

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 ISSUE | 研發 R&D | 品保 QA | 版數 REVISION |
|-------------|-----------|----------|----------------|
| | | | |

客 戶 承 認

CUSTOMER APPROVAL

BI-SONIC TECHNOLOGY CO., LTD

HEADQUARTER: 2F, NO. 137, LANE 235, PAO CHAIO RD.,
HSIN-TIEN CITY, TAIPEI HSIEN, 231, TAIWAN , R.O.C.

TEL:(02)89192168 FAX:(02)89192169

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. |

**BI-SONIC TECHNOLOGY
CO., LTD.**

FILE NO :

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

**BI-SONIC TECHNOLOGY
CO., LTD**

FILE NO :

A4E0011HB-B1

REVISIONS :

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

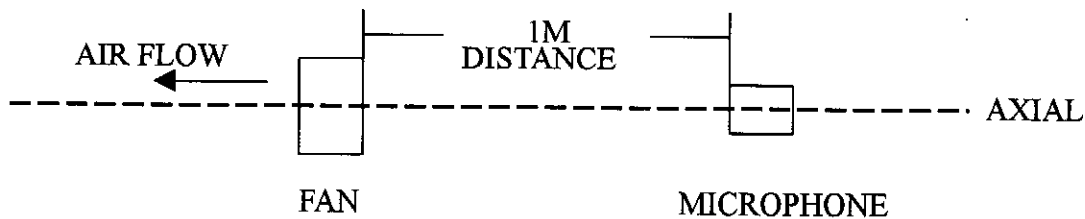
5 . PROTECTION :

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 .

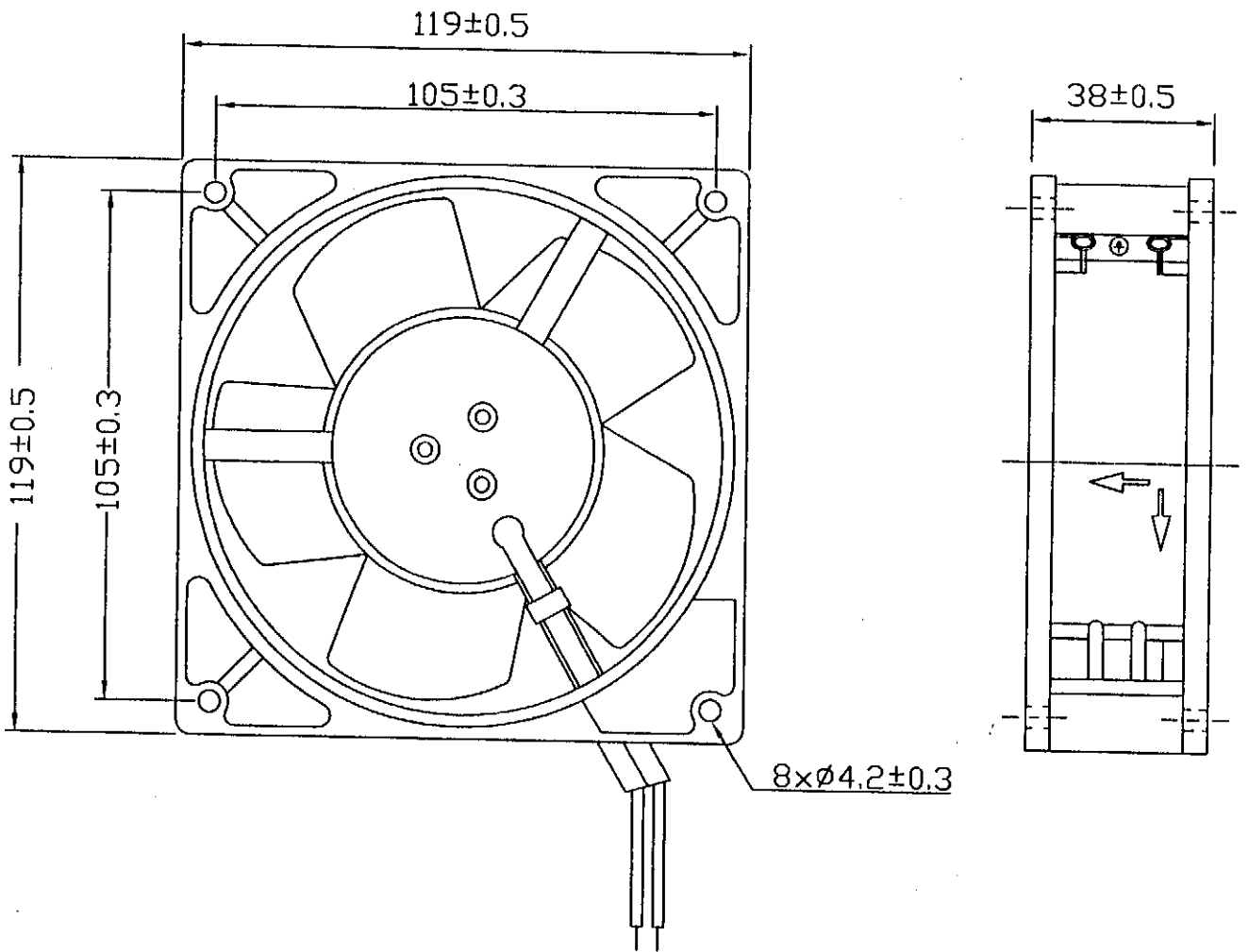
7 . STATICS PRESSURE VS AIR FLOW CURVE :

MEASURED PER TWO CHAMBER METHOD .

DATA-CURVE SEE ATTACHED PAGE .

8 · DIMENSIONS DRAWING :

UNIT:mm



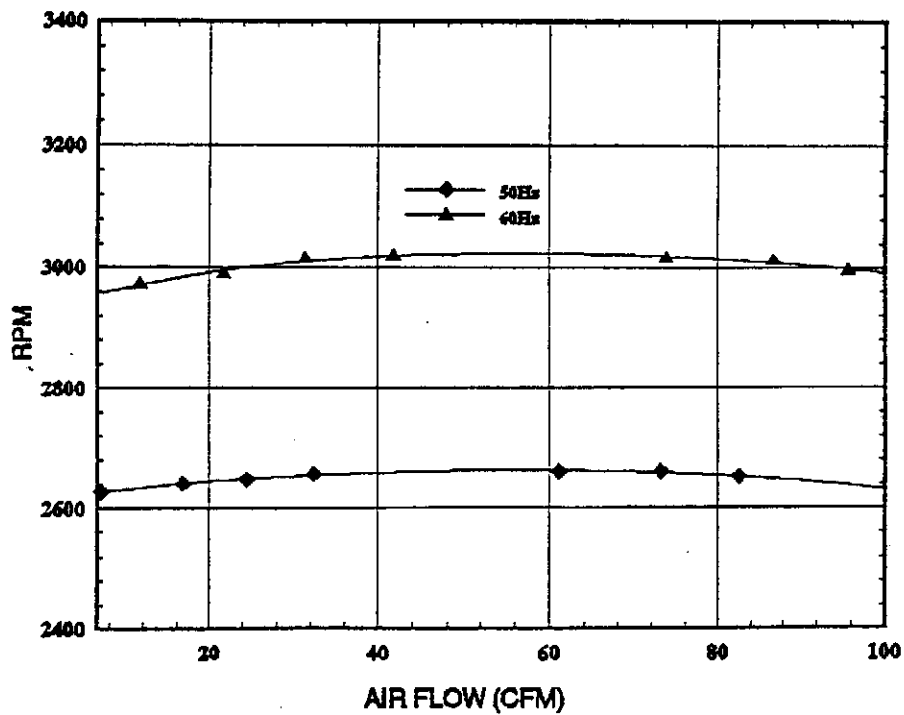
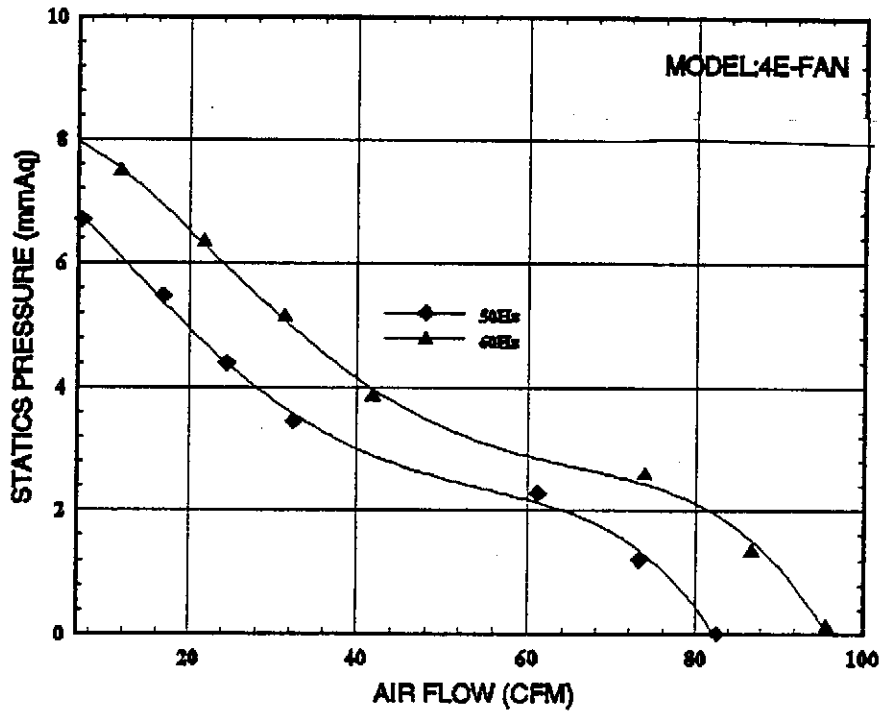
**BI-SONIC TECHNOLOGY
CO., LTD.**

FILE NO : A4E0011HB-B1

REVISIONS :

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: |
|---|---|

| 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
60Hz

資料代碼:

測試頻率:

10KHz

測試感度:

0dB

觸發感度:

0/128

觸發位置:

100點

Y軸上限:

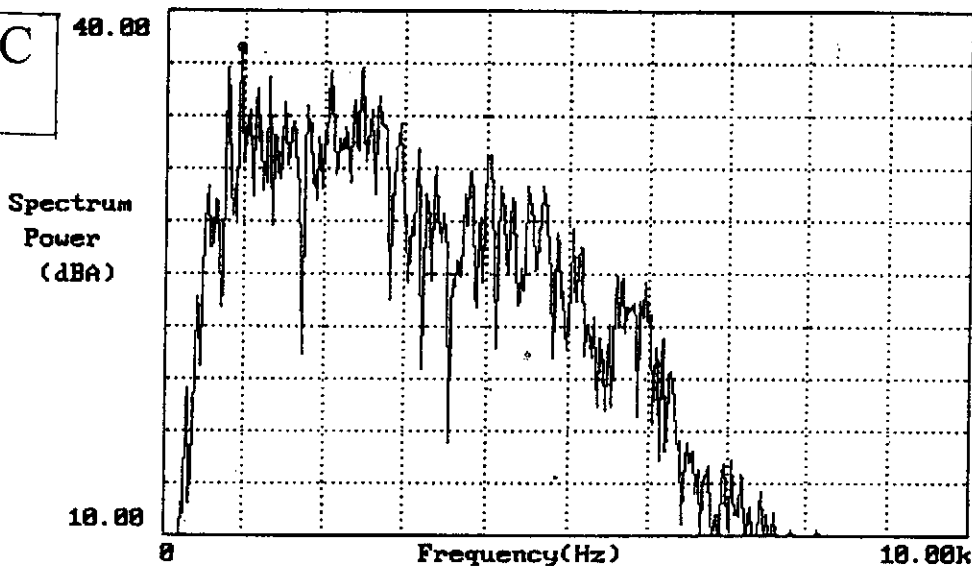
40.00

Y軸下限:

10.00

平均次數:

3次



| | | | | | |
|--------|----------|------------|-------|----------|------------|
| OU. AL | —— | 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