





SPECIFICATION FOR APPROVAL

TO : _____

REF. No. _____

APPROVED DATE 	CHECKED DATE  	PREPARED DATE 
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MODEL No. AD1224UB-A71GL P.S. (Q)

DESCRIPTION: DC FAN (RoHS) REV. A

ID No. IP55

THIS OFFER IS MADE ACCORDING TO YOUR CURRENT INQUIRY.
UNLESS OTHERWISE REVISED, THIS SPECIFICATION WILL BE FINAL FOR
ALL FUTURE PRODUCTION OF ORDERS FROM YOUR RESPECTED COMPANY

KINDLY STUDY IN DETAILS AND RETURN TO US THE DUPLICATE DULY
SIGNED AS YOUR CONFIRMATION OF SAME.



ADDA CORP.
REGISTERED TO ISO 9001
ISO/TS 16949
CERTIFICATE NO.A8035



ADDA CORPORATION

Customer :	Ref: (RoHS)
ADDA Model No. : AD1224UB-A71GL	P.S:(Q)
Samples attached :	piece(s)
Safety Approval : UL, CUL, TUV, CE	TUV:EN 60950-1:2001+A11 UL:UL507 CE:EN 61000-6-1:2007 EN 61000-6-3:2007

Specifications

ITEM	SPECIFICATION / CONDITION
DIMENSIONS	: 120x120x25 mm
BEARING TYPE	: BALL
RATED VOLTAGE	: 24.0 VDC
OPERATING VOLTAGE RANGE	: 21.6 VDC - 26.4 VDC
START-UP VOLTAGE	: 17.0 VDC, NORMAL
REAL CURRENT	: 0.190 Amp.
REAL POWER	: 4.560 Watt.
RATED CURRENT	: 0.250 Amp. + 10% MAX
RATED POWER	: 6.000 Watt.
RATED SPEED	: 2500 RPM ± 10% (IN FREE AIR AT RATED VOLTAGE)
AIR FLOW	: 98.965 CFM (min.: 89.068 CFM)
AIR FLOW	: 2.800 CMM (min.: 2.520 CMM) (IN FREE AIR AT RATED VOLTAGE)
STATIC AIR PRESSURE	: 0.174 Inch H2O (min.: 0.140 Inch H2O)
STATIC AIR PRESSURE	: 4.419 mm H2O (min.: 3.579 mm H2O) (IN FREE AIR AT RATED VOLTAGE)
NOISE LEVEL	: 43.3 dB(A) (max.: 47.3 dB(A))
MOTOR PROTECTION	: BY IC
POLARITY PROTECTION	: NO
CONNECTION LEAD TYPE	: WIRE , AWG#24
LIFE EXPECTANCY	: 70000 Hours at 40 °C / 65%
NET WEIGHT	: 156 Gram.
PACKING	: 60 pcs. per Export Carton



Unless otherwise stated, the relative humidity is 65%, and the temperature is 25°C for the standard testing.
Should you have any doubt, please refer to the environmental conditions specified in the acknowledgement document.

SPECIFICATION

1.0 SCOPE

This documentation defines the mechanical & electrical Characteristics of DC Brushless Fans.

2.0 MATERIAL

- 2.1 Housing : UL94V-0 Glass Filled polyester (P.B.T)
- 2.2 Fan Blade : UL94V-0 Glass Filled polyester (P.B.T)
- 2.3 Bearing Sys. : () Sleeve, oil impregnated.
(V) Two Ball Bearing
() One Ball one Sleeve
() Hypro Bearing
() FDB Bearing
- 2.4 RoHS : (V) YES
HF : () YES

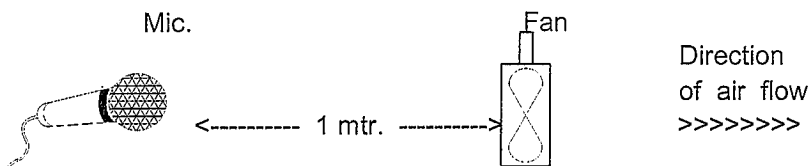
3.0 DIMENSIONS & CONSTRUCTION

All dimensions, Direction of rotation and air flow were specified as per drawing attached.

4.0 CHARACTERISTICS & DEFINITION

- 4.1 All rated characteristics were specified as per data sheet enclosed.
- 4.2 Rated Current : Rated Current shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.3 Rated Speed : Rated Speed shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.4 Start Voltage : The voltage which is able to start the fan to operate by suddenly switching 'ON'.
- 4.5 Input Power : Input Power shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.6 Locked Rotor Current : Locked current shall be measured within one minute of rotor locked, after 3 minutes of continuous rotation at rated voltage in clean air.
- 4.7 Air Flow & Static Pressure : The air flow data and static pressures should be determined in accordance with AMCA-210 standard or DIN24163 specification in a double chamber testing with intake - side measurement.
- 4.8 Noise Level : The measurement of noise level is carried out with reference to CNS8753 in an anechoic chamber with the microphone positioned 1 meter from the air intake. Testing fan shall be hung in clean air.

NOISE LEVEL MEASUREMENT



- 4.9 Protection Degree : IP 55 in accordance to IEC60529 standard
Dust Tight : The fan is protected from total touch protection and no harmful ingress of dust.
Protected Against Powerful Water Jets : The fan is protected from water jets, from any directions and no harmful ingress of water.



SPECIFICATION

5.0 MECHANICAL INSPECTION

5.1 Rotation Direction

Counterclockwise when look into impeller side.

5.2 Protection

All fans have integrated protection against locked rotor condition so that there will be no damage to winding or any electronic component.

Restarting is automatic as soon as any constraint to rotation has been released.

As fan placed at dead angle position, and the switch was changed from off to on. Restarting was automatic normal as soon as and proved that this fan is good fan.

5.3 Locked Rotor Protection

No damage shall be found after 72 hours continuously at condition of rotation locked.

Restarting is automatic as soon as constraint to running has been released.

5.4 Avoid the damage, check the correct voltage and proper polarity before connecting with power.

5.5 Free Drop Shock

In minimum package condition, the fan should withstand drops on any three faces from a height of 30cm onto a wood board of 10mm thick.

5.6 Please do not stick a grease and/or an oil to the fan housing or blade which may have a harmful influence by a chemical reaction at high humidity.

6.0 ELECTRICAL INSPECTION

6.1 Insulation Resistance

Not less than 10M ohm between housing and positive end of lead wire (red) at 500V DC.

6.2 Dielectric Strength

No damage should be found at 500 VAC for 60 seconds, measured with 1mA trip current between housing and positive end of lead wire.

6.3 Life Expectancy

The continous duty life at given temperature after which, 90% of testing units shall still be running.

7.0 ENVIRONMENTAL

7.1 Operating Temperature / Humidity

-10°C to +70 at humidity 100% RH.

7.2 Storage Temperature

All function shall be normal after 500 hours storage at -40°C to +70 °C with a 24 hour recovery period at room temperature.

7.3 Humidity

After 96 hours, 95% RH, 40+/-2°C per MIL-STD-202F, method 103B humidity test, the measured data on insulation resistance and dielectric strength shall meet the specificaiton.



SPECIFICATION

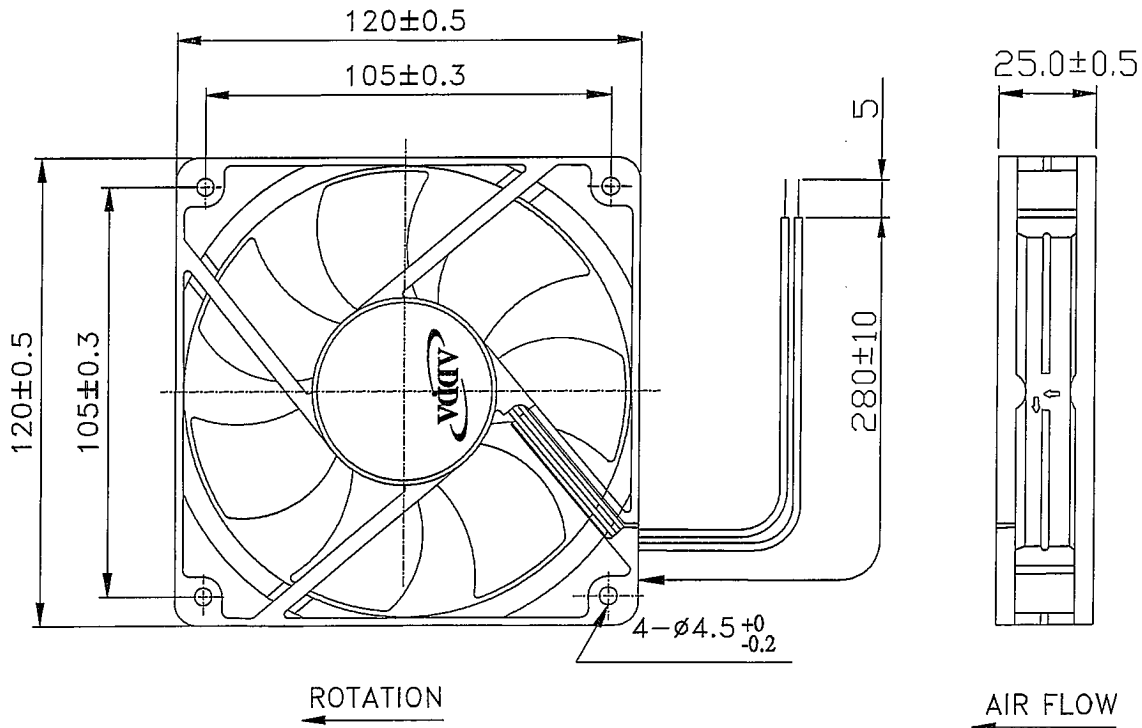
8.0 REMARKS

8.1 Material and construction are subject to change without advance notice. The changes should be within specification.

8.2 All fans shall meet the quality inspection under sampling plan MIL-STD-105E as follow:

Critical	0.25%
Major	1.00%
Minor	2.50%

9.0 OUTLINE STYLING & DIMENSIONS



LEAD WIRES : UL 1007, AWG24 , L = 280 +/- 10 mm
Red = positive ; Black = negative.

10.0 Notes:

- 10.1 Please do not touch and push Fan Blade with fingers or others, fan blade and ball bearings may be damaged and it causes noise defect.
- 10.2 Do not carry the fan by its lead wires
- 10.3 If the fan does not have the polarity protection function, the connection of the colored wires should be red + red, and black + black, or else the fan will be damaged in no time.
- 10.4 For the models without reverse connection of polarity protection, please do not connect the lead wire in reverse
- 10.5 Please don't install this fan in series with 2x voltage inputs. For example, if a single fan rated at 12V, then don't install two of them in series with 24V input.
- 10.6 Every specific fan is designed for its certain application (project). Therefore, if you want to use this fan in other application (project), please inform ADDA first so that we can confirm whether there is any issue which might be incurred from the reason of this different application (project) or not.



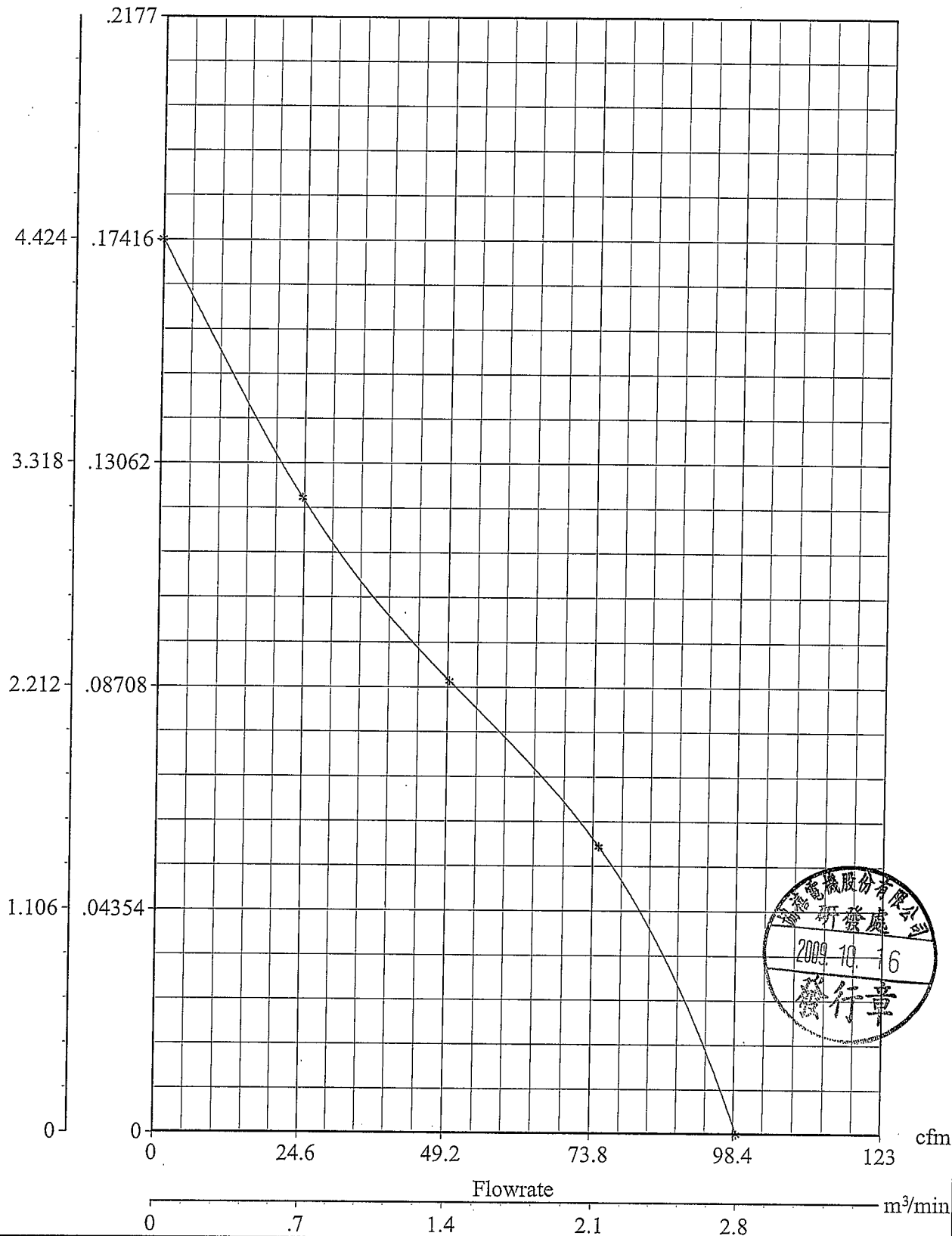


Adda Fan Performance Test Report

Static Pressure

mmH₂O inH₂O

Fan Model : AD1224UB-A71GL(Q)



Approver :

Examiner :

Tester :

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50068602

Blatt *Page*
0020

Ihr Zeichen *Client Reference*
12031916

Unser Zeichen *Our Reference*
ZTW2-MRC- 11005418 015

Ausstellungsdatum
09.05.2006

Date of Issue
(day/mo/yr)

Genehmigungsinhaber *License Holder*
Adda Corporation
6, East Section, Industry 6 Road
Pingtung City 900
Taiwan, R.O.C.

Fertigungsstätte *Manufacturing Plant*
Adda Corporation
6, East Section, Industry 6 Road
Pingtung City 900
Taiwan, R.O.C.

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
EN 60950-1:2001+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Ventilator (DC Fan)

Wie Blatt (As Page) 01

Ergänzung (Addition)

Bezeichnung : ADZ1Z2Z3Z4-Z5Z6Z7Z8

(Type Designation)

Z1 steht für (stands for) : 20, 02, 03, 35, 04, 45, 05, 50,
06, 07, 08, 09, 12 oder (or) 75

Z2 steht für (stands for) : 05, 12, 24 oder (or) 48

Z3 steht für (stands for) : U, H, M, L oder (or) D

Z4 steht für (stands for) : B, S oder (or) X

Z5 steht für (stands for) : A, C, D, F, J, K, Q, R, Y oder
(or) G

Z6 steht für (stands for) : 5, 7, 9, A, B oder (or) C

Z7 steht für (stands for) : 0, 1, 2, 3, 4, 6, 8, A oder
(or) B

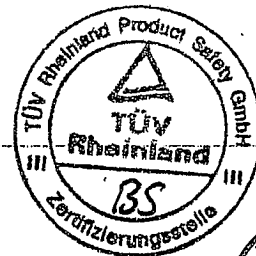
Z8 steht für (stands for) : freibleibend (blank) oder (or)
GL

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product
fulfills above-mentioned-requirements, the production is subject to surveillance.

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

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Zertifizierungsstelle 2009. 10. 16



Dipl.-Ing. B. Scheirer