

SPECIFICATION FOR APPROVAL

客 戶

CUSTOMER:

客 戶 料 號

CUSTOMER PARTS NO.:

品 名

DC BRUSHLESS FAN

DESCRIPTION:

機種

MODEL NO.:

BP402005H

檔案序號

D402005HB-A0

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 : DC BRUSHLESS FAN

MODEL NO : BP402005H

1、SCOPE :

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS AXIAL FLOW FAN. THE FAN MOTOR IS WITH TWO PHASES AND FOUR POLES.

2、ELECTRICAL CHARACTERISTICS :

ALL MEASUREMENTS PERFORMED AT 20~30°C ROOM TEMPERATURE & 50~70%R.H.UNLESS OTHERWISE SPECIFIED.

ITEM	DESCRIPTION	UNIT	SYMBOL	SPEC.	CONDITION
1	RATED VOLTAGE	VOLTS	V	5	
2	OPERATION VOLTAGE	VOLTS	V	4.5~5.7	
3	INPUT CURRENT	AMP	A	0.25MAX	AT RATED VOLTAGE
4	INPUT POWER	WATTS	W	1.25MAX	AT RATED VOLTAGE
5	ROTATION SPEED	RPM	RPM	7000± 10%	AT RATED VOLTAGE FREE AIR
6	ACOUSTICAL NOISE (AVG)	dB(A)	dB(A)	31± 10%	DETAILS SEE ATTACHED PAGE.
7	MAX. AIR-FLOW	CFM	Q	7.77± 10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
8	MAX. AIR-PRESSURE	mmH ₂ O	P	3.8± 10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
9	STARTING VOLTAGE	VOLTS	V	4.5	AT RATED VOLTAGE
10	INSULATION RESISTANCE	MEG. OHM	MΩ	10MΩ MIN. AT 500V DC	BETWEEN FRAME AND (+) LEADWIRE
11	DIELECTRIC STRENGTH	MILLI-AMP	mA	5mA MAX. AT 500V AC 60Hz. FOR 1 MINUTE	BETWEEN FRAME AND (+) LEADWIRE

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ITEM	DESCRIPTION	SPEC.	
12	ROTATION	CW VIEW FROM NAME PLATE SIDE	
13	AIR-FLOW DIRECTION	AIR INTAKE OVER THE STRUTS	
14	INSULATION RANK	UL : CLASS A	
15	LIFE EXPECTANCY	50000 HOURS CONTINUOUS	☆

☆ 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 ----- PLASTIC PBT UL : 94V-0 RATING + FIBRE GLASS.
- 3-3. FAN BLADE----- PLASTIC PBT UL : 94V-0 RATING + FIBRE GLASS.
- 3-4. BEARING SYSTEM ----- BALL BEARING
- 3-5. WEIGHT----- 40 GRAMS
- 3-6. LEAD WIRE----- 1007 AWG # 26
 - + POSITIVERED
 - NEGATIVE.....YELLOW

4、ENVIRONMENTAL :

- 4-1. OPERATING TEMPERATURE----- -10 TO +70°C
- 4-2. STORAGE TEMPERATURE----- -40 TO +75°C
- 4-3. DROP TEST

IN MINIMUM PACKAGING CONDITION FAN WITHSTANDS EACH ONE DROP OF THREE FACES FROM 30CM DISTANCE HEIGHT ONTO 10mm THICKNESS OF WOODEN BOARD.
- 4-4. VIBRATION TEST

FREQUENCY : 10—55Hz AMPLITUDE : 4MM
X , Y , Z DIRECTION EACH FOR 1 HR.

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4-5. SHOCK TEST

APPLY PEAK ACCELERATION 50g AND KEEP DURATION OF THE PULSE FOR 11ms (HALF SINE WAVE) .

5 . PROTECTION :

5-1. POLARITY PROTECTION

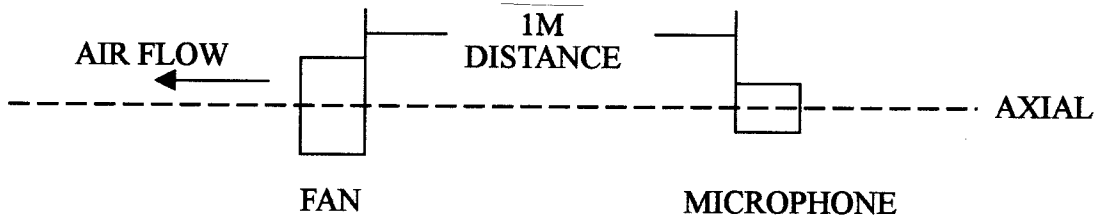
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSE LEADS .

5-2. LOCKED ROTOR 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 .

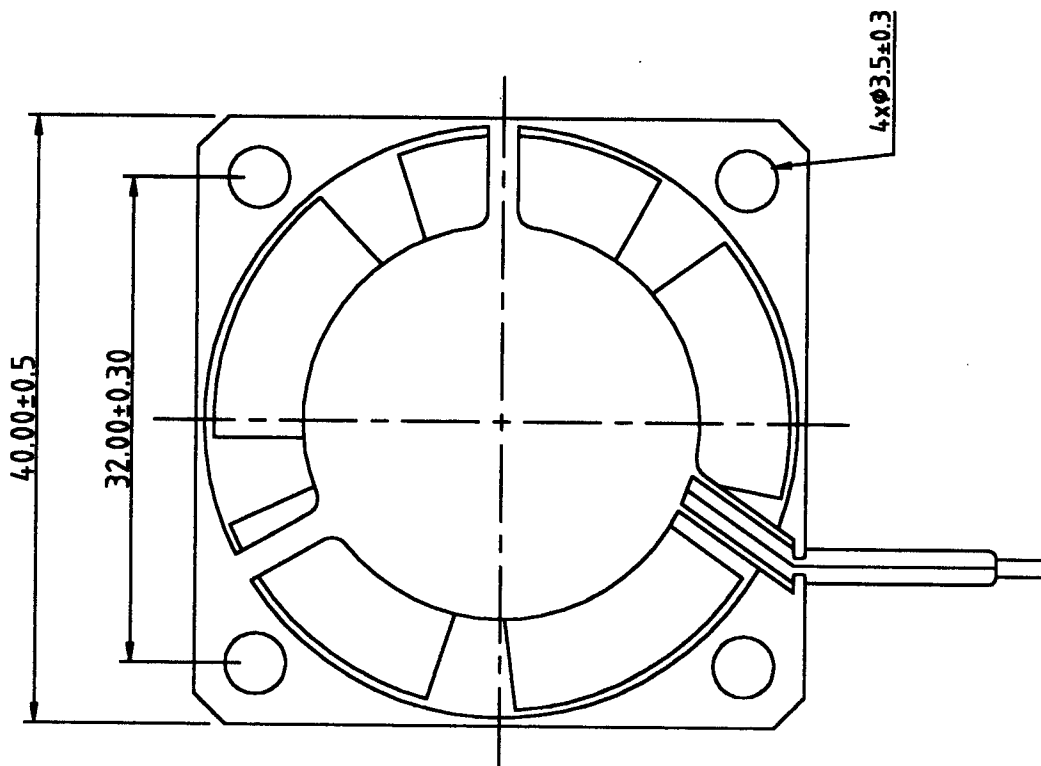
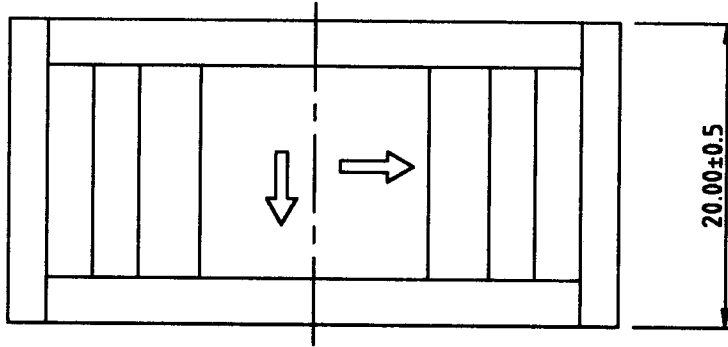
7 . STATICS PRESSURE VS AIR FLOW CURVE :

MEASURED PER TWO CHAMBER METHOD .

DATA-CURVE SEE ATTACHED PAGE .

8、DIMENSIONS DRAWING :

UNIT: mm



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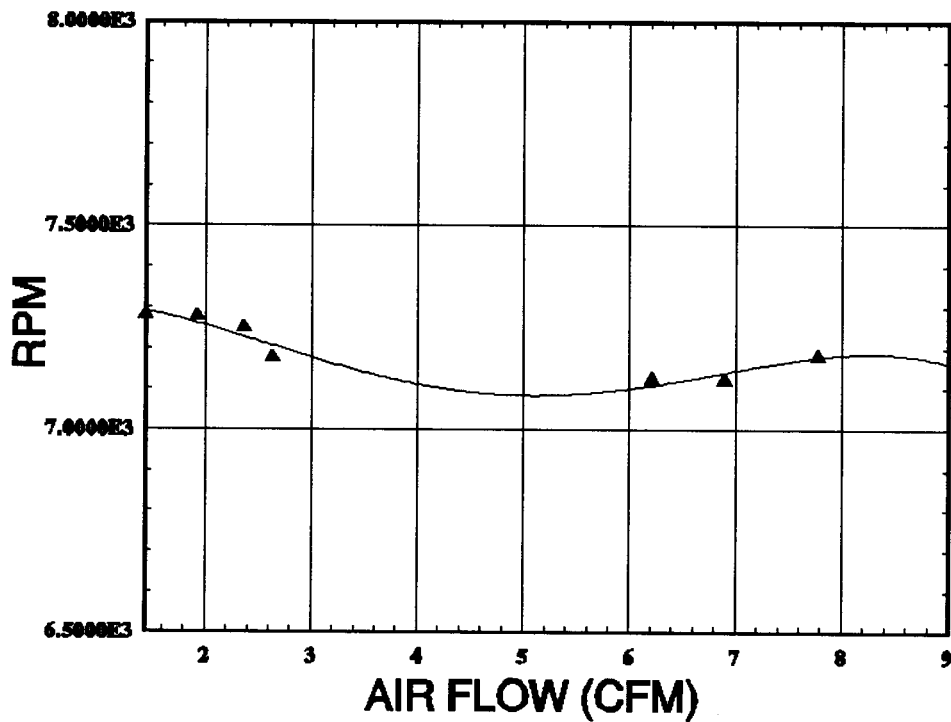
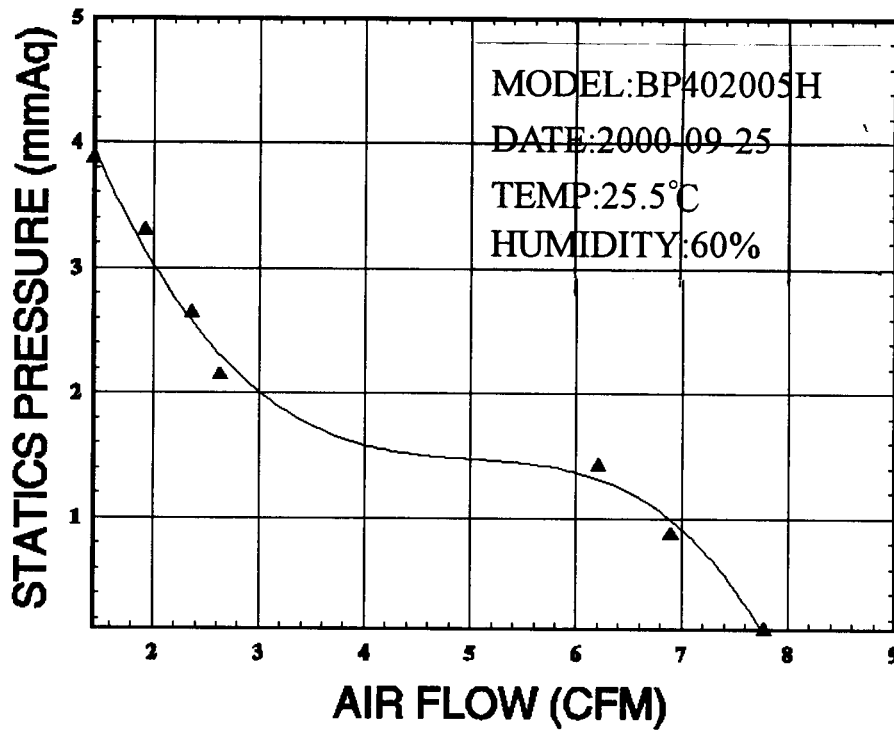
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BI-SONIC FAN PERFORMANCE CURVES



BI-SONIC FAN PERFORANCE DATA SHEET

Customer: Fan Model:4020-05H Testing Method: Constant Voltage Testing Voltage: DC 5 V, 0Hz Barometric Pressure (cmHg): Dry Bulb Temperature (C):25.5 Relative Humidity (%) 60 File Name:4020-05H	Test No:4020-05H System Setup:outlet Chamber Testing Date: 09-25-2000 Barometric Density (kg/m3):1.14 Testing Engineer:Chen Jr Wei Remark:
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No	CFM	mmAq	inAq	mA	RPM	Watt	
1	7.77	0.12	0.004	0.19	7181	0.95	
2	6.89	0.873	0.034	0.19	7121	0.95	
3	6.2	1.419	0.055	0.19	7123	0.95	
4	2.63	2.145	0.084	0.19	7175	0.95	
5	2.36	2.642	0.104	0.19	7248	0.95	
6	1.92	3.298	0.129	0.19	7276	0.95	
7	1.44	3.872	0.152	0.19	7280	0.95	

BI-SONIC TECHNOLOGY CORP NOISE TEST REPORT

測試機種: 4020-H

測試目的: Evaluation 評估

工 令: _____

IPQC

取 樣: _____ pcs

QA

資料代碼:

4020-H

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:

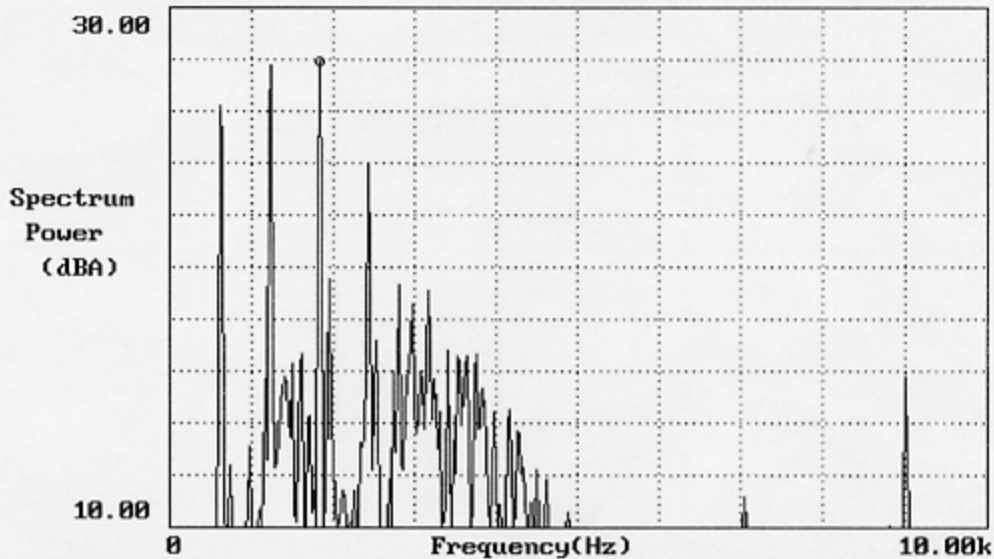
30.00

Y軸下限:

10.00

平均次數:

3次



OV. AL	———	30.72424dB	MAXIM	1.825kHz	27.88574dB
LEFT	5.000kHz	7.38037 dB	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 : 2000-09-25