

TECHNICAL REPORT



Report No: FCC1609015-01

File reference No: 2016-09-12

Applicant: King of Fans, Inc.

Product: 60" Sudler Ridge

Model No: 60-SUDE

Trademark: Home Decorators Collection

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: September 12, 2016

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@timeway-lab.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.

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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 States
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: 60" Sudler Ridge
Manufacturer: Chienlun Industries (zhongshan) Ltd..
Address: Da Che Industrial Area,Nanlang Town, Zhongshan,Guangdong
China 528451
Brand Name: Home Decorators Collection
Model Number: 60-SUDE
Rating: Input:120V, 60Hz; Fan W/O Light Kit: 0.6A, 72W; Fan W/Light Kit: 0.76A, 92W
Rx Frequency: 304.25MHz

1.4 Submitted Sample: 1 Samples

1.5 Test Duration: 2016-09-05 to 2016-09-09

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

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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	R&S	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

Horn Antenna	BBHA 9170	9120D-631	R&S	2016-08-24	1Year
Horn Antenna	BBHA 9120D	6K00003613	R&S	2016-08-24	1Year

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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

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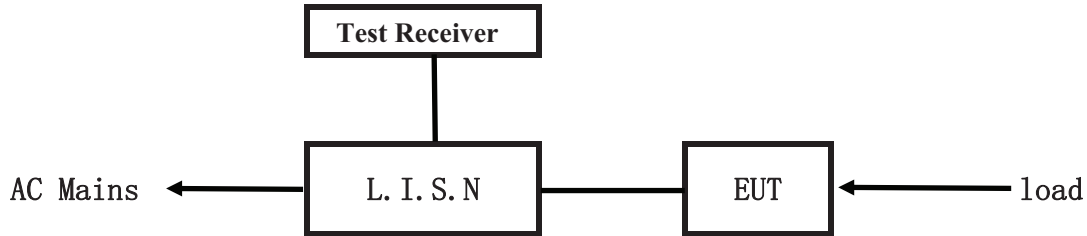
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4.0 Conducted Power line Test

4.1 Schematics of the test



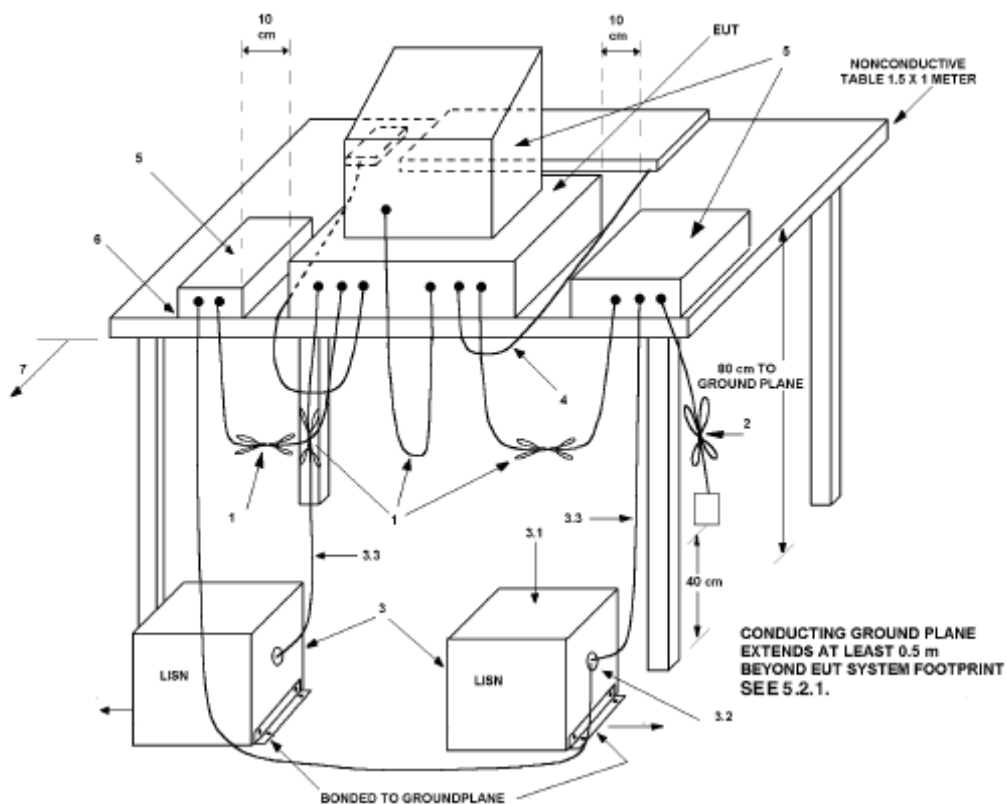
EUT: Equipment Under Test

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



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4.3 Power line conducted Emission Limit

Frequency(MHz)	Class A Limits dB(μ V)		Class B Limits dB(μ V)	
	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.

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

EUT Operating Environment

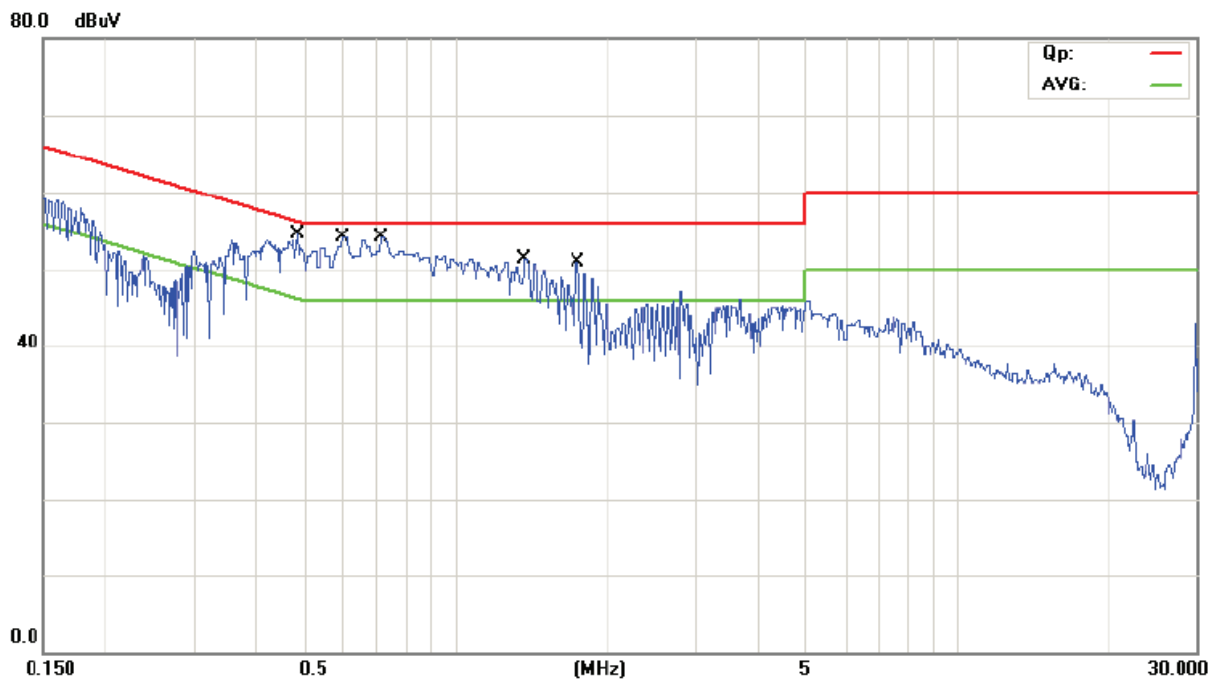
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Receiving Mode

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.4805	40.90	11.35	52.25	56.33	-4.08	QP	
2		0.4805	23.90	11.35	35.25	46.33	-11.08	AVG	
3		0.5974	39.33	11.47	50.80	56.00	-5.20	QP	
4		0.5974	18.70	11.47	30.17	46.00	-15.83	AVG	
5		0.7063	38.00	11.59	49.59	56.00	-6.41	QP	
6		0.7063	16.80	11.59	28.39	46.00	-17.61	AVG	
7		1.3722	36.00	12.05	48.05	56.00	-7.95	QP	
8		1.3722	15.80	12.05	27.85	46.00	-18.15	AVG	
9		1.7331	35.30	12.19	47.49	56.00	-8.51	QP	
10		1.7331	14.10	12.19	26.29	46.00	-19.71	AVG	

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

EUT Operating Environment

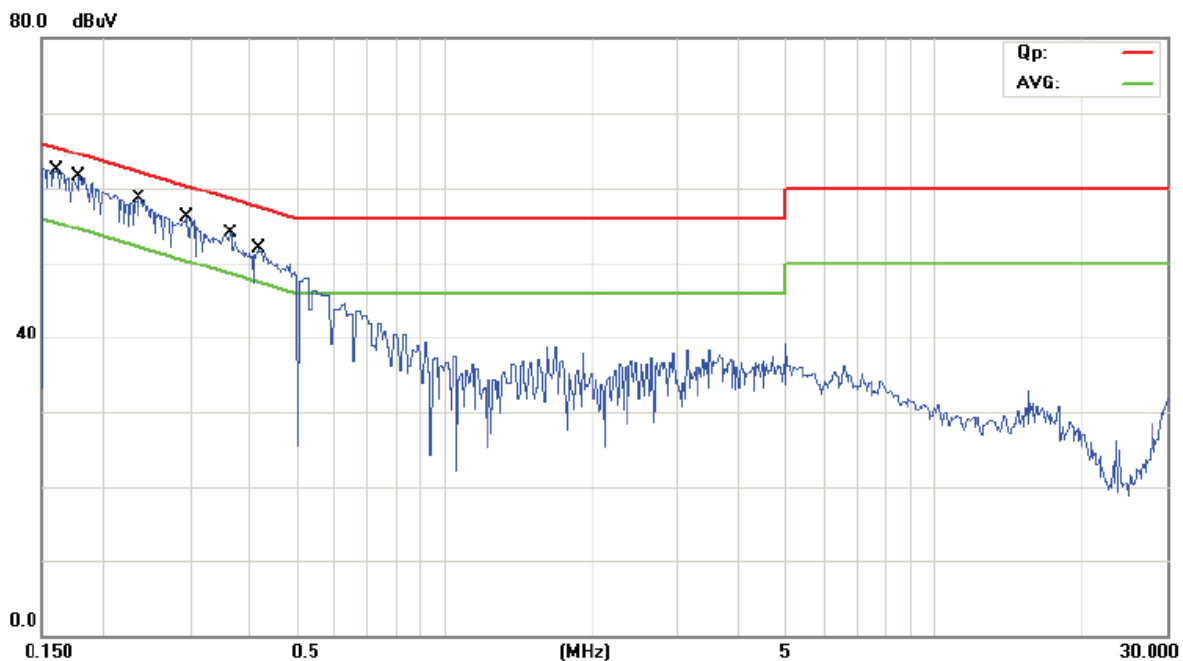
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

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	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1611	50.20	11.01	61.21	65.41	-4.20	QP	
2		0.1611	26.20	11.01	37.21	55.41	-18.20	AVG	
3		0.1788	48.00	11.03	59.03	64.54	-5.51	QP	
4		0.1788	24.80	11.03	35.83	54.54	-18.71	AVG	
5	*	0.2366	47.00	11.09	58.09	62.21	-4.12	QP	
6		0.2366	25.80	11.09	36.89	52.21	-15.32	AVG	
7		0.2946	44.70	11.15	55.85	60.39	-4.54	QP	
8		0.2946	23.30	11.15	34.45	50.39	-15.94	AVG	
9		0.3625	42.10	11.22	53.32	58.67	-5.35	QP	
10		0.3625	21.90	11.22	33.12	48.67	-15.55	AVG	
11		0.4167	40.70	11.28	51.98	57.51	-5.53	QP	
12		0.4167	18.38	11.28	29.66	47.51	-17.85	AVG	

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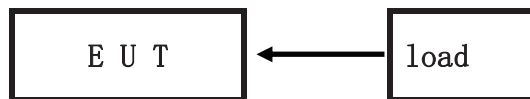
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5.0 Radiated Disturbance Test

5.1 Schematics of the test

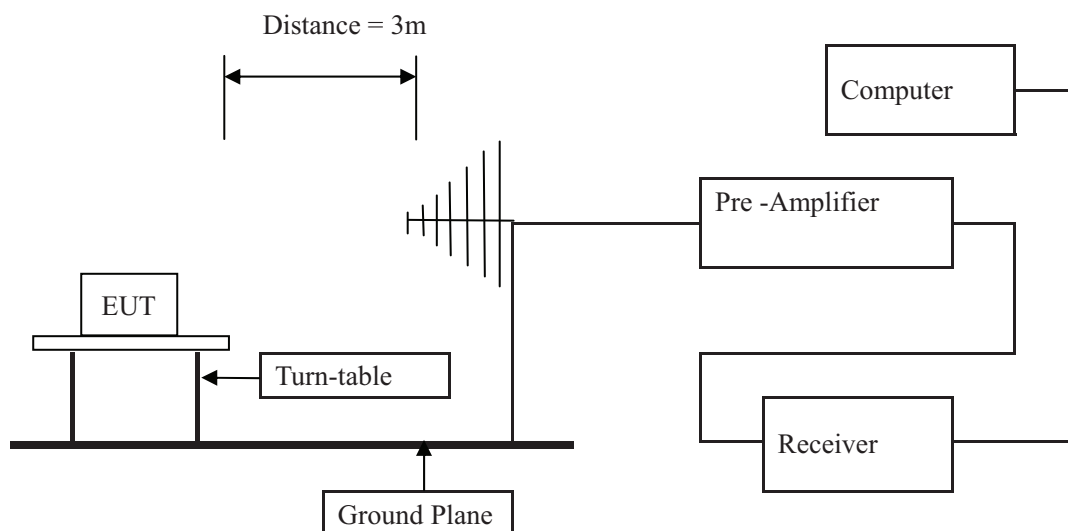


5.2 Test Method and test Procedure:

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 detector.

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

Block diagram of Test setup



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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)
939.640	40.11	H	46.00
106.400	23.97	V	43.50

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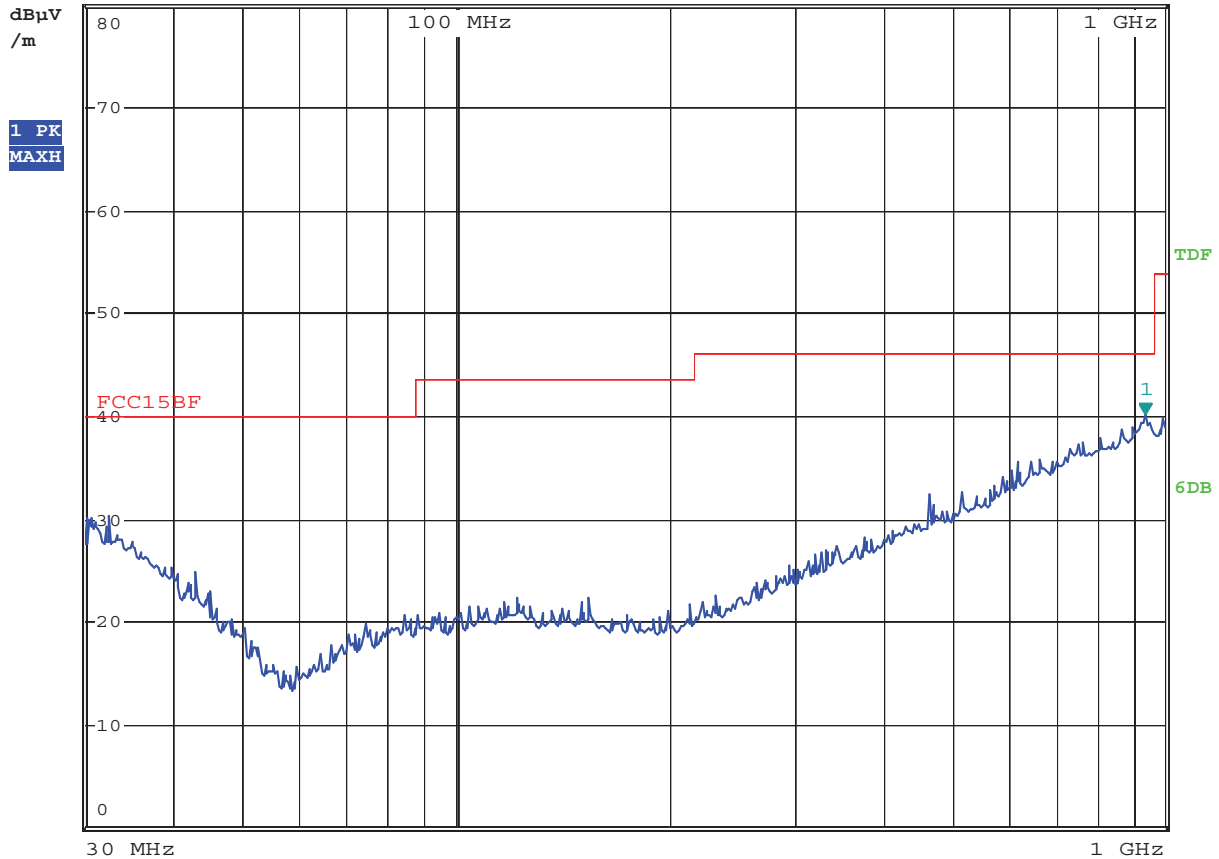
Test Figure:

H



MARKER 1
 939.64 MHz
 Att 10 dB

RBW 120 kHz Marker 1 [T1]
 MT 50 μs 40.11 dBμV/m
 PREAMP ON 939.64000000 MHz



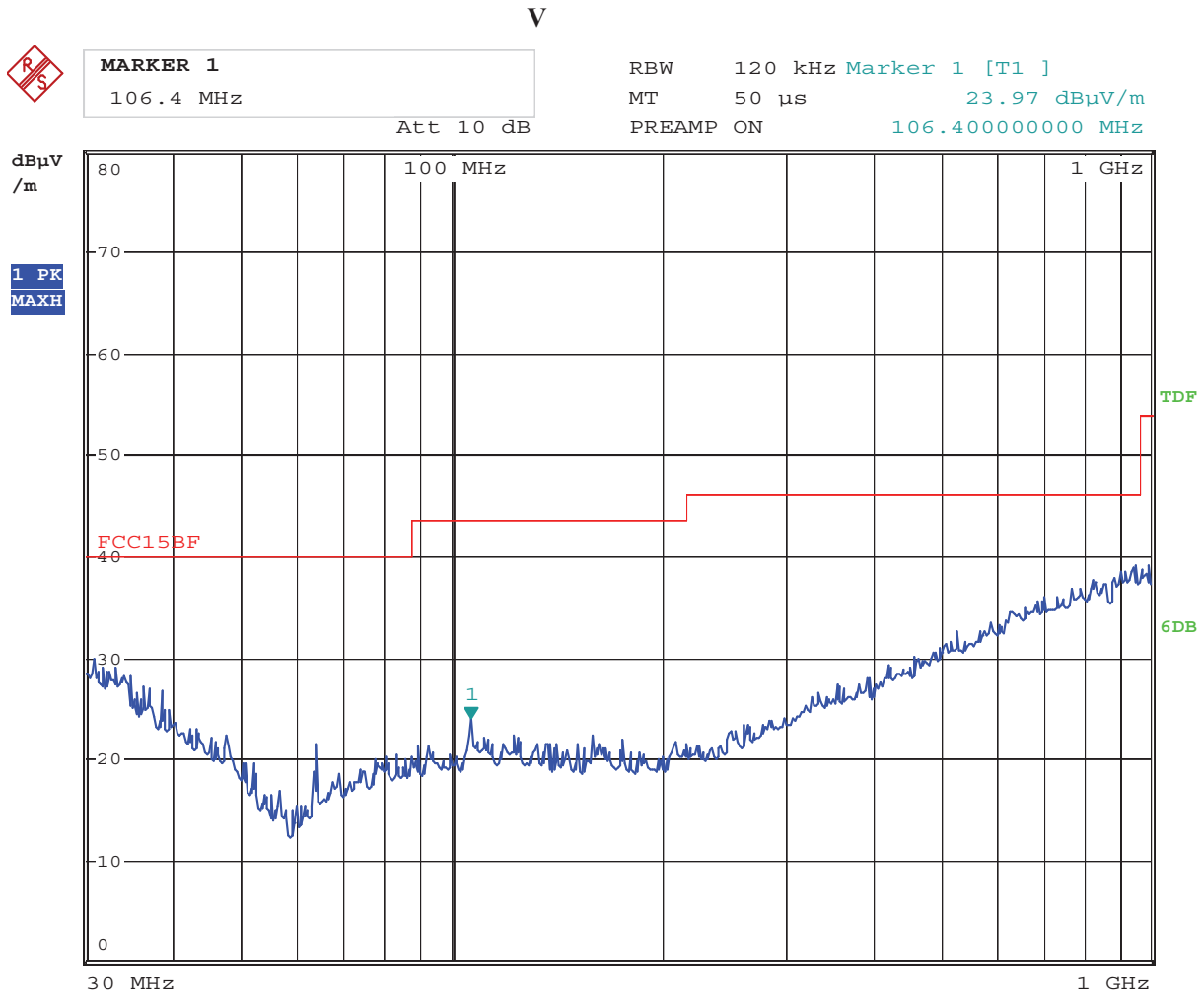
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Test Figure:



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

EUT Operating Environment

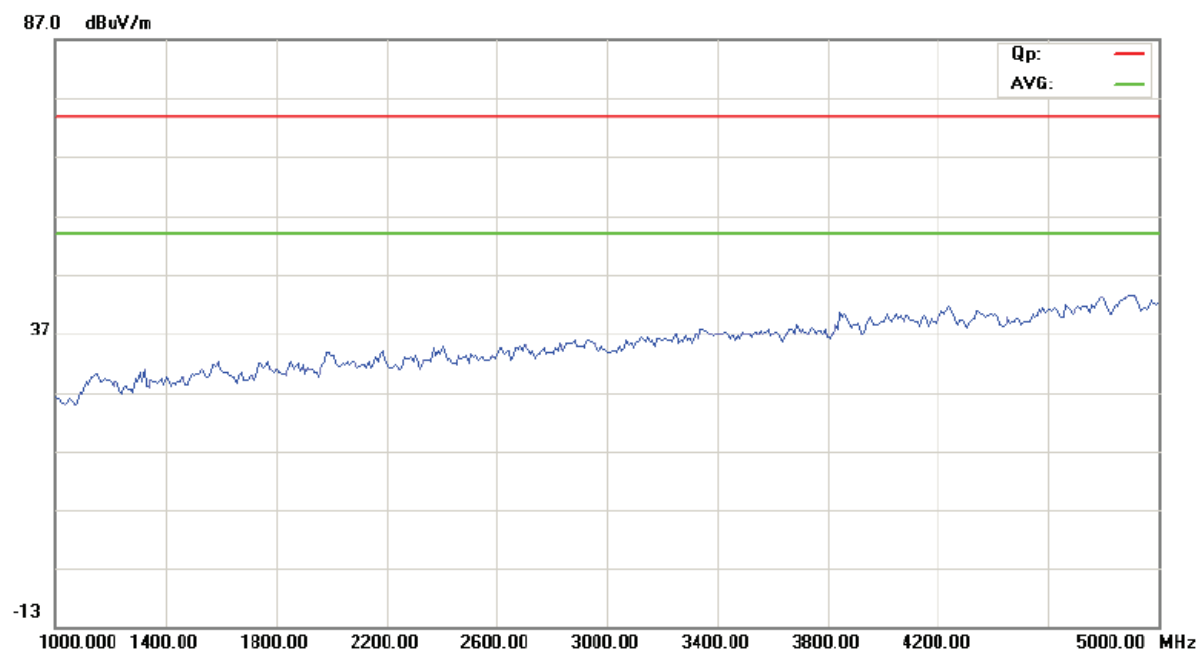
Temperature: 25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

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: PK scan curve is lower than AV limit

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

EUT Operating Environment

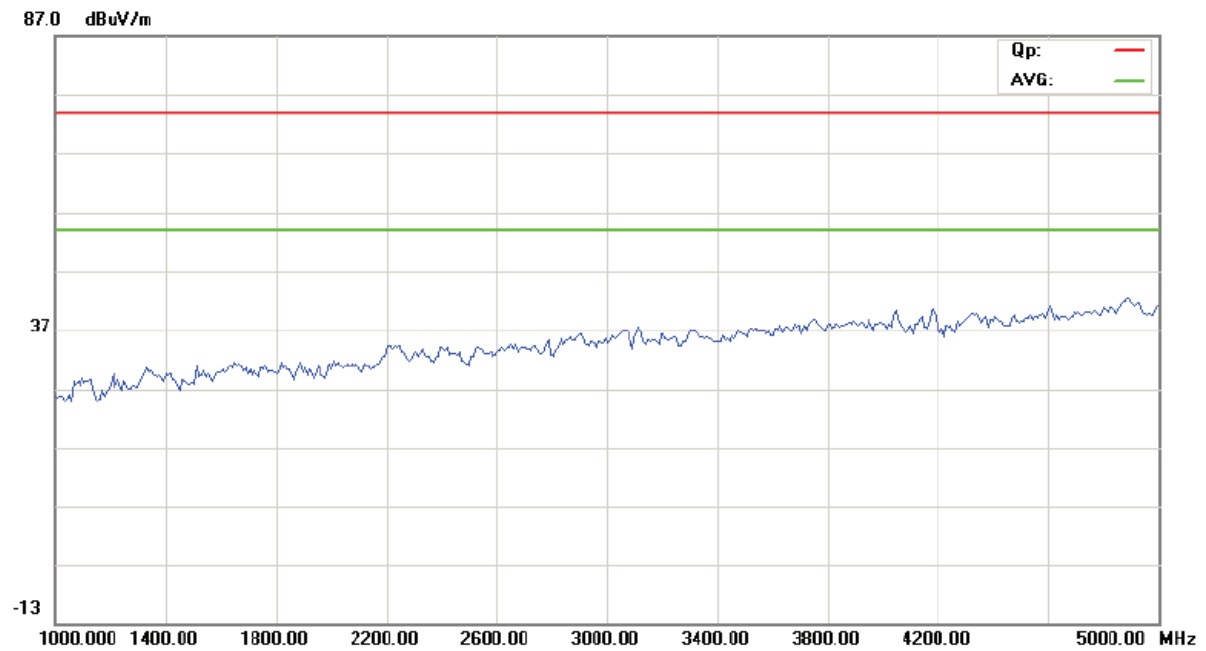
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

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: PK scan curve is lower than AV limit

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6.0 FCC ID Label

FCC ID: RGB-60SUDES

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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