

File E132003
Project 07CA21174

June 05, 2007

REPORT

ON

COMPONENT - FANS, ELECTRIC

Delta Electronics Inc.
Taoyuan Hsien, Taiwan

Copyright © 2007 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report provided it is reproduced in its entirety.

Underwriters Laboratories Inc. authorizes the above-named company to reproduce the latest pages of that portion of this Report consisting of this Cover Page through Page 3.

DESCRIPTION

PRODUCT COVERED:

*USR, CNR Component - DC Fans, Models see "ELECTRICAL RATINGS" for details.

*USR indicates investigation to the Standard for Electric Fans, UL 507.

CNR indicates investigation to the Canadian Standard for Fans and Ventilators, CSA C22.2 No. 113.

ELECTRICAL RATINGS:

Model Nos.	Volts, DC	Current, A
ASB0412MA-6K12(Y)	18	0.09
ASB0405LA-A(Y)	5	0.01
ASB0405MA-A(Y)	5	0.12
ASB0405HA-A(Y)	5	0.16
ASB0405HHA-A(Y)	5	0.20
ASB0405VHA-A(Y)	5	0.24
AFB0405LA-A(Y)	5	0.08
AFB0405MA-A(Y)	5	0.10
AFB0405HA-A(Y)	5	0.12
AFB0405HHA-A(Y)	5	0.14
AFB0405VHA-A(Y)	5	0.16
ASB0412LA-A(Y)	12	0.06
ASB0412MA-A(Y)	12	0.08
ASB0412HA-A(Y)	12	0.10
ASB0412HHA-A(Y)	12	0.12
ASB0412VHA-A(Y)	12	0.16
AFB0412LA-A(Y)	12	0.06
AFB0412MA-A(Y)	12	0.07
AFB0412HA-A(Y)	12	0.08
AFB0412HHA-A(Y)	12	0.10
AFB0412VHA-A(Y)	12	0.12

Note: Above (Y) may be xxxxxx, where x may be A through Z, 0 through 9, "-" or blank.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

The fans described in this report are provided with a solid state control circuitry that incorporates a current limiting, current shutdown circuit for locked rotor conditions.

Conditions of Acceptability -

For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

The following items are limitations to be considered during the end-use investigation:

1. This investigation was established to cover a Class A insulating system for all fans described in this Report.
2. The suitability of these fans when operating under normal or abnormal conditions, within an appliance or enclosure, should be determined for each application.
3. The suitability of these fans for use when exposed to water, oil, freon, chemicals, X-rays, ultraviolet rays, and the like, has not been determined by this investigation.
4. The suitability of the leads should be determined for each application with regard to size, temperature limitations, and any other elements that might be required in the end-use product.
5. The thermoplastic enclosure of these fans has not been subjected to the Mold Stress Distortion and Ball Impact (5 ft-lbs) Tests as described in Standard UL 746C during this investigation.
6. The solid state control circuitry provided with the fans was subjected to a 7-Hour Abnormal Operation Locked Rotor Test. If coil temperatures exceeded Normal Temperature Test limits, the locked rotor test was continued for 18 days in accordance with UL 2111, Standard for Overheating Protection for Motors. Suitability of the motors locked rotor protection shall be determined in the end-product investigation.
7. These fans have not been evaluated for use with solid state speed control devices. Suitability for such usage should be evaluated in the end-use product.
8. The Temperature Test conducted on the fans described in this Report was done in an average ambient temperature of 25°C. The suitability of these fans when they are intended to operate in a higher ambient temperature should be evaluated during the end-use investigation.

9. The fans shall be mounted and enclosed in accordance with the frame and enclosure requirements of the end product. Suitable enclosures or guards shall be provided for the fan blades to reduce the risk of injury to persons. The fans may be provided with a finger guard. Suitability of the finger guard shall be determined in the end-use investigation.
10. The minimum flammability rating of the plastic used for the fan blades of the fans described in this Report is V-0.
11. The minimum flammability rating of the bobbin and other insulating material of the fans described in this Report is V-0.
12. The fans described in this Report have not been evaluated to the requirements for over-surface and through-air spacings described in Section 24 of the Standard for Electric Fans, UL 507 and Clause 9.3 of the Canadian Standard for Fans and Ventilators, CSA C22.2 No. 113-12. These spacings have been waived on the basis that these fans will be connected to an isolated secondary circuit rated maximum 30 V rms (42.2 V peak) or 60 V dc and are subjected to a 500 V dielectric strength test.
13. The minimum flammability rating of the printed wiring boards used in the fans described in this Report is V-0.
14. The fans described in this report may be mounted to an external heatsink, mounting bracket, chassis, shroud, or the like. The above mounted parts have not been evaluated with the fans. Suitability of the above parts should be evaluated in combination with the fan during the end-product investigation and described in the end-product report.
15. The suitability of the lead terminations and connectors should be determined during the end-product investigation.
16. The suitability of the adhesive-backed aluminum labels provided with the fans described in this Report has not been evaluated for permanence of marking and should be judged in the end-use application.
17. Wiring leads are tack soldered to the printed wiring board. Suitability of the lead securement and routing shall be evaluated in the end-product.