SPECIFICATION FOR APPROVAL

客　　戶
CUSTOMER:

客　戶　料　號
CUSTOMER PARTS NO.:

品　　名
DESCRIPTION: DC BRUSHLESS FAN

機種
MODEL NO.: BP402024M-03

檔案序號
FILE NO.: D402024MB-A0

核示 ISSUE	研發 R&D	品保 QA	版數 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： BP402024M-03

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℃ ROOM TEMPERATURE &50-70% R.H. UNLESS OTHERWISE SPECIFIED. SPEED MEASURED AFTER CONTINUOUS 10 MINUTE OPERATION AT RATED VOLTAGE IN CLEAN AIR·

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ITEM	DESCRIPTION	UNIT	SYMBOL	SPEC.	CONDITION
1	RATED VOLTAGE	VOLTS	V	24	
2	OPERATION VOLTAGE	VOLTS	V	12~27.6	
3	INPUT CURRENT	AMP	A	0.13 MAX	AT RATED VOLTAGE
4	INPUT POWER	WATTS	W	3.12 MAX	AT RATED VOLTAGE
5	ROTATION SPEED	RPM	RPM	6000±10%	AT RATED VOLTAGE FREE AIR
6	ACOUSTICAL NOISE (AVG)	dB(A)	dB(A)	28.35 ±10%	DETAILS SEE ATTACHED PAGE.
7	MAX. AIR-FLOW	CFM	Q	7.19 ±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
8	MAX. AIR-PRESSURE	mmH_2O	P	3.40 ±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
9	STARTING VOLTAGE	VOLTS	V	12	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.

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	□
16	SAFETY APPROVAL	UL.CSA.CE.	

□ 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

\+ POSITIVE.....RED

— NEGATIVE.....BLACK

4、ENVIRONMENTAL：

4-1. OPERATING TEMPERATURE ---------- -10 TO +70℃

4-2. STORAGE TEMPERATURE ---------- -40 TO +75℃

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·

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

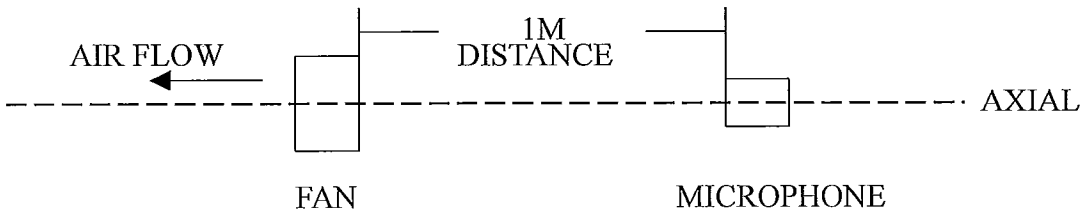
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSE LEADS·

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 SPECTRUN ANALYZER ·

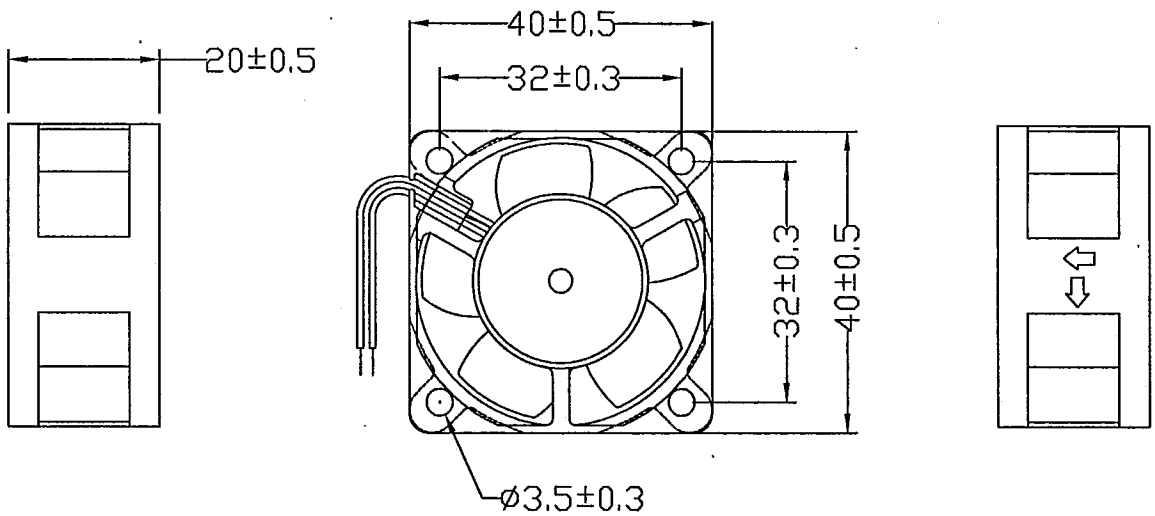
6-5. NOISE DISTRIBUTION CURVE SEE ATTACHED PAGE ·

7 、STATICS PRESSURE VS AIR FLOW CURVE ：

MEASURED PER TWO CHAMBER METHOD ·

DATA-CURVE SEE ATTACHED PAGE ·

8、DIMENSIONS DRAWING：　　UNIT:mm

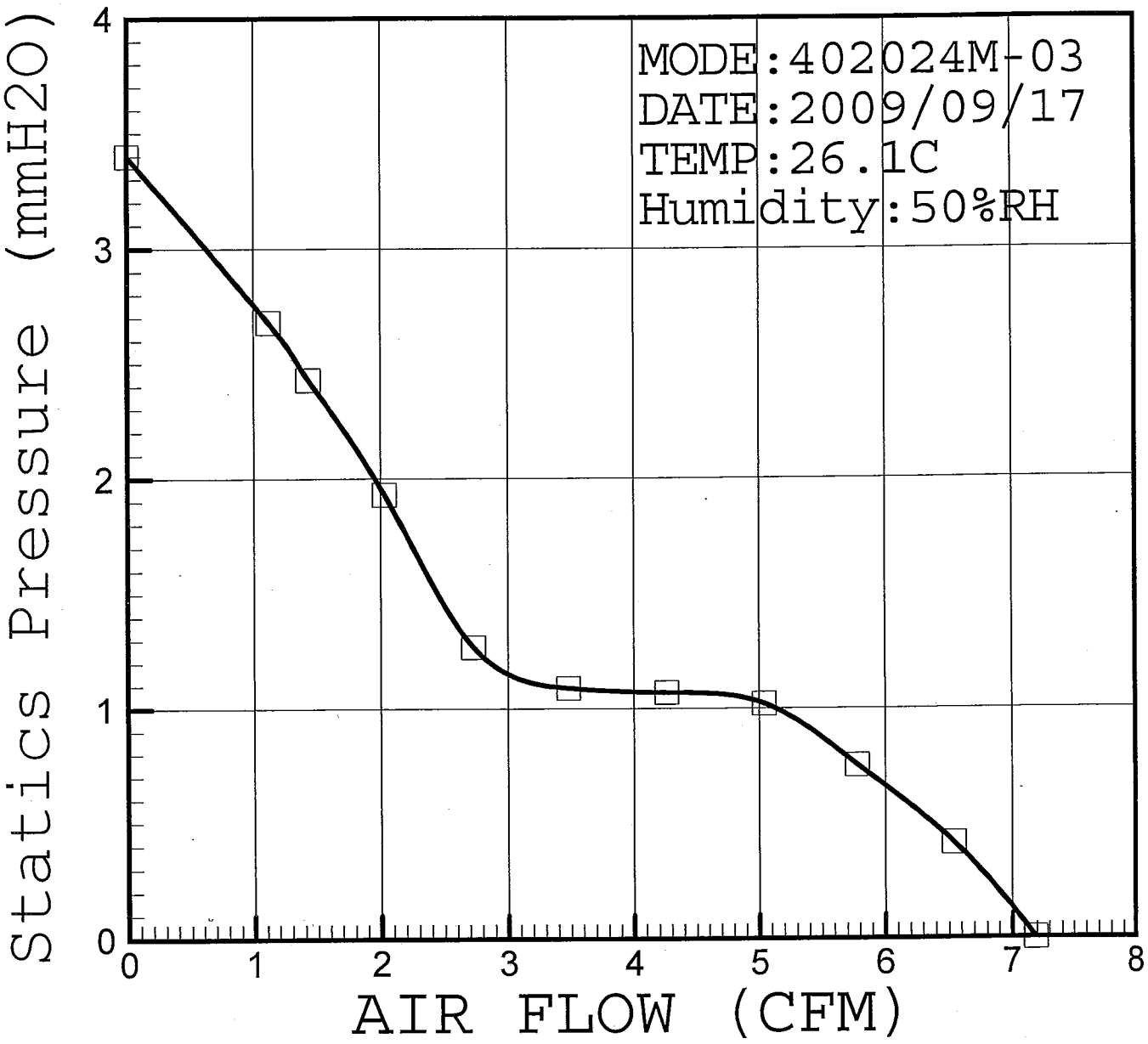


BI-SONIC TECHNOLOGY CO., LTD.	FILE NO：	D402024MA-A0	REVISIONS：	

BI-SONIC FAN PERFORMANCE DATA SHEET

Customer:
Test No:402024M-03
Fan Model:402024M-03
System Setup:outlet Chamber
Testing Method: Constant Voltage
Testing Date:2009/09/17
Testing Voltage:DC 24V, 0Hz
Barometric Density (kg/m3):1.14
Barometric Pressure (cmHg):
Testing Engineer:ling yan
Dry Bulb Temperature (C):24
Remark:VV
Relative Humidity (%)50
File Name:402024M-03

NO.	CFM	mmAq	inAq	A	RPM	Watt	
1	0.00	3.40	0.133926	0.059	6135	0.83	
2	1.12	2.68	0.1055652	0.060	6212	0.82	
3	1.43	2.43	0.0957177	0.060	6246	0.81	
4	2.03	1.93	0.0760227	0.059	6316	0.80	
5	2.73	1.27	0.0500253	0.059	6383	0.79	
6	3.48	1.09	0.0429351	0.059	6367	0.79	
7	4.26	1.07	0.0421473	0.059	6293	0.81	
8	5.04	1.02	0.0401778	0.060	6198	0.82	
9	5.78	0.75	0.0295425	0.061	6143	0.84	
10	6.54	0.41	0.0161499	0.061	6136	0.84	
11	7.19	0.00	0	0.061	6157	0.83	


MODE:402024M-03
DATE:2009/09/17
TEMP:26.1C
Humidity:50%RH
Statics Pressure (mmH2O)
AIR FLOW (CFM)
0
1
2
3
4
0
1
2
3
4
5
6
7
8

BI-SONIC TECHNOLOGY CORP NOISE TEST REPORT

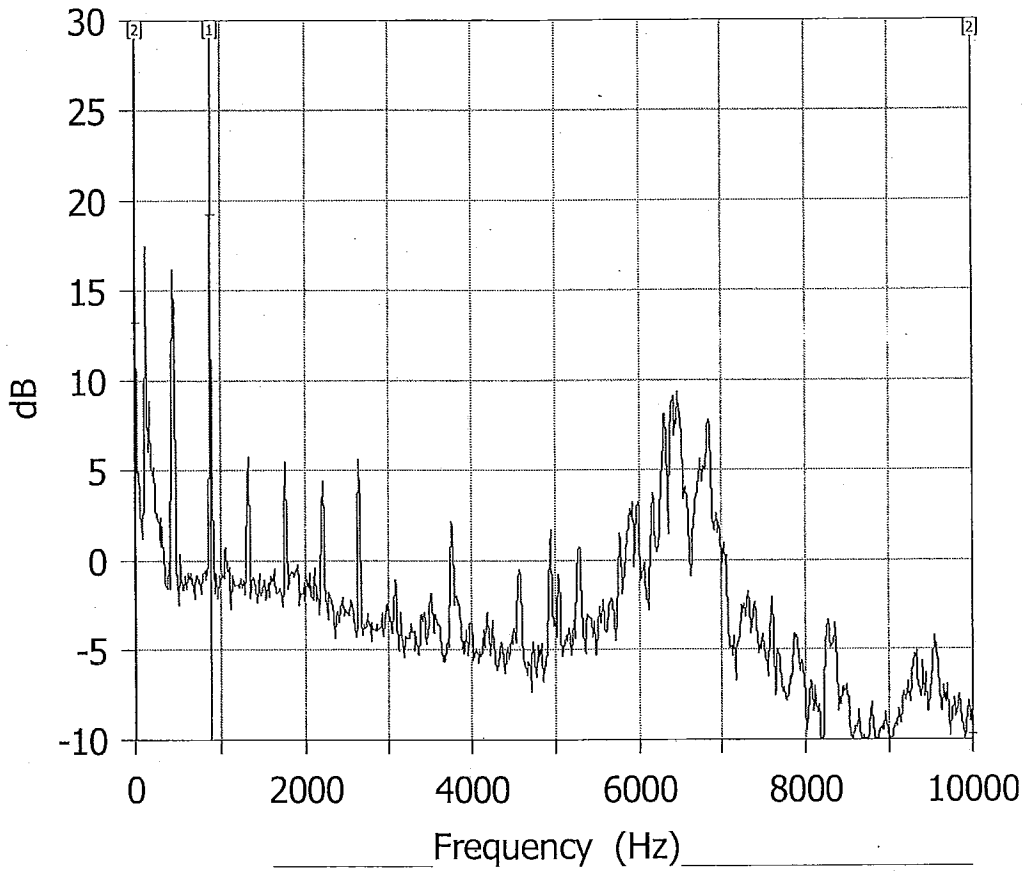
MODEL NO : 402024M-03 TEST PURPOSE : [V] Evaluation

SAMPLING : 1 PCS [ ] IPQC

[ ] QA

MODEL NO :

TEST FREQ
10KHz
TESE SENS
0dB
TRIG SENS
0/128
TRIG LOCA
100
Y AXIS UP
30.00
Y AXIS LW
-10.00
AVERAGE



1	Tr1	Position	X:875.0000	Y:19.27266		
2	Tr1	O.A.	X(1):0.000000	X(2):10000.00	O.A.:28.35096	Average:-1.404032

ANALYSIS : _____

(1)Background Noise : 17dBA
(2)FFT Analyzer
(3)Sound Pressure Level Meter
NO.402024M-03

Reporter :
Date : 2009/9/23