Under Test

4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014.The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2014.Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup



4.3 Power line conducted Emission Limit

Frequency(MHz)	Class A Limits dB(μV)		Class B Limits dB(μV)	
	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
0.15 ～ 0.50	79.00	66.00	66.00～56.00*	56.00～46.00*
0.50 ～ 5.00	73.00	60.00	56.00	46.00
5.00 ～ 30.00	73.00	60.00	60.00	50.00

Notes: 1. *decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

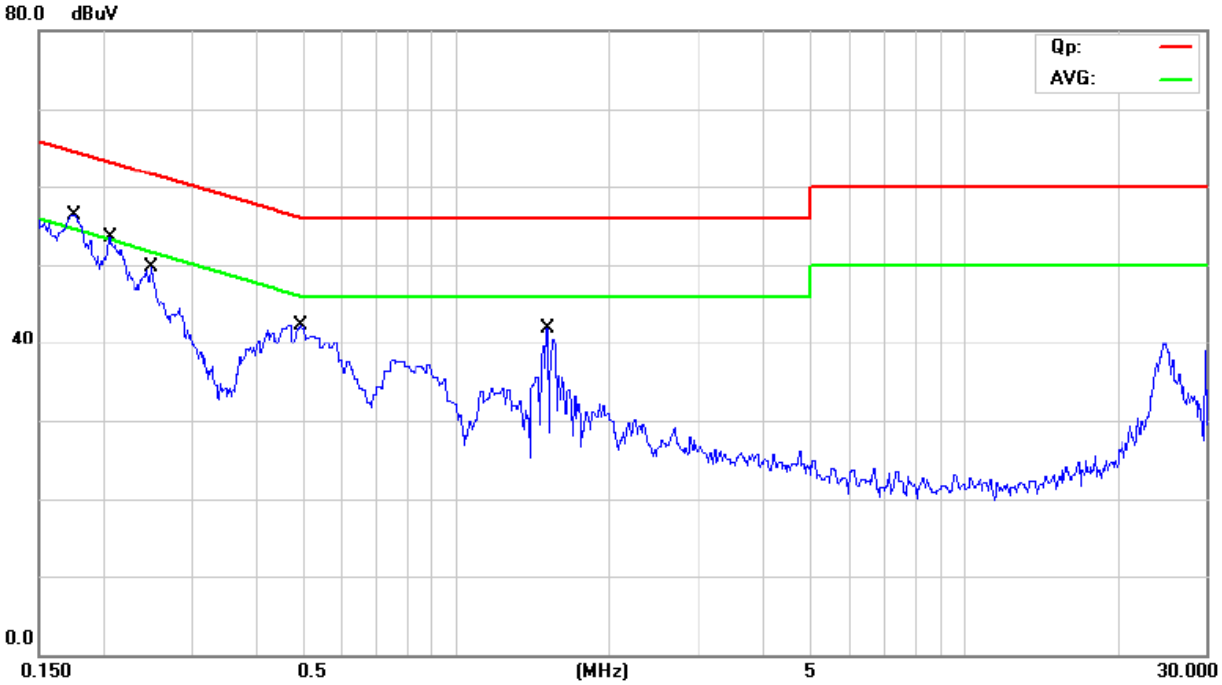
Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Receiving Mode

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1753	40.10	9.87	49.97	64.71	-14.74	QP	
2	*	0.1753	34.00	9.87	43.87	54.71	-10.84	AVG	
3		0.2052	36.20	9.91	46.11	63.40	-17.29	QP	
4		0.2052	30.90	9.91	40.81	53.40	-12.59	AVG	
5		0.2504	32.30	9.97	42.27	61.74	-19.47	QP	
6		0.2504	28.70	9.97	38.67	51.74	-13.07	AVG	
7		1.5187	21.80	10.89	32.69	56.00	-23.31	QP	
8		1.5187	7.30	10.89	18.19	46.00	-27.81	AVG	
9		0.4901	26.70	10.26	36.96	56.17	-19.21	QP	
10		0.4901	22.60	10.26	32.86	46.17	-13.31	AVG	

B: **Conducted Emission on Neutral Terminal (150kHz to 30MHz)**

EUT Operating Environment

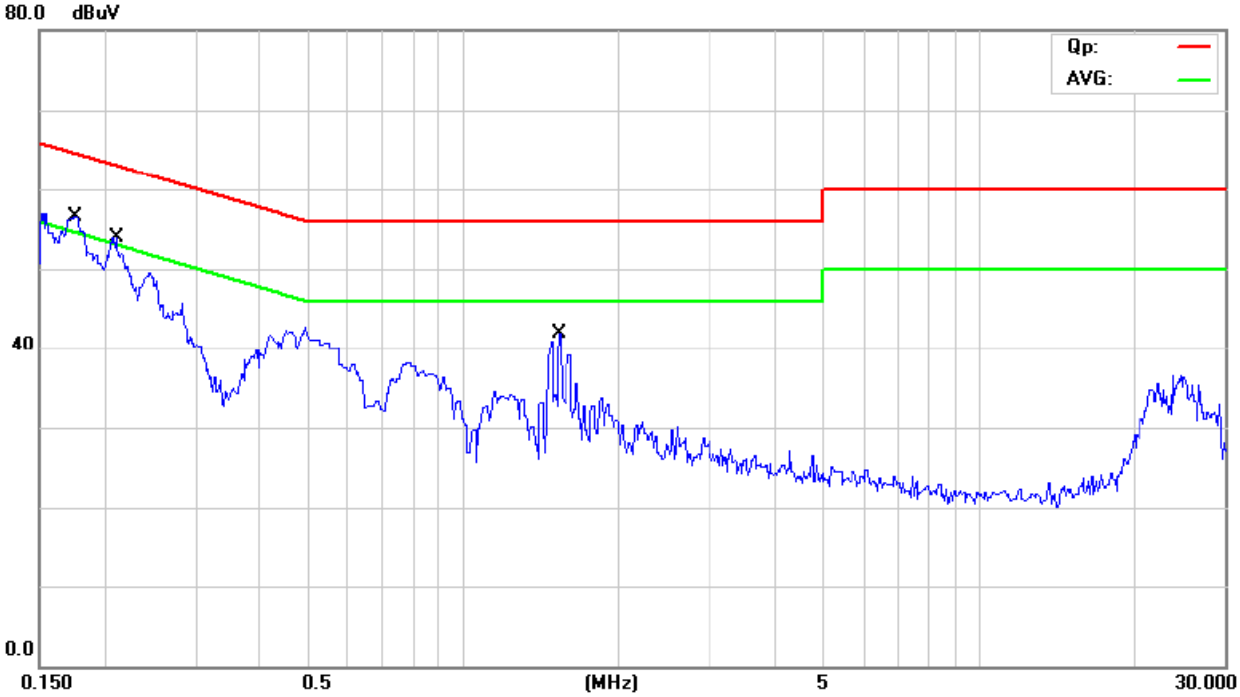
Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Receiving Mode

Equipment Level: Class B

Results: Pass

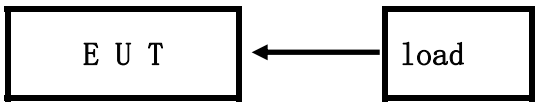
Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1762	40.50	9.87	50.37	64.66	-14.29	QP	
2	*	0.1762	33.90	9.87	43.77	54.66	-10.89	AVG	
3		0.2104	36.40	9.92	46.32	63.19	-16.87	QP	
4		0.2104	30.70	9.92	40.62	53.19	-12.57	AVG	
5		1.5214	21.70	10.89	32.59	56.00	-23.41	QP	
6		1.5214	12.40	10.89	23.29	46.00	-22.71	AVG	

5.0 Radiated Disturbance Test

5.1 Schematics of the test

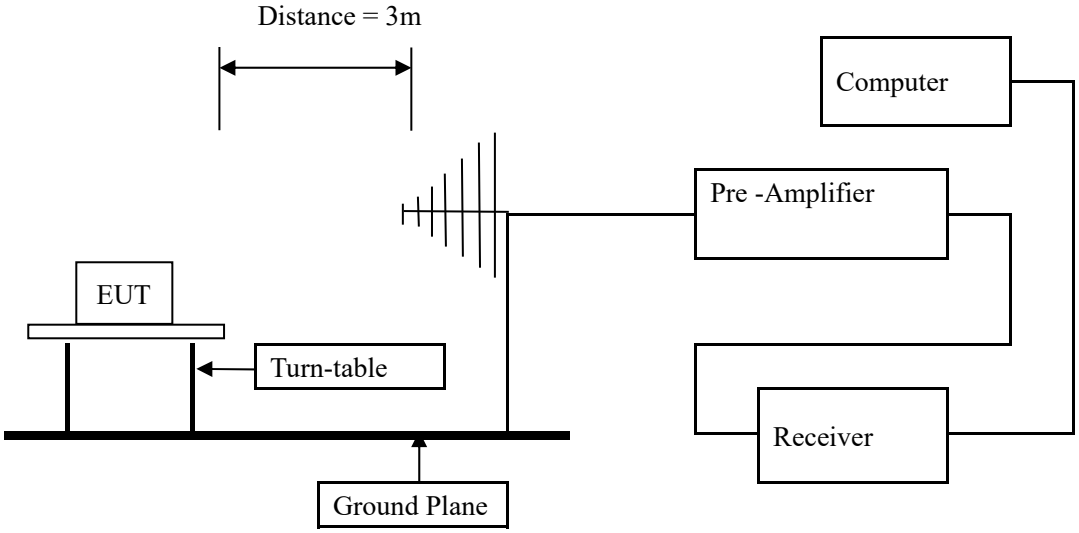


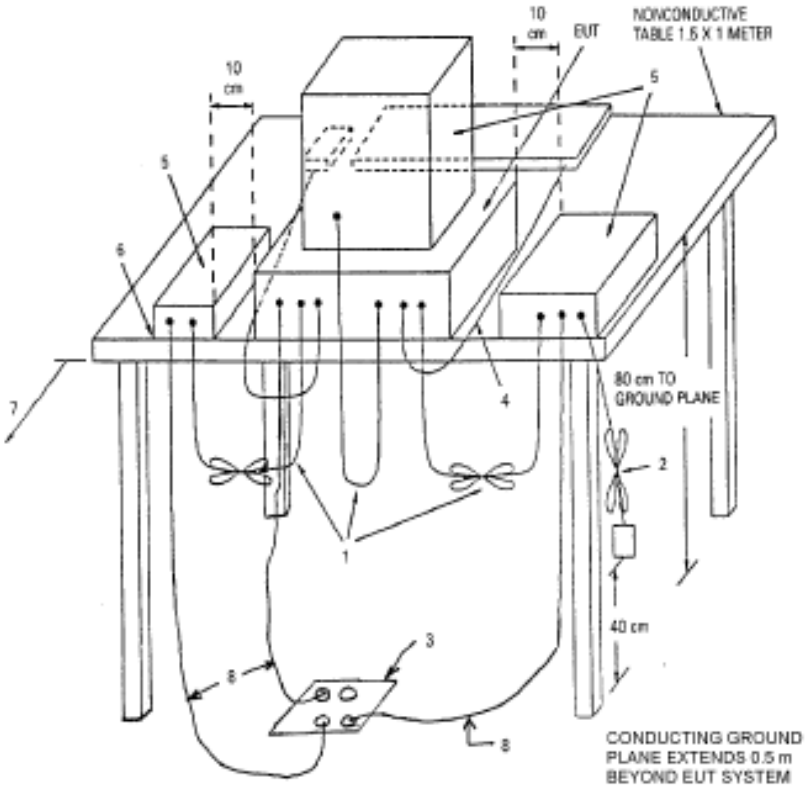
5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2014; The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup





5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: 1.The lower limit shall apply at the transition frequencies

2.This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

5.4 Test result

The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK. Measurements were made at 3 meters.

Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

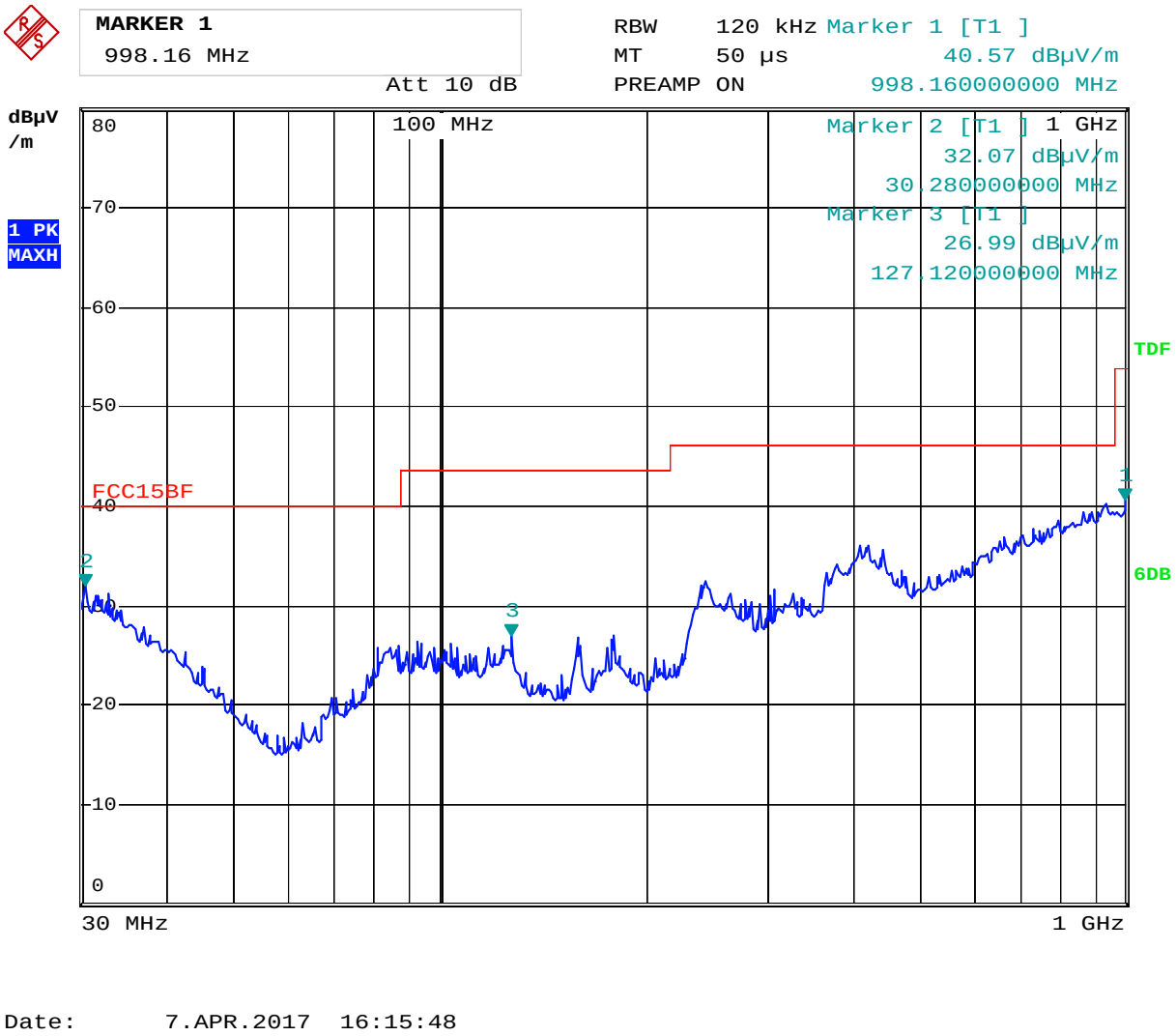
EUT set Condition: **Receiving Mode**

Results: **Pass**

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
998.160	40.57	H	54.00
30.280	32.07	H	40.00
127.120	26.99	H	43.50
936.960	40.09	V	46.00
30.040	31.32	V	40.00
47.560	31.18	V	40.00

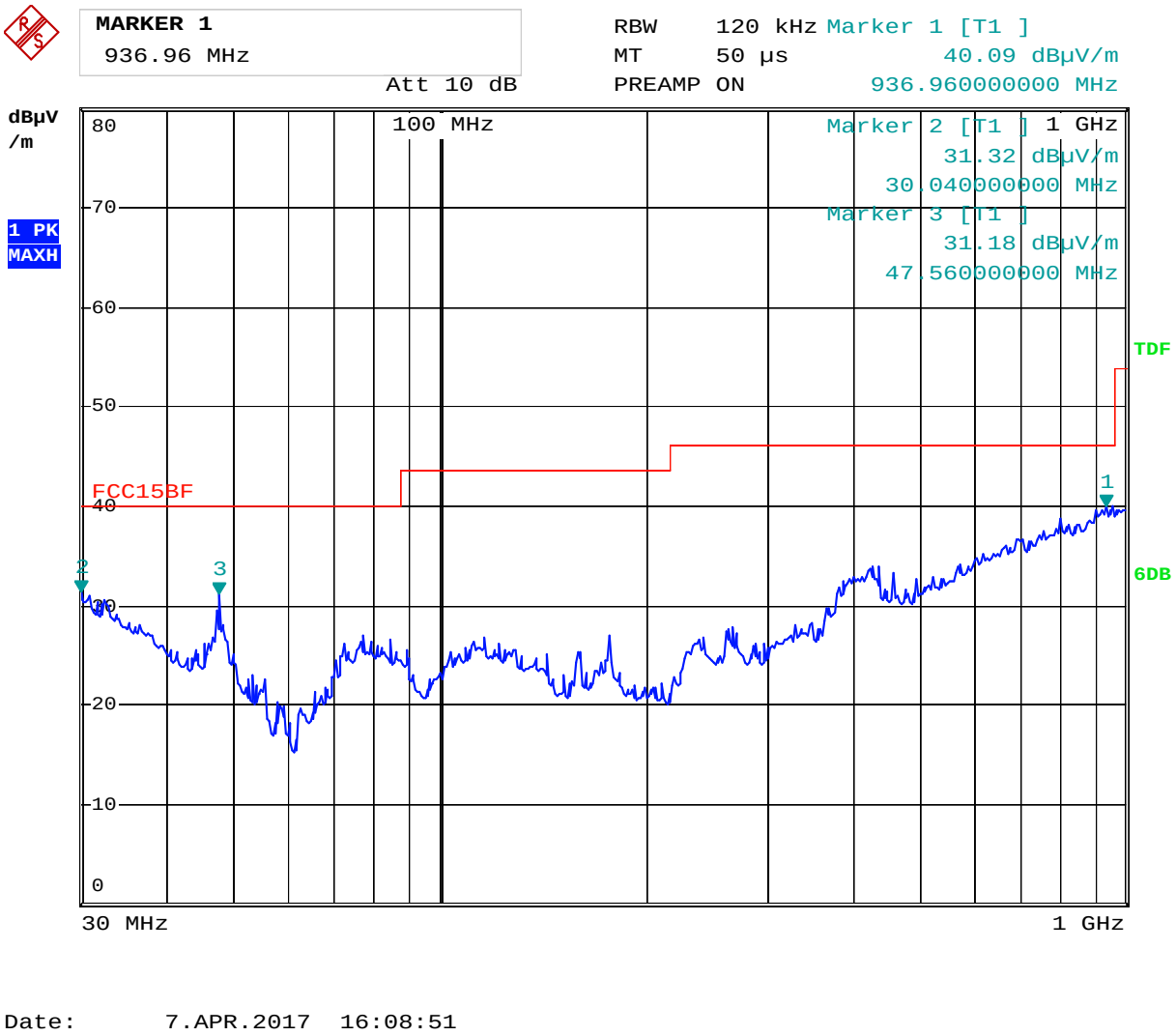
Test Figure:

H



Test Figure:

V



Radiated Disturbance (1000MHz----5000MHz)

EUT Operating Environment

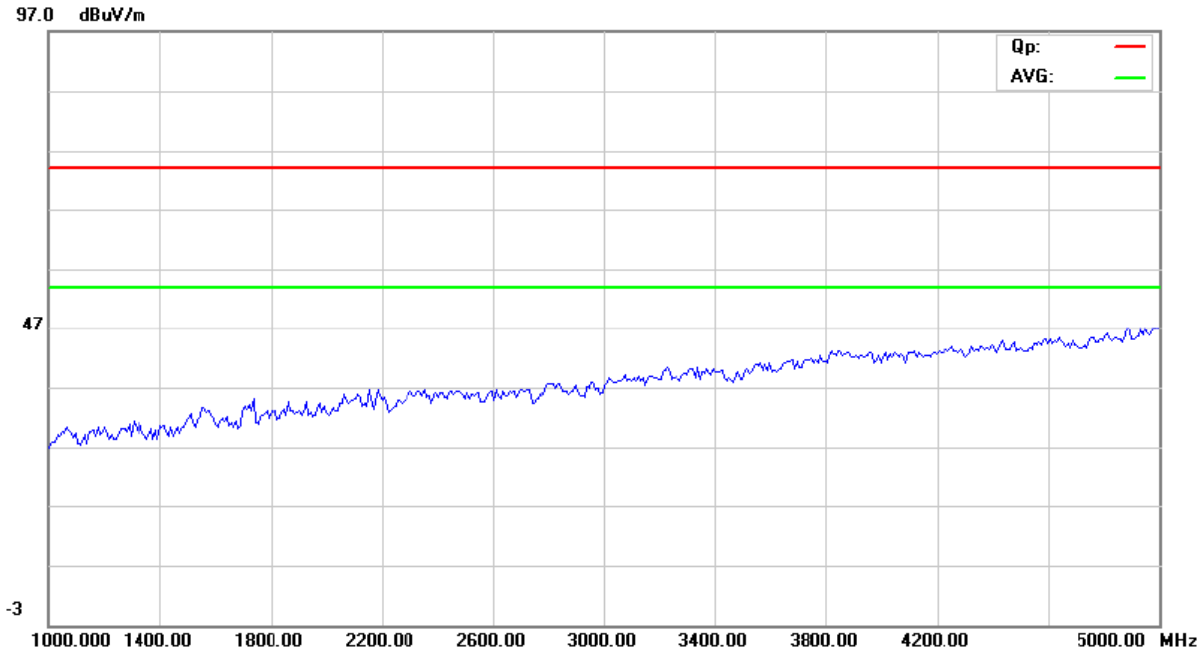
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Receiving Mode

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBμV/m)
--	--	H	54(AV)

Note: Scan by PK detector , the PK scan result curve is much lower than AV limit

Radiated Disturbance (1000MHz----5000MHz)

EUT Operating Environment

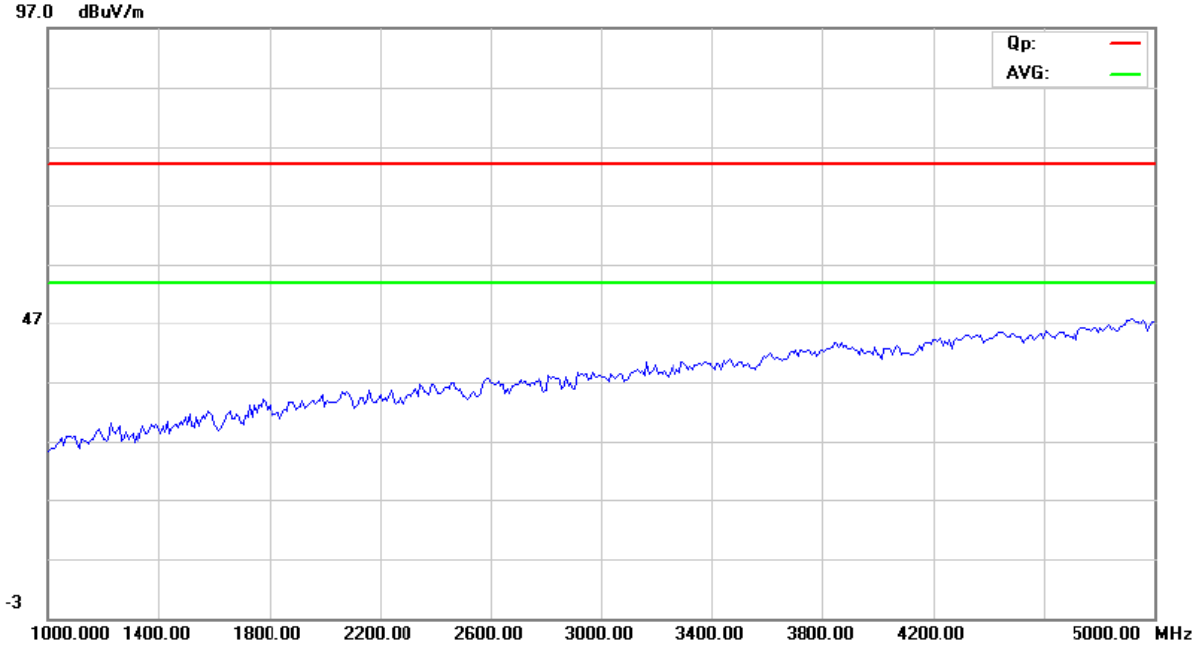
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Receiving Mode

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBμV/m)
--	--	V	54(AV)

Note: Scan by PK detector， the PK scan result curve is much lower than AV limit