

SPECIFICATION FOR APPROVAL

TO : _____

REF. No. _____

| | | |
|--|---|--|
| APPROVED DATE  | CHECKED DATE  | PREPARED DATE  |
|--|---|--|

MODEL No. AK2581HB P.S. (AT)

DESCRIPTION: AC FAN (RoHS) REV. C

ID No. _____

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. AB035

ADDA CORPORATION

BRUSHLESS AXIAL COOLING FANS

| | |
|-----------------------------------|---------------|
| Customer : | Ref: (RoHS) |
| Adda Model No : AK2581HB P.S:(AT) | |
| Samples attached : | Piece(s), |
| Safety Approval : | UL,CUL,TUV,CE |

Specifications

| <u>ITEM</u> | <u>SPECIFICATION / CONDITION</u> |
|-------------------------|---|
| MEASUREMENTS | : 254x89 mm |
| BEARING TYPE | : BALL |
| RATED | : 115 VAC +/- 10% |
| OPERATING VOLTAGE RANGE | : 110 — 120 VAC |
| OPERATING FREQUENCY | : 50 / 60 Hz |
| RATED /ACTUAL CURRENT | : 0.55 / 0.62 A / 0.60 / 0.58 A |
| INPUT /ACTUAL POWER | : 71.9 / 70.5 Watt / 68.5 / 67.1 Watt |
| RATED SPEED | : 2000 / 2100 RPM +/- 10 % |
| AIR FLOW | : 630.0 / 680.0 CFM (min at zero static pressure.) |
| STATIC AIR PRESSURE | : 0.275 / 0.346 INCH-H2O (min at zero air flow.) |
| NOISE LEVEL | : 62.0 / 66.0 dB (A) ±2 |
| NET WEIGHT | : 2000 Gram. |
| PACKING | : 6 pcs. Per Export Carton |



| | | |
|------------------|------------------------------|----------|
| ADDA CORPORATION | Model No.: AK2581HB P.S:(AT) | Page 1/5 |
|------------------|------------------------------|----------|

SPECIFICATION

1.0 Scope : This documentation defines the mechanical & electrical characteristics of AC brushless fans.

2.0 Material :

2.1 Housing High quality aluminum die-casting frame flated with black paint.

2.2 Fan blade UL 94V - 0 Glass filled polyester (P.B.T)

2.3 Bearing Sys Oil impregnated sleeve or
 Ball Bearing : Japan
 Hypro Bearing
 one Ball one Sleeve
 RoHS

2.4 RoHS wire UL 1015 , 20 AWG

2.5 Connector Not included in this fan
 Note as : _____

3.0 Dimension & construction : All dimension, direction of rotation and air flow, rated characteristics are specifide in drawing & data-sheet of enclosed.

4.0 Characteristics definition :

4.1 Rated current : Rated current shall be measured after 30 minutes continuous rotation at rated voltage.

4.2 Rated speed : Rated speed shall be measured after 30 minutes continuous rotation at rated voltage.

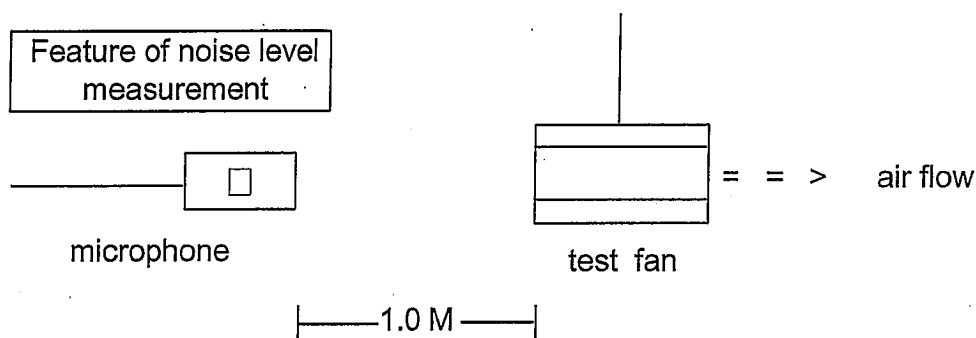
4.3 Start voltage : The voltages that enable to start the fan by sudden switch on.

4.4 Input power : Input power shall be measured after 30 minutes continuous rotation at rated voltage.



SPECIFICATION

- 4 · 5 Locked current : Locked current shall be measured with in one minutes or rotor locked , After 30 minutes continuous rotation at rated voltage in clean air.
- 4 · 6 Air flow & static pressure : The air flow data and static pressures are determined in accordance with AMCA standard or DIN 24163 specification in a double-chamber testing with intake-side measurement.
- 4 · 7 Noise level : The measurement of noise level is carried out with reference to CNS8753 in a anechoic chamber with the microphone positioned 1 M from the air intake. Testing fan shall be hung in clear air.



5 · 0 Mechanical inspection

- 5 · 1 Rotation direction : Clockwise from the front face of the fan. A clear " == > " (arrow mark) shall be found on the body of housing .
- 5 · 2 Safe design : All fans have intergrated protection against locked rotor condition so that there can be no damage on winding and / or any electrical components. Restart is automatic as soon as any constraint to running has been released.



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5 · 3 Locked rotor protection : No damage shall be found for continuous 72 hours at condition of rotation locked. Restart is automatic as soon as constraint to running has been released.

5 · 4 Free drop shock : In minute package condition. The fan should withstand each one drop of three faces from 30 cm distance height onto 10 mm thickness of wooden board

6 · 0 Electrical inspection

6 · 1 Insulation resistance : 100 MΩ or more at 500 V megger.

6 · 2 Dielectric strength : 1 minute at 1500 VAC / 50-60Hz

6 · 3 Basic Rated Life (L10)

| Bearing type | Temperature | Hours |
|----------------|-------------|-------|
| Sleeve bearing | 25°C | 31000 |
| | 50°C | 15000 |
| | 70°C | 10000 |
| Ball bearing | 25°C | 50000 |
| | 50°C | 30000 |
| | 70°C | 20000 |

7 · 0 Environmental

7 · 1 Operating Temperature : -10°C ~ +70°C

7 · 2 Humidity RH : 20 % ~ 85 % (Max)

7 · 3 Storage Temperature : Will satisfy performance standards after 500 hours storage at -40 °C ~ 70 °C (normal humidity) with a 24 - hour recovery period at room temperature.



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7 · 4 Humidity : After 96 hrs, 95 % RH, $40 \pm 2 \text{ }^\circ\text{C}$ per MIL - STD - 202F, method 103B, Humidity test, The measured data of insulation resistance & dielectric strength should meet the specification listed in attach.

7 · 5 Thermal Shock : After thermal shock test per MIL - STD - 202F, method 107G, condition D, The measured data of insulation resistance & dielectric strength should the specification listed in datasheet.

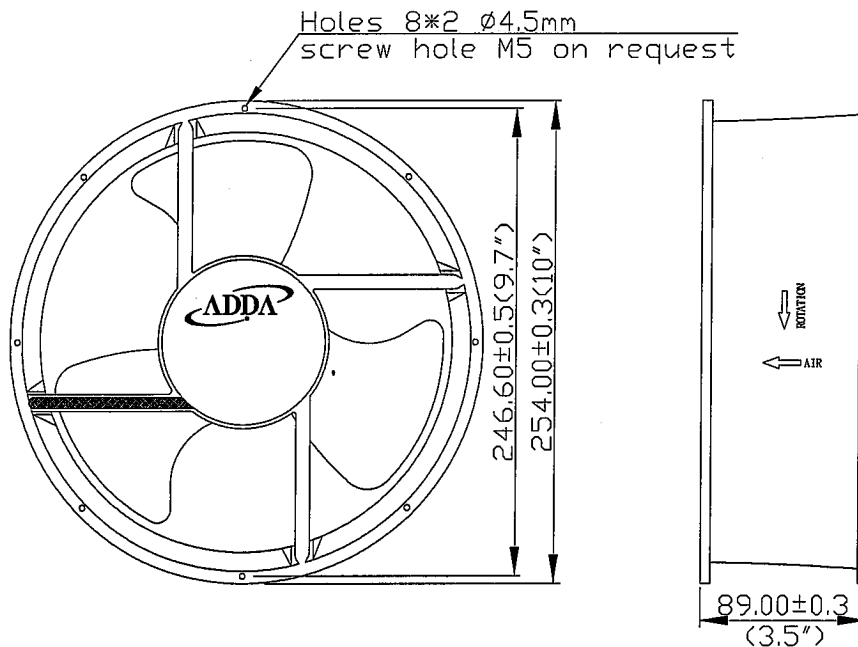
8 · 0 Remark

8 · 1 Material and construction are subject to change without advance notice. The changes should be within specification listed in this approved sheet.

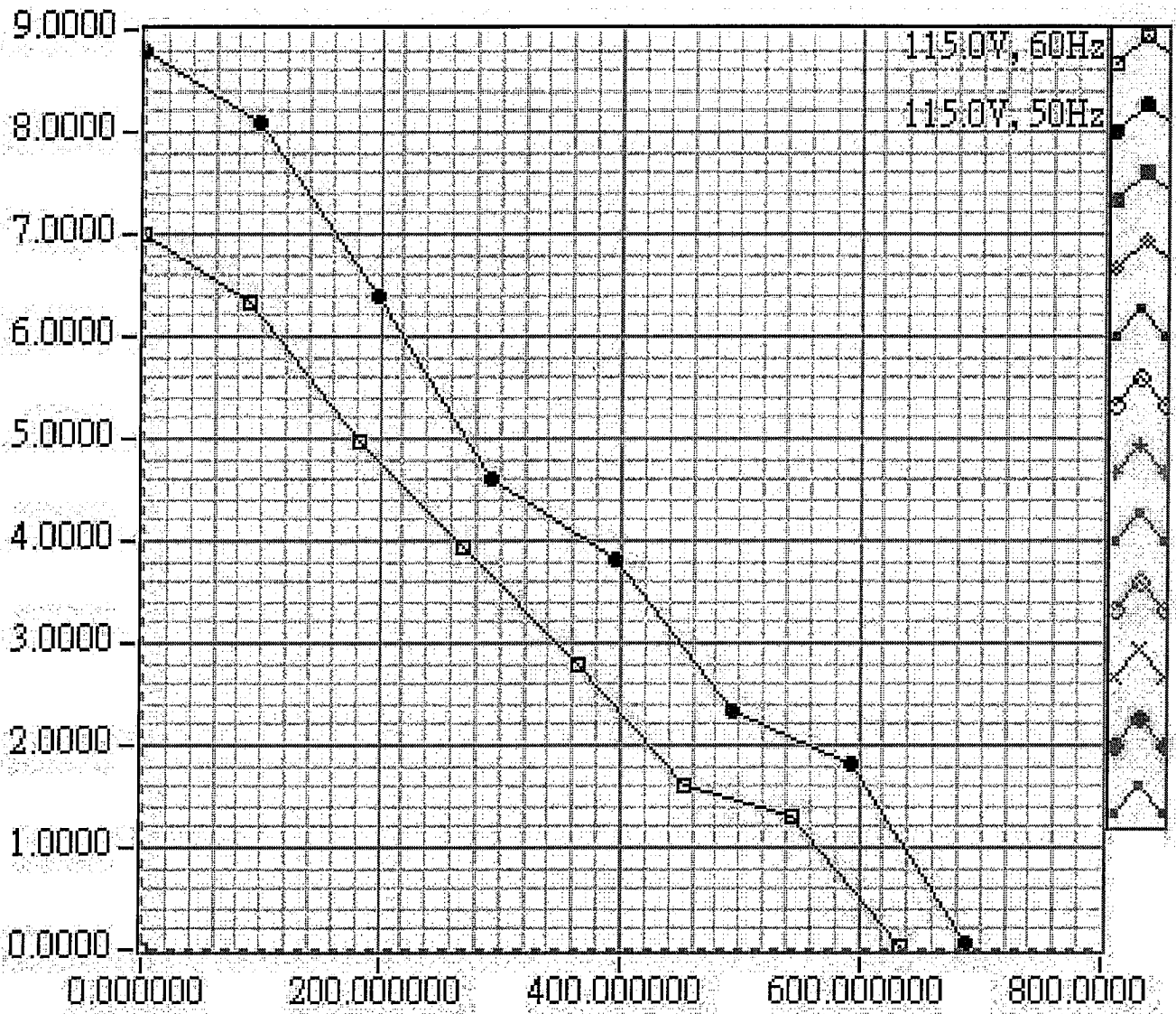
8 · 2 All the fans shall meet the inspection under sampling plan MIL - STD - 105E, The AQL are as follow :

| | |
|----------|--------------|
| Critical | AQL = 0.25 % |
| Major | AQL = 1.00 % |
| Minor | AQL = 2.50 % |

9 · 0 Drawing



AK2581HB(AT)



ML FILE NO. E132139

Issued: 2006-05-03

MULTIPLE RECOGNITION
of
FANS, ELECTRIC - COMPONENT
(GPWV2, GPWV8)
for

[349050-002] ADDA CORP

Basically Recognized for:

[420883-001] SHENG KWEI ENTERPRISE CO LTD (TPI)

Basically Recognized products covered by Procedure and/or Reports under File No. E202962, Volume 1

| Products Covered | Report Date | Basic Applicant's (Supplier's) Product Designation | Multiple Listee's Product Designations | |
|------------------|--------------|--|--|----------|
| AC Fans | 1999-09-07 | SK825AP-11-1 | AK8251HB | |
| | | SK825AP-22-1 | AK8252HB | |
| | | SK92AP-11-1 | AK9251HB | |
| | | SK92AP-22-1 | AK9252HB | |
| | | SK109AP-11-1 | AK1281HB | |
| | | SK109AP-22-1 | AK1282HB | |
| | | SK172AP-11-1 | AK1751HB | |
| | | SK172AP-22-1 | AK1752HB | |
| | | 2002-01-14 | SK825AP-11-2 | AK8251MB |
| | | | SK825AP-11-3 | AK8251LB |
| | | | SK838AP-11-1 | AK8381HB |
| | | | SK838AP-11-2 | AK8381MB |
| | | | SK838AP-11-3 | AK8381LB |
| | | | SK92AP-11-2 | AK9251MB |
| | SK92AP-11-3 | | AK9251LB | |
| | SK938AP-11-1 | | AK9381HB | |
| | SK938AP-11-2 | | AK9381MB | |
| | SK938AP-11-3 | | AK9381LB | |
| | SK125AP-11-1 | | AK1251HB | |
| | SK125AP-11-2 | | AK1251MB | |
| | SK125AP-11-3 | | AK1251LB | |
| | SK109AP-11-2 | AK1281MB | | |
| | SK109AP-11-3 | AK1281LB | | |



MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

Issued: 2006-05-03

M/L [349050-002] ADDA CORP
AP [420883-001] SHENG KWEI ENTERPRISE CO LTD (TPI)

| Products Covered | Report Date | Basic Applicant's (Supplier's) Product Designation | Multiple Listee's Product Designations |
|------------------|-------------|--|--|
| | 2002-01-15 | SK825AP-22-2 | AK8252MB |
| | | SK825AP-22-3 | AK8252LB |
| | | SK838AP-22-1 | AK8382HB |
| | | SK838AP-22-2 | AK8382MB |
| | | SK838AP-22-3 | AK8382LB |
| | | SK92AP-22-2 | AK9252MB |
| | | SK92AP-22-3 | AK9252LB |
| | | SK938AP-22-1 | AK9382HB |
| | | SK938AP-22-2 | AK9382MB |
| | | SK938AP-22-3 | AK9382LB |
| | | SK125AP-22-1 | AK1252HB |
| | | SK125AP-22-2 | AK1252MB |
| | | SK125AP-22-3 | AK1252LB |
| | | SK109AP-22-2 | AK1282MB |
| | | SK109AP-22-3 | AK1282LB |
| | 2002-01-16 | SK162AP-11-1 | AK1651HB |
| | | SK162AP-11-2 | AK1651MB |
| | | SK162AP-11-3 | AK1651LB |
| | | SK172AP-11-2 | AK1751MB |
| | | SK172AP-11-3 | AK1751LB |
| | | SK205AP-11-1 | AK2071HB |
| | | SK254AP-11-1 | AK2581HB |
| | | SK254AP-11-2 | AK2581MB |
| | 2002-01-17 | SK162AP-22-1 | AK1652HB |
| | | SK162AP-22-2 | AK1652MB |
| | | SK162AP-22-3 | AK1652LB |
| | | SK172AP-22-2 | AK1752MB |
| | | SK172AP-22-3 | AK1752LB |
| | | SK205AP-22-1 | AK2072HB |
| | | SK254AP-22-1 | AK2582HB |
| | | SK254AP-22-2 | AK2582MB |

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.



Issued: 2006-05-03

M/L [349050-002] ADDA CORP

AP [420883-001] SHENG KWEI ENTERPRISE CO LTD (TPI)

| Products Covered | Report Date | Basic Applicant's (Supplier's) Product Designation | Multiple Listee's Product Designations |
|------------------|-------------|--|--|
| | 2004-05-20 | SK176AP-11-1 SK176AP-22-1 SK180AP-11-1 SK180AP-22-1 | AK1781HB AK1782HB AK1861HB AK1862HB |

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.



Sheng Kwei Enterprise Co., Ltd.
Mr. Shun-Tung Tsao, President
-
No. 273, Hsing Nan Street
Tainan City 702
Taiwan

Date : 07.04.2006
Our ref. : IRC ZTW1
Your ref.: 12039117/EH

Ref : R TÜV-Mark Approval

Type of Equipment : (AC Fan)
Model Designation : See Certificate
Certificate No. : R 50081257 0001
Report No. : 10002060 004

Dear Mr. Shun-Tung Tsao,

Enclosed please find above certification documents.
Please forward these originals to the certificate holder.

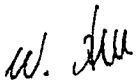
If you contact our office, please quote our reference above.

We thank you for your cooperation.

The certificate holder is: Adda Corporation

With kind regards,

Certification Body



Dipl.-Ing. W. Hsu

Enclosure

TÜV RHEINLAND TAIWAN LTD.

7F, No. 2, Min Chuan E. Rd., Sec.3,
Taipei 104, Taiwan, R.O.C.
Tel. (02) 2516-6040
Fax (02) 2504-5040
<http://www.twn.tuv.com>

TAICHUNG BRANCH:
10F, No. 219, Min Chuan Rd.,
Taichung 403, Taiwan, R.O.C.
Tel. (04) 2301-9898
Fax (04) 2301-9696

KAOSIUNG BRANCH:
33F-3, No. 80, Min Tzu 1st Rd.,
Kaohsiung 807, Taiwan, R.O.C.
Tel. (07) 380-1722
Fax (07) 380-1728

NANKANG BRANCH:
No. 99-23, Nan Kang Rd., Sec. 2,
Taipei 115, Taiwan, R.O.C.
Tel. (02) 2783-6650
Fax (02) 2783-7117



Adda Corporation
Mr. You-Wen Huang
R & D Department
6, East Section, Industry 6 Road
Pingtung City 900
Taiwan

Date : 07.04.2006
Our ref. : IRC ZTW1
Your ref.: 12039117/EH

Ref : R TÜV-Mark Approval

Type of Equipment : (AC Fan)
Model Designation : See Certificate
Certificate No. : R 50081257 0001
Report No. : 10002060 004

Dear Mr. You-Wen Huang,

The above specified technical equipment has been tested and found to be in accordance with the relevant requirements.

Enclosed you will find the certificate of approval.

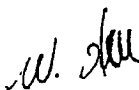
If cancellation of the certificate is submitted by November 15 in a given year, no fee will be charged for the following year.

We appreciate your kind support and would like to offer our assistance and continuous services in the future.

Please contact our office for approval of your new products.

With kind regards,

Certification Body


Dipl.-Ing. W. Hsu

CC: Sheng Kwei Enterprise Co., Ltd.

Enclosure

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7F, No. 2, Min Chuan E. Rd., Sec.3,
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Fax (04) 2301-9696

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33F-3, No. 80, Min Tzu 1st Rd.,
Kaohsiung 807, Taiwan, R.O.C.
Tel. (07) 380-1722
Fax (07) 380-1728

NANKANG BRANCH:
No. 99-23, Nan Kang Rd., Sec. 2,
Taipei 115, Taiwan, R.O.C.
Tel. (02) 2783-6650
Fax (02) 2783-7117



Zertifikat Nr. *Certificate No.*
 R 50081257

 Blatt *Page*
 0001

 Ihr Zeichen *Client Reference*
 12039117/EH

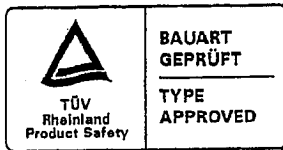
 Unser Zeichen *Our Reference*
 ZTW1-IRC- 10002060 004

 Ausstellungsdatum
 07.04.2006

 Date of Issue
 (day/mo/yr)

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

 Fertigungsstätte *Manufacturing Plant*
 ZTW1-BIO-10002060 001

 Prüfzeichen *Test Mark*

 Geprüft nach *Tested acc. to*
 EN 60335-1:2002+A1+A11
 EN 60335-2-80:2003+A1

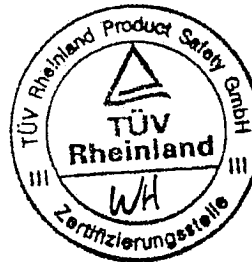
 Zertifiziertes Produkt (Geräteidentifikation)
 Certified Product (Product Identification)

 Lizenzentgelte - Einheit
 License Fee - Unit

Ventilator (AC Fan)

| | | |
|--------------------------------|---|---|
| Bezeichnung (Type Designation) | : AKxxxxyzB | 5 |
| xxx steht für (stands for) | : 125, 128, 165, 175, 178, 186, 207 258, 825, 838, 925 oder (or) 938 | 1 |
| y steht für (stands for) | : 1 oder (or) 2 | 1 |
| z steht für (stands for) | : H, M oder (or) L | 1 |
| Nennspannung (Rated Voltage) | : AC 100-120V, 50/60Hz (y=1) AC 200-240V, 50/60Hz (y=2) | |
| Nennstrom (Rated Current) | : siehe Anlage (see Appendix) | |

8



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

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Zertifizierungsstelle

Dipl.-Ing. W. Hsu



Appendix to TÜV Bauart approved Certificate No.: R 50081257

Kind of equipment : AC Fan
 Report number : 10016385 001
 Model Name : AKxxxzyB (xxx= 125, 128, 165, 175, 178, 186, 207, 258,
 825, 838, 925 or 938; y= 1 or 2; z= H, M or L)

| Model No. | Voltage (V) | Current (A) |
|-----------|-------------|-------------|
| AK8251HB | 100-120 | 0.17/0.15 |
| AK8251MB | 100-120 | 0.09/0.08 |
| AK8251LB | 100-120 | 0.07/0.06 |
| AK8252HB | 200-240 | 0.08/0.07 |
| AK8252MB | 200-240 | 0.06/0.05 |
| AK8252LB | 200-240 | 0.05/0.04 |
| AK8381HB | 100-120 | 0.12/0.10 |
| AK8381MB | 100-120 | 0.07/0.06 |
| AK8381LB | 100-120 | 0.05/0.04 |
| AK8382HB | 200-240 | 0.06/0.05 |
| AK8382MB | 200-240 | 0.05/0.04 |
| AK8382LB | 200-240 | 0.04/0.03 |
| AK9251HB | 100-120 | 0.18/0.16 |
| AK9251MB | 100-120 | 0.09/0.08 |
| AK9251LB | 100-120 | 0.07/0.06 |
| AK9252HB | 200-240 | 0.08/0.07 |
| AK9252MB | 200-240 | 0.06/0.05 |
| AK9252LB | 200-240 | 0.05/0.04 |
| AK9381HB | 100-120 | 0.12/0.11 |
| AK9381MB | 100-120 | 0.07/0.06 |
| AK9381LB | 100-120 | 0.05/0.04 |
| AK9382HB | 200-240 | 0.06/0.05 |
| AK9382MB | 200-240 | 0.05/0.04 |
| AK9382LB | 200-240 | 0.04/0.03 |
| AK1251HB | 100-120 | 0.25/0.20 |
| AK1251MB | 100-120 | 0.09/0.08 |
| AK1251LB | 100-120 | 0.06/0.05 |



Appendix to TÜV Bauart approved Certificate No.: R 50081257

Kind of equipment : AC Fan
 Report number : 10016385 001
 Model Name : AKxxxxyzB (xxx= 125, 128, 165, 175, 178, 186, 207, 258,
 825, 838, 925 or 938; y= 1 or 2; z= H, M or L)

| Model No. | Voltage (V) | Current (A) |
|-----------|-------------|-------------|
| AK1252HB | 200-240 | 0.09/0.07 |
| AK1252MB | 200-240 | 0.06/0.05 |
| AK1252LB | 200-240 | 0.05/0.04 |
| AK1281HB | 100-120 | 0.25/0.21 |
| AK1281MB | 100-120 | 0.14/0.13 |
| AK1281LB | 100-120 | 0.10/0.10 |
| AK1282HB | 200-240 | 0.12/0.10 |
| AK1282MB | 200-240 | 0.07/0.06 |
| AK1282LB | 200-240 | 0.06/0.05 |
| AK1651HB | 100-120 | 0.56/0.50 |
| AK1651MB | 100-120 | 0.28/0.27 |
| AK1651LB | 100-120 | 0.21/0.19 |
| AK1652HB | 200-240 | 0.30/0.25 |
| AK1652MB | 200-240 | 0.17/0.16 |
| AK1652LB | 200-240 | 0.13/0.12 |
| AK1751HB | 100-120 | 0.24/0.25 |
| AK1751MB | 100-120 | 0.17/0.21 |
| AK1751LB | 100-120 | 0.16/0.20 |
| AK1752HB | 200-240 | 0.12/0.16 |
| AK1752MB | 200-240 | 0.10/0.12 |
| AK1752LB | 200-240 | 0.09/0.16 |
| AK1781HB | 100-120 | 0.57/0.48 |
| AK1782HB | 200-240 | 0.21/0.23 |
| AK1861HB | 100-120 | 0.53/0.50 |
| AK1862HB | 200-240 | 0.23/0.24 |
| AK2071HB | 100-120 | 0.60/1.0 |
| AK2072HB | 200-240 | 0.30/0.49 |





Appendix to TÜV Bauart approved Certificate No.: R 50081257

Kind of equipment : AC Fan
 Report number : 10016385 001
 Model Name : AKxxxxyzB (xxx= 125, 128, 165, 175, 178, 186, 207, 258, 825, 838, 925 or 938; y= 1 or 2; z= H, M or L)

| Model No. | Voltage (V) | Current (A) |
|-----------|-------------|-------------|
| AK2581HB | 100-120 | 0.55/0.62 |
| AK2581MB | 100-120 | 0.22/0.24 |
| AK2582HB | 200-240 | 0.26/0.30 |
| AK2582MB | 200-240 | 0.16/0.14 |

Date: April 07, 2006

Certification Body

[Signature]
 Dipl.-Ing. Windah Hsu



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9