

SPECIFICATION FOR APPROVAL

客 戶

CUSTOMER:

客 戶 料 號

CUSTOMER PARTS NO.:

品 名

AC AXIAL FAN

DESCRIPTION:

機種

4E-115B-W

MODEL NO.:

檔案序號

A4E0011HB-B1

FILE NO.:

核示	研發	品保	版數
ISSUE	R&D	QA	REVISION

客 戶 承 認

CUSTOMER APPROVAL

BI-SONIC TECHNOLOGY CO., LTD

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PERFORMANCE SPECIFICATION

PRODUCT TITLE : AC AXIAL FAN

MODEL NO : 4E-115B-W

1、SCOPE：

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE AC AXIAL FLOW FAN. THE FAN MOTOR IS SHADED POLE MOTOR WITH EXTERNAL ROTOR.

2、ELECTRICAL CHARACTERISTICS：

ALL MEASUREMENTS PERFORMED AT 20-30°C ROOM TEMPERATURE & 50-70% R.H. UNLESS OTHERWISE SPECIFIED. SPEED MEASURED AFTER CONTINUOUS 10 MINUTE OPERATION AT RATED VOLTAGE IN CLEAN AIR.

ITEM	DESCRIPTION	UNIT	SYMBOL	SPEC.		CONDITION
				50Hz	60Hz	
1	RATED VOLTAGE	VOLTS	V	115	AC	
2	OPERATION VOLTAGE	VOLTS	V	105~125	AC	
3	INPUT CURRENT	AMP	A	0.25MAX	0.24MAX	AT RATED VOLTAGE
4	INPUT POWER	WATTS	W	24MAX	22MAX	AT RATED VOLTAGE
5	ROTATION SPEED	RPM	RPM	2650±10%	3000±10%	AT RATED VOLTAGE FREE AIR
6	ACOUSTICAL NOISE (AVG)	dB(A)	dB(A)	41±10%	45±10%	DETAILS SEE ATTACHED PAGE.
7	MAX. AIR-FLOW	CFM	Q	82.4±10%	95.6±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
8	MAX. AIR-PRESSURE	mmH ₂ O	P	6.7±10%	7.4±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
9	INSULATION RESISTANCE	MEG. OHM	MΩ	100MΩ MIN. AT 500V DC		BETWEEN FRAME AND LEAD WIRE.
10	DIELECTRIC STRENGTH			WITHSTANDING AT 1400V AC 60Hz. FOR 1 MINUTE		BETWEEN FRAME AND LEAD WIRE.

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A4E0011HB-B1

REVISIONS：

ITEM	DESCRIPTION	SPEC.	
11	ROTATION	CW VIEW FROM NAME PLATE SIDE	
12	AIR-FLOW DIRECTION	AIR INTAKE OVER THE STRUTS	
13	INSULATION CLASS	CLASS B	
14	LIFE EXPECTANCY	50000 HOURS CONTINUOUS	□
15	SAFETY APPROVAL	UL. CSA. TUV. CE. IP54.	

□ LIFE IS DEFINED AS THE TIME MOTOR SPEED DECREASED MORE THAN 30% COMPARED WITH INITIAL VALUE.

3、MECHANICAL

- 3-1. DIMENSIONS----- SEE SECTION 8
- 3-2. FRAME ----- METAL CONSTRUCTION WITH ALUMINUM DIE-CASTING.
- 3-3. IMPELLER----- MADE OF METAL MATERIAL SPOT WELDING ON ROTOR SHELL.
- 3-4. COATING ----- CED (CATHONIC ELECTRODEPOSITION COATING WITH EPOXY) COATING ON METAL SURFACE BE CAPABLE OF IMPACT RESISTANT AND ABRASION RESISTANT.
- 3-5. BEARING SYSTEM ----- BALL BEARING
- 3-6. WEIGHT----- 600 GRAMS
- 3-7. LEAD WIRE ----- 1007 AWG # 22
- 3-8. TYPE OF OUTPUT : LEADWIRE
- 3-9. PLASTIC PARTS----- UNFLAMABLE MATERIAL , MEET UL 94V-0 RATING.

4、ENVIRONMENTAL :

- 4-1. OPERATING TEMPERATURE----- -10 TO +70°C
- 4-2. STORAGE TEMPERATURE ----- -30 TO +75°C

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A4E0011HB-B1

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4-3. OPERATING HUMIDITY ----- RH 20% ~ 85%

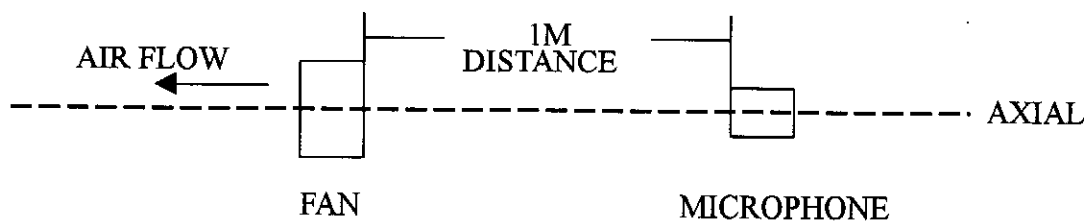
5、PROTECTION：

5-1. IMPEDANCE PROTECTION

IMPEDANCE OF MOTOR COIL WINDING PROTECTS MOTOR FROM
FLAMING IN THE CONDITION OF 72 Hrs LOCKED ROTOR AT RATED
VOLTAGE.

6、ACOUSTICAL NOISE：

6-1. MEASUREMENT SET-UP



6-2. MEASUREMENT PERFORMED IN ANECHOIC TEST CHAMBER
UNDER FREE AIR CONDITION .

6-3. CHAMBER BACKGROUND NOISE 17dB MAX .

6-4. READING TAKEN FROM SPECTRUM ANALYZER .

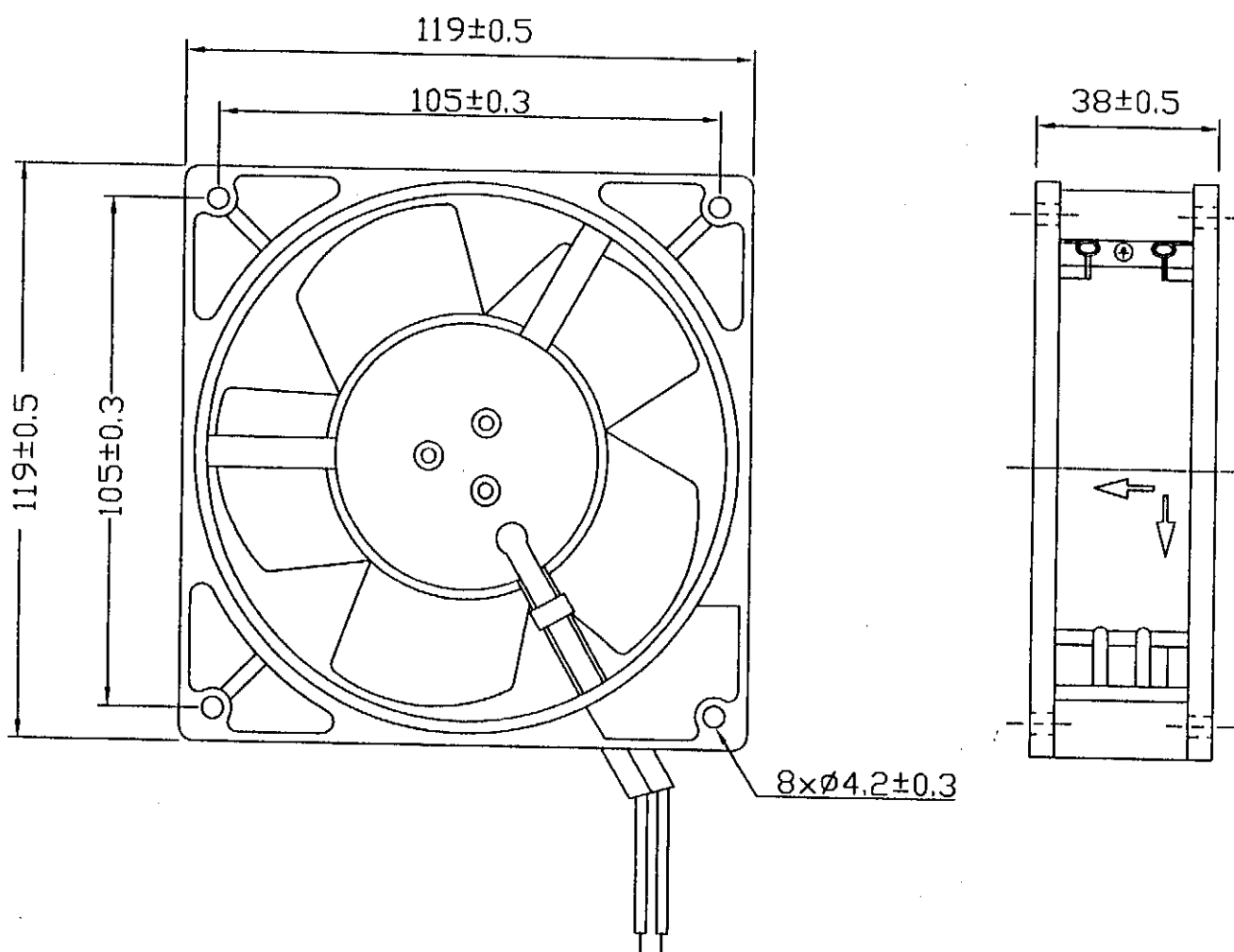
6-5. NOISE DISTRIBUTION CURVE SEE ATTACHED PAGE .

7、STATICS PRESSURE VS AIR FLOW CURVE：

MEASURED PER TWO CHAMBER METHOD .
DATA-CURVE SEE ATTACHED PAGE .

8、DIMENSIONS DRAWING：

UNIT:mm



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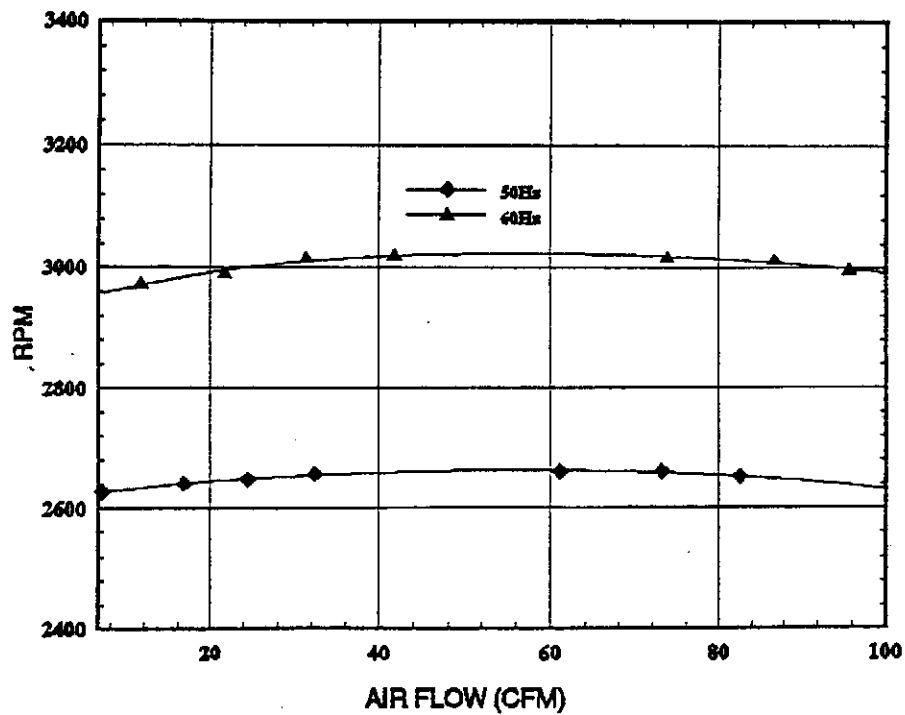
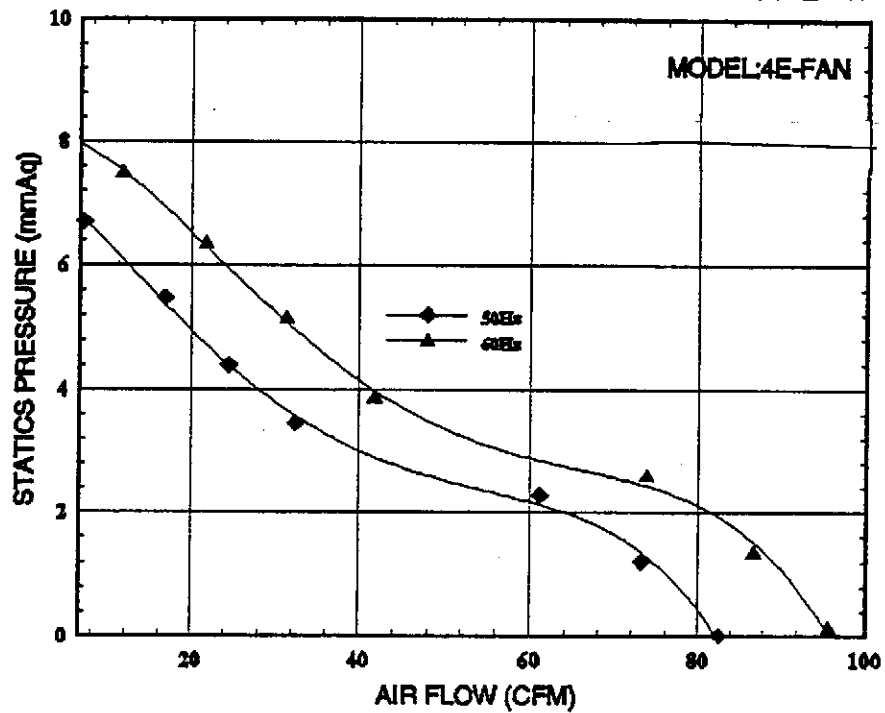
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A4E0011HB-B1

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BI-SONIC FAN PERFORMANCE CURVES

4E-115B-W



BI-SONIC FAN PERFORMANCE DATA SHEET

Customer: Fan Mode: 4E-115B-W Testing Method: Constant Voltage Testing Voltage: AC 115 V, 50/60Hz Barometric Pressure (cmHg): Dry Bulb Temperature (C):25.1 Relative Humidity (%) 60 File Name: 4E-115B-W	Test No: 4E-115B-W System Setup:outlet Chamber Testing Date: 06-26-2000 Barometric Density (kg/m3):1.14 Testing Engineer:Chen Jr Wei Remark:
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No	CFM	mmAq	inAq	A	RPM	Watt	
50Hz 1	82.48	0.013	0.005	0.21	2652	24	
2	73.07	1.209	0.047	0.21	2661	24	
3	61.03	2.283	0.089	0.21	2661	24	
4	32.33	3.467	0.136	0.21	2658	24	
5	24.45	4.401	0.173	0.21	2648	24	
6	16.66	5.487	0.216	0.21	2641	24	
7	7.02	6.695	0.263	0.21	2627	24	
No	CFM	mmAq	inAq	A	RPM	Watt	
60Hz 1	95.68	0.117	0.004	0.191	2996	22	
2	86.75	1.343	0.052	0.194	3012	22	
3	73.78	2.593	0.102	0.197	3016	22	
4	41.73	3.867	0.152	0.195	3019	22	
5	31.27	5.143	0.202	0.2	3016	22	
6	21.64	6.349	0.249	0.203	2988	22	
7	11.51	7.481	0.294	0.207	2972	22	

BI-SONIC TECHNOLOGY CORP NOISE TEST REPORT

測試機種: 4E-115B-W

測試目的: ☐ Evaluation 評估

工 令: _____

☐ IPQC

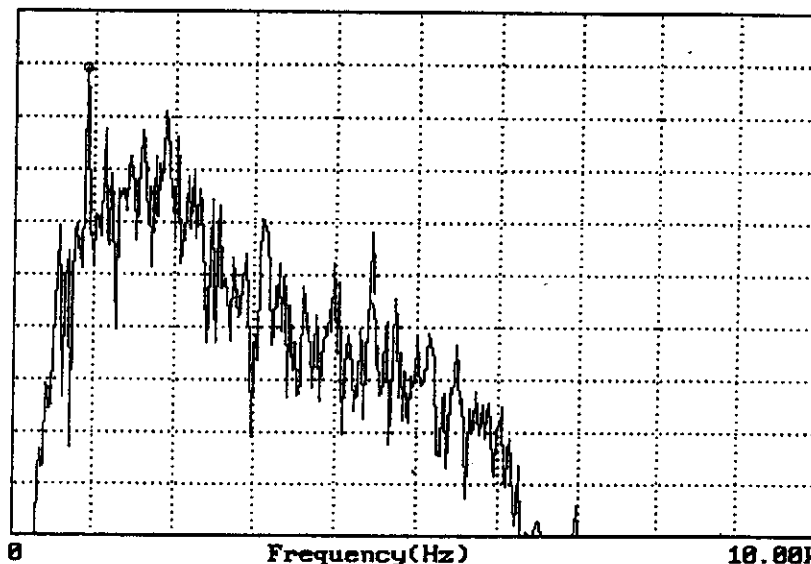
取 樣: _____ pcs

☐ QA

115V AC
50Hz

40.00

Spectrum
Power
(dBA)



0

Frequency(Hz)

10.00k

資料代碼:

測試頻率:

10KHz

測試感度:

8dB

觸發感度:

0/128

觸發位置:

100點

Y軸上限:

40.00

Y軸下限:

10.00

平均次數:

3次

OU.AL	_____	41.90222dB	MAXIM	899.99Hz	36.71082dB
LEFT	5.000kHz	21.38184dB	MINIM	0.0000Hz	-289.418dB

結果分析: _____

(1) Background Noise : 17dBA

(2) FFT Analyzer

(3) Sound Pressure Level Meter

No.RR01.04A

Reporter: _____

Date : 2000/06/14

BI-SONIC TECHNOLOGY CORP NOISE TEST REPORT

測試機種: 4E-115B-W

測試目的: ☐ Evaluation 評估

工 令: _____

☐ I.P.Q.C

取 樣: _____ pcs

☐ Q.A

115V AC
60Hz

資料代碼:

測試頻率:

10KHz

測試感度:

8dB

觸發感度:

8/128

觸發位置:

100點

Y軸上限:

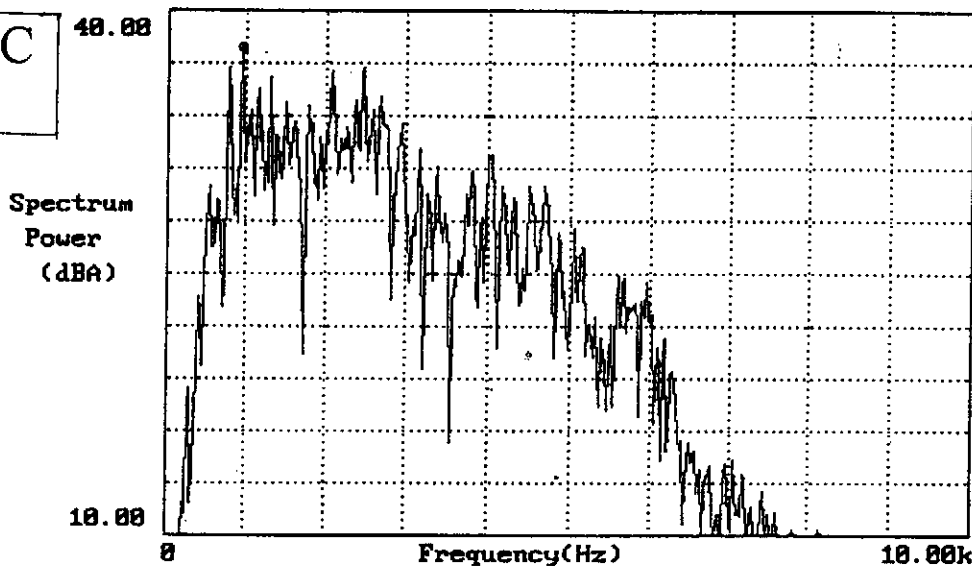
40.00

Y軸下限:

10.00

平均次數:

3次



OV. AL	——	45.91040dB	MAXIM	950.00Hz	37.88810dB
LEFT	5.000kHz	22.72766dB	MINIM	0.0000Hz	-289.418dB

結果分析: _____

(1) Background Noise : 17dBA

(2) FFT Analyzer

(3) Sound Pressure Level Meter

No. RR01.04A

Reporter: _____

Date : 2000/06/14