File E77551
Project 08CA48557

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REPORT

On

COMPONENT - FANS, ELECTRIC

Sunonwealth Electric Machine Industry Co., Ltd.
Kaohsiung, Taiwan

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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. 113-10.

ELECTRICAL RATINGS:

Model Nos.	Volts, DC	Amperes, A	Wattage, W
EEC0251B1(Y)	12	0.451	5.4
EEC0251B2(Y)	12	0.279	3.4
EEC0251B3(Y)	12	0.161	1.9
KD1212PTB3-6A E(Y)	12	0.160	1.9
MEC0251V1(Y)	12	0.451	5.4
MEC0251V2(Y)	12	0.279	3.4
MEC0251V3(Y)	12	0.161	1.9
EEC0252B1(Y)	24	0.207	5.0
EEC0252B2(Y)	24	0.146	3.5
EEC0252B3(Y)	24	0.084	2.0
MEC0252V1(Y)	24	0.207	5.0
MEC0252V2(Y)	24	0.146	3.5
MEC0252V3(Y)	24	0.084	2.0
EEC0254B1(Y)	48	0.119	5.7
EEC0254B2(Y)	48	0.079	3.8
EEC0254B3(Y)	48	0.054	2.6
EEC0254B3-D(Y)	**48**	**0.035**	**1.68**
MEC0254V1(Y)	48	0.119	5.7
MEC0254V2(Y)	48	0.079	3.8
MEC0254V3(Y)	48	0.054	2.6
EEC0381B1(Y)	12	0.833	10
EEC0381B2(Y)	12	0.421	5.1
EEC0381B3(Y)	12	0.241	2.9
MEC0381V1(Y)	12	0.833	10
MEC0381V2(Y)	12	0.421	5.1
MEC0381V3(Y)	12	0.241	2.9
EEC0382B1(Y)	24	0.383	9.2
EEC0382B2(Y)	24	0.224	5.4
EEC0382B3(Y)	24	0.13	3.1
MEC0382V1(Y)	24	0.383	9.2
MEC0382V2(Y)	24	0.224	5.4
MEC0382V3(Y)	24	0.13	3.1

Note: Above (Y) stands for 30 variables, each variable may be A through Z, 0 through 9, “-”, “(”, “)”, “.”, “/” or blank.

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ELECTRICAL RATINGS: (Cont'd)

Model Nos.	Volts, DC	Amperes, A	Wattage, W
EEC0384B1(Y)	48	0.203	9.7
EEC0384B2(Y)	48	0.12	5.8
EEC0384B3(Y)	48	0.069	3.3
MEC0384V1(Y)	48	0.203	9.7
MEC0384V2(Y)	48	0.12	5.8
MEC0384V3(Y)	48	0.069	3.3

Note: Above (Y) stands for 30 variables, each variable may be A through Z, 0 through 9, "-", "(", ")", ".", "/" or blank.

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TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S 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 Insulation 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, shall 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 shall 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 an Abnormal Operation Locked Rotor Test. If winding 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. The fans have not been evaluated for use with solid state speed control devices. Suitability for such usage shall 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 shall be evaluated during the end-use investigation.

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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 frame and impeller of the fans described in this Report is V-0.

11. The minimum flammability rating of the bobbin and other insulation material of the fans described in this Report is V-0 (at minimum 1.6 mm thick).

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. 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 shall 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 shall be determined during the end-product investigation.

16. Wiring leads are tack soldered to the printed wiring board. Suitability of the lead securement and routing shall be evaluated in the end-product.

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