

**ECE TYPE-APPROVAL CERTIFICATE**



Communication Concerning:    Approval granted  
    ~~Approval extended~~  
    ~~Approval refused~~  
    ~~Approval withdrawn~~  
    ~~Production definitively discontinued~~

Of a type of electrical/electronic sub-assembly with regard to Regulation No.10.

Approval No: **E24-10R-052237**

Extension No: *N/A*

Reason for extension: *N/A*

- |     |   |   |
|-----|---|---|
| 1.  | Make (trade name of manufacturer):  | <b><i>MaxxFan</i></b>   |
| 2.  | Type and general commercial description:<br><br>Variant(s):   | <b><i>00-04500KIT/00-06200KI40T<br/>MaxxFan Recreational Vehicle Fan<br/>See Information Document point 2.1</i></b>   |
| 3.  | Means of identification of type, if marked on the component:  | <b><i>Letters and digits</i></b>  |
| 3.1 | Location of that marking:   | <b><i>Adhesive label on the housing</i></b>   |
| 4.  | Category of vehicle:  | <b><i>All Categories of vehicle</i></b>   |
| 5.  | Name and address of manufacturer:   | <b><i>RV Products – A division of Airxcel, Inc<br/>3050N.ST. FRANCIS WICHITA.KS 67219</i></b>   |
| 6.  | In the case of components and separate technical units, location and method of affixing of the ECE approval mark: | <b><i>Adhesive label on the housing</i></b>   |
| 7.  | Address(es) of assembly plant(s):   | <b><i>Taizhou Puan Lighting Technology Co., Ltd.<br/>Building 1, 2, 4, 5, No.1111,<br/>East Section of Tiyuchang Road,<br/>Taizhou City, Zhejiang, P.R. China</i></b> |

Approval No: E24-10R-052237

Extension No: *N/A*

8. Additional information (where applicable): *See appendix*
9. Technical service responsible for carrying out the tests: *TÜV SÜD Auto Service GmbH  
Westendstraße 199  
D-80686 München*
10. Date of test report: *06.07.2017*
11. Number of test report: *17-00528-CX-SHA-00*
12. Remarks (if any): *See Appendix*
13. Place: *Dublin*
14. Date: *24<sup>th</sup> July, 2017.*
15. Signature: 



16. The index to the information package lodged with the approval authority, which may be obtained on request is attached.

## Appendix

To type-approval communication concerning the type approval of an electrical/electronic sub-assembly under Regulation No.10.

- |       |   |  |
|-------|---|--|
| 1.    | Additional information  |  |
| 1.1.  | Electrical system rated voltage:  | <i>12V, negative ground</i>  |
| 1.2.  | This ESA can be used on any vehicle type with the following restrictions:   | <i>See manufacturer's specifications.</i>  |
| 1.2.1 | Installation conditions, if any:  | <i>See manufacturer's specifications.</i>  |
| 1.3.  | This ESA can only be used on the following vehicle types:   | <i>N/A</i>   |
| 1.3.1 | Installation conditions, if any:  | <i>N/A</i>   |
| 1.4.  | The specific test method(s) used and the frequency ranges covered to determine immunity were:                       | <i>Bulk current injection method<br/>Frequency range: 20 -400 MHz<br/>Anechoic chamber<br/>Frequency range: 400 MHz – 2GHz</i> |
| 1.5.  | Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: | <i>TÜV SÜD Auto Service GmbH</i>   |
| 2.    | Remarks:  | <i>N/A</i>   |

Appendix to type-approval communication concerning the type approval of a vehicle under Regulation No.10.

- |     |   |            |
|-----|---|------------|
| 1.  | Additional information  |            |
| 2.  | Special devices for the purpose of Annex 4 to this Regulation:  | <i>N/A</i> |
| 3.  | Electrical system rated voltage:  | <i>N/A</i> |
| 4.  | Type of bodywork:   | <i>N/A</i> |
| 5.  | List of electronic systems installed in the tested vehicle(s) not limited to the items in the information document: | <i>N/A</i> |
| 5.1 | Vehicle equipped with 24 GHz short-range radar equipment (yes/no):  | <i>N/A</i> |
| 6.  | Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: | <i>N/A</i> |
| 7.  | Remarks:  | <i>N/A</i> |

## Index to the Information Package

|   |                                     |
|---|-------------------------------------|
| Date of issue:  | <i>24<sup>th</sup> July, 2017.</i>  |
| Date of latest amendment:   | <i>N/A</i>                          |
| Reason for extension/revision:                                      | <i>N/A</i>                          |
| 1. Additional conditions, and advisory notes on legal alternatives. |                                     |
| 2. Test report(s)   |                                     |
| - numbers(s):   | <i>17-00528-CX-SHA-00</i>           |
| - date of issue:  | <i>06.07.2017</i>                   |
| - date of latest amendment:   | <i>N/A</i>                          |
| 3. Information document   |                                     |
| - number(s):  | <i>00-04500KIT/00-06200KI40T-00</i> |
| - date of issue:  | <i>04.05.2017</i>                   |
| - date of latest amendment:   | <i>N/A</i>                          |
| Documentation:  | <i>27 pages</i>                     |

**Appendix: Additional conditions, and advisory notes on legal alternatives**

A: Additional conditions:

1. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
2. Each type from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
3. Changes in the type are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
4. At regular intervals, any tests or associated checks prescribed by the applicable legislation to verify continued conformity with the approved type shall be carried out. The manufacturer shall demonstrate compliance with this by submitting to NSAI evidence of adequate arrangements and documented control plans for each type approved.
5. Any set of samples or test pieces showing evidence of non-conformity shall give rise to further sampling and testing and all steps shall be taken to restore conformity of production.
6. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
7. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to NSAI.
8. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
9. When the manufacture or sale of the system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B: Legal Options:

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin.



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Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200KI40T

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## TECHNICAL REPORT

**No.: 17-00528-CX-SHA-00**

Test of a type of a component

according to the Regulation of the Economic Commission for Europe relating to

**Electromagnetic Compatibility**

**No.: UNECE R10**

Including all amendments up to

**Series 05, Supplement 00**

| Approval status  |                              |
|--|------------------------------|
| <input checked="" type="checkbox"/> Granting of a type approval    | <b>E24 10R-052237 Ext.00</b> |
| <input type="checkbox"/> Extension/correction to type approval no. |                              |

Test Report No.: 17-00528-CX-SHA-00

Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200KI40T

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## 1. General

- 1.1. Make : 
- 1.2. Type : 00-04500KIT/00-06200KI40T
- 1.3. Variant(s) (if applicable) : Variant 1: Manual  
00-05100KI40, 00-06200KI40, 00-05100KI, 00-05101KI, 00-06200KI, 00-06201KI, 00-04001KI, 00-04050KI, 00-04051KI, 00-04000KI, 00-06200KIT, 00-06200KI40T  
Variant 2: Remote Control  
00-07000KI40, 00-07500KI40, 00-07501KI, 00-07500KIT, 00-07500KI40T, 00-07000KI, 00-07001KI, 00-07500KI, 00-08000KI, 00-08001KI, 00-08500KI, 00-08501KI, 00-08700KI, 00-08900KI, 00-04500KI, 00-04501KI, 00-04540KI, 00-04541KI, 00-04700KI, 00-04800KI, 00-04801KI, 00-04900KI  
Note: (-) in model numbers designate a revision level, which may be “-“ or any alpha character which do not affect the product evaluation and or compliance.
- 1.4. Commercial description(s) : MaxxFan (RECREATIONAL VEHICLE FAN)
- 1.5. Category of vehicle : All categories of vehicle
- 1.6. Name and address of manufacturer : RV Products – A division of Airxcel, Inc  
3050N.ST. FRANCIS WICHITA.KS  
67219
- 1.7. Name and address of representative : SHANGHAI INSTRUMENTS &  
ELECTRONICS USA CORP.  
14243 CANYON VINE COVE, DRAPER,  
UT84020, USA

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Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200K140T

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1.8. Information document

No. : 00-04500KIT/00-06200K140T-00

Date of issue : 2017-05-04 (YYYY-MM-DD)

Last date of amendment : N/A

1.9. Technical description of the component : See manufacturer's information document

2. **Test record** : Refer to Annex 2

3. **Enclosure(s)**

Annex 1 List of modification

Annex 2 Test record

Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz

Annex 2b Conducted transients from ESAs to the vehicle power supply

Annex 2c Immunity of ESA to conducted transient interferences

Annex 2d Immunity of ESAs to electromagnetic radiation

Annex 3 Information document

4. **Statement of conformity**

The information folder as mentioned under No. 1.8. and the type described therein are in compliance with the test specification mentioned above. The worst-case was selected in accordance with document "Preparation of Test Reports".

The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

München, 2017-07-06

(YYYY-MM-DD)



Erin Zeng  
Test Laboratory / DIN EN ISO 17025



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| Approval authority                             | Country         | Registration-number          | Actual scope list   |
|--|-----------------|------------------------------|---|
| Kraftfahrt-Bundesamt (KBA)                     | Germany         | KBA-P 00100-10               | <a href="http://www.kba.de">http://www.kba.de</a>   |
| Vehicle Certification Agency (VCA)             | United Kingdom  | VCA-TS-006                   | <a href="http://ec.europa.eu/enterprise/sectors/automotive/approval-authorities-technical-services/technical-services/index_en.htm">http://ec.europa.eu/enterprise/sectors/automotive/approval-authorities-technical-services/technical-services/index_en.htm</a> |
| Approval Authority of the Netherlands (RDW)    | The Netherlands | RDWT-082-XX                  |   |
| National Standards Authority of Ireland (NSAI) | Ireland         | Technical Service Number: 49 |   |
| Vehicle Safety Certification Center (VSCC)     | Taiwan          | DE04-06-2                    | <a href="http://www.vsc.org.tw/English/Default.aspx">http://www.vsc.org.tw/English/Default.aspx</a>   |



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**Annex 1**

**List of modification**

Correction of : N/A

Modification of : N/A

Addition of : N/A

Deletion of : N/A

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Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200KI40T

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## Annex 2

## Test record

### 1. Technical data of the test component

Representative ESA : 00-04500KIT/00-06200KI40T

Tested variant (if any) : Variant 1: Manual (00-05100KI40, low power)  
Variant 2: Remote Control (00-04700KI, high power)

### 2. Test conditions

2.1. Instrument : In accordance to the standard above

2.2. Ambient condition : In accordance to the standard above

2.3. Carrying out of the test

2.3.1. Broadband electromagnetic interference generated by ESA

2.3.1.1. Method of measurement : Measured by the method described in annex 7 of ECE-Regulation No. 10. respectively annex VII of Directive 2009/19/EC.

2.3.1.2. Results : The measured values, expressed in dB $\mu$ V/m, are below the reference limits.

The test was passed.

2.3.2. Narrowband electromagnetic interference generated by ESA

2.3.2.1. Method of measurement : Measured by the method described in annex 8 of ECE-Regulation No. 10. respectively annex VII of Directive 2009/19/EC.

2.3.2.2. Results : The measured values, expressed in dB $\mu$ V/m, are below the reference limits. The test was passed.

2.3.3. Immunity of ESA to electromagnetic radiation

2.3.3.1 Method of measurement Measured by bulk current injection (20 MHz - 400 MHz) and in the anechoic chamber (400 MHz – 2 GHz) as described in annex 9 of ECE-Regulation No. 10 respectively annex IX of Directive 2009/19/EC



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2.3.3.2. Performance criteria : No degradation of function by testing with 60 mA (bulk current injection) and 30 V/m (anechoic chamber).

2.3.3.3. Results : The ESA has not exhibited any malfunction. The claimed functional state was fulfilled during the test. The test was passed

2.3.4. Immunity of ESA to conducted transient interferences

2.3.4.1. Method of measurement : Measured as described in annex 10 of ECE-Regulation No. 10. respectively annex X of Directive 2009/19/EC.

2.3.4.2. Results : The ESA has not exhibited any unacceptable malfunction. The claimed functional state was fulfilled during the test. The test was passed.

2.3.5. Conducted transient interferences generated by ESA

2.3.5.1. Method of measurement : Measured as described in annex 10 of ECE-Regulation No. 10. respectively annex X of Directive 2009/19/EC.

2.3.5.2. Results : The measured values are below the reference limits. The test was passed.

### 3. Test result

The results of the tests are attached in the diagrams of the enclosure.

### 4. Place and date of test

Place : Shanghai Inspection and Testing Institute of Instruments and Automatic Systems

Date : 2017-05-16 (YYYY-MM-DD) - 2017-05-18 (YYYY-MM-DD)

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Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200KI40T

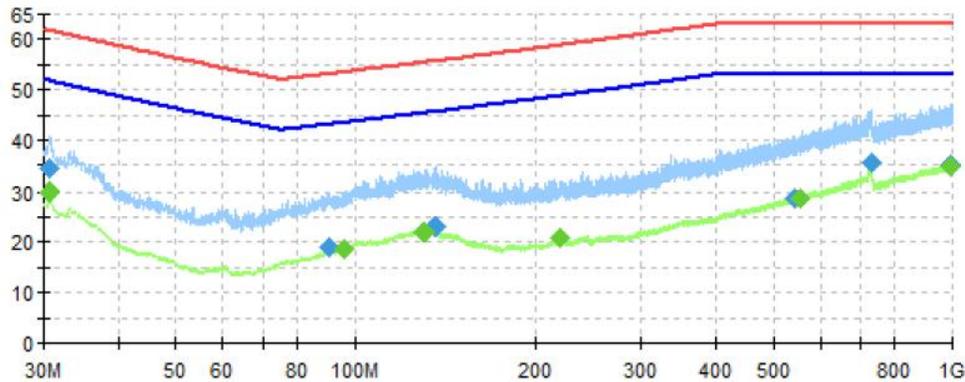
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**Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz**

Tested Model: Variant 1: Manual (00-05100KI40, low power) Test Voltage: 13.5V

Test Mode: On Test Result: Pass

**Horizontal Polarity Test Result Diagram (Broadband and Narrow band)**



**Maximum broadband QP value:**

| Frequency (MHz) | QuasiPeak (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|------------------|-------------|--------------|-------------|--------------|
| 30.720000       | 34.5             | 100.0       | H            | 27.20       | 61.70        |
| 90.120000       | 19.1             | 100.0       | H            | 34.00       | 53.10        |
| 135.900000      | 23.1             | 100.0       | H            | 32.50       | 55.70        |
| 543.360000      | 28.8             | 100.0       | H            | 34.20       | 63.00        |
| 729.480000      | 35.6             | 100.0       | H            | 27.40       | 63.00        |
| 991.620000      | 35.0             | 100.0       | H            | 28.00       | 63.00        |

**Maximum narrowband AV value:**

| Frequency (MHz) | Average (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|----------------|-------------|--------------|-------------|--------------|
| 30.720000       | 30.0           | 100.0       | H            | 21.70       | 51.70        |
| 95.880000       | 18.6           | 100.0       | H            | 24.90       | 43.50        |
| 129.900000      | 22.2           | 100.0       | H            | 23.20       | 45.30        |
| 219.780000      | 20.9           | 100.0       | H            | 27.80       | 48.80        |
| 556.980000      | 28.9           | 100.0       | H            | 24.10       | 53.00        |
| 995.280000      | 34.7           | 100.0       | H            | 18.30       | 53.00        |

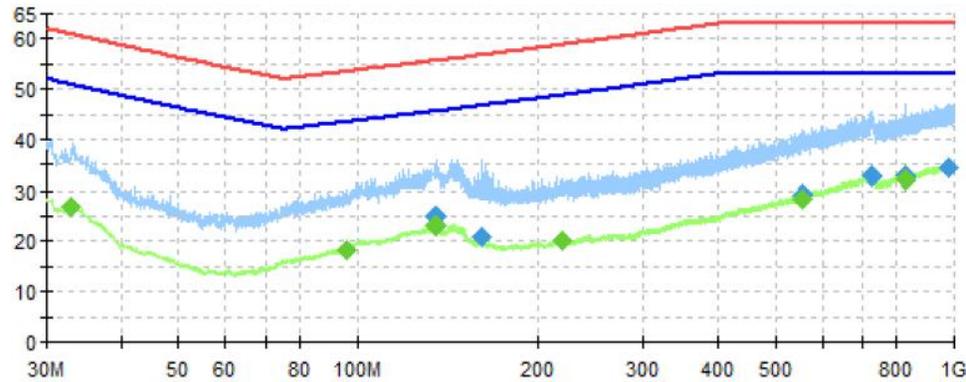
Test Report No.: 17-00528-CX-SHA-00

Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200K140T

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**Vertical Polarity Test Result Diagram (Broadband and Narrow band)**



**Maximum broadband QP value:**

| Frequency (MHz) | QuasiPeak (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|------------------|-------------|--------------|-------------|--------------|
| 134.760000      | 25.1             | 100.0       | V            | 30.50       | 55.60        |
| 160.860000      | 20.8             | 100.0       | V            | 35.90       | 56.80        |
| 555.360000      | 29.1             | 100.0       | V            | 33.90       | 63.00        |
| 724.860000      | 32.8             | 100.0       | V            | 30.20       | 63.00        |
| 826.680000      | 32.7             | 100.0       | V            | 30.30       | 63.00        |
| 980.040000      | 34.5             | 100.0       | V            | 28.50       | 63.00        |

**Maximum narrowband AV value:**

| Frequency (MHz) | Average (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|----------------|-------------|--------------|-------------|--------------|
| 33.000000       | 26.9           | 100.0       | V            | 23.90       | 50.90        |
| 95.760000       | 18.4           | 100.0       | V            | 25.00       | 43.50        |
| 135.000000      | 23.0           | 100.0       | V            | 22.60       | 45.60        |
| 219.180000      | 20.1           | 100.0       | V            | 28.70       | 48.70        |
| 556.140000      | 28.4           | 100.0       | V            | 24.60       | 53.00        |
| 825.600000      | 32.1           | 100.0       | V            | 20.90       | 53.00        |

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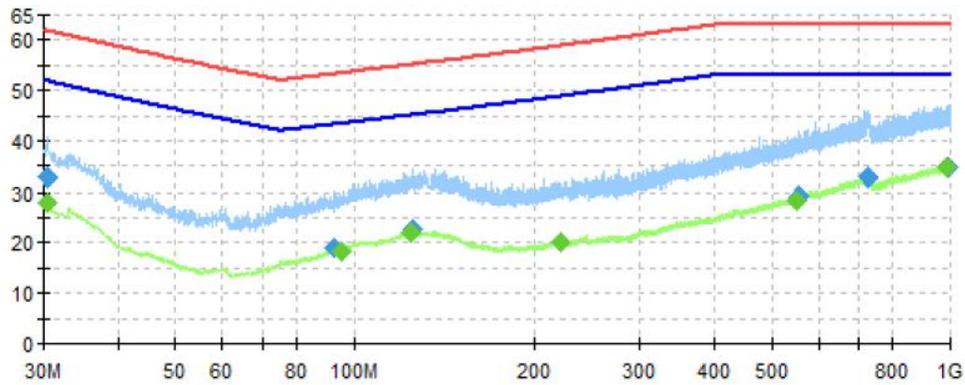
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Tested Model: Variant 2: Remote Control Test Voltage: 13.5V  
 (00-04700KI, high power)

Test Mode: On Test Result: Pass

**Horizontal Polarity Test Result Diagram (Broadband and Narrow band)**



**Maximum broadband QP value:**

| Frequency (MHz) | QuasiPeak (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|------------------|-------------|--------------|-------------|--------------|
| 30.480000       | 32.9             | 100.0       | H            | 28.90       | 61.80        |
| 92.340000       | 19.0             | 100.0       | H            | 34.30       | 53.30        |
| 125.820000      | 22.8             | 100.0       | H            | 32.40       | 55.20        |
| 556.260000      | 29.3             | 100.0       | H            | 33.70       | 63.00        |
| 724.860000      | 32.8             | 100.0       | H            | 30.20       | 63.00        |
| 994.680000      | 34.9             | 100.0       | H            | 28.10       | 63.00        |

**Maximum narrowband AV value:**

| Frequency (MHz) | Average (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|----------------|-------------|--------------|-------------|--------------|
| 30.480000       | 28.2           | 100.0       | H            | 23.60       | 51.80        |
| 95.100000       | 18.4           | 100.0       | H            | 25.00       | 43.40        |
| 124.560000      | 21.9           | 100.0       | H            | 23.10       | 45.10        |
| 220.260000      | 20.4           | 100.0       | H            | 28.40       | 48.80        |
| 552.000000      | 28.5           | 100.0       | H            | 24.50       | 53.00        |
| 987.840000      | 34.8           | 100.0       | H            | 18.20       | 53.00        |

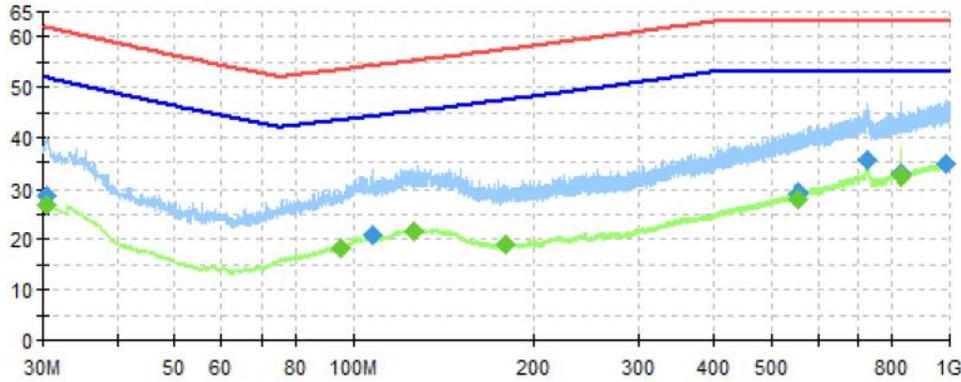
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**Vertical Polarity Test Result Diagram (Broadband and Narrow band)**



**Maximum broadband QP value:**

| Frequency (MHz) | QuasiPeak (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|------------------|-------------|--------------|-------------|--------------|
| 30.480000       | 28.6             | 100.0       | V            | 33.20       | 61.80        |
| 108.000000      | 21.0             | 100.0       | V            | 33.20       | 54.20        |
| 556.980000      | 29.2             | 100.0       | V            | 33.80       | 63.00        |
| 726.240000      | 35.3             | 100.0       | V            | 27.70       | 63.00        |
| 826.620000      | 32.7             | 100.0       | V            | 30.30       | 63.00        |
| 988.200000      | 34.8             | 100.0       | V            | 28.20       | 63.00        |

**Maximum narrowband AV value:**

| Frequency (MHz) | Average (dB/m) | Height (cm) | Polarization | Margin (dB) | Limit (dB/m) |
|-----------------|----------------|-------------|--------------|-------------|--------------|
| 30.420000       | 27.0           | 100.0       | V            | 24.80       | 51.80        |
| 95.160000       | 18.2           | 100.0       | V            | 25.30       | 43.40        |
| 126.540000      | 21.5           | 100.0       | V            | 23.60       | 45.20        |
| 178.920000      | 18.9           | 100.0       | V            | 28.50       | 47.40        |
| 555.600000      | 27.9           | 100.0       | V            | 25.10       | 53.00        |
| 826.620000      | 32.6           | 100.0       | V            | 20.40       | 53.00        |



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 Manufacturer: RV Products – A division of Airxcel, Inc  
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**Annex 2b Conducted transients from ESAs to the vehicle power supply**

Tested Model: Variant 1: Manual (00-05100KI40, low power) Test Voltage: 13.5V

Test Mode: On Test Result: Pass

**Measurement result:**

| Polarity of pulse amplitude | Maximum allowed value for vehicles with 12V systems | Measured Pulse amplitude True value |
|-----------------------------|---|-------------------------------------|
| Positive                    | + 75V   | + 18.5V                             |
| Negative                    | - 100V  | - 18.7V                             |

Tested Model: Variant 2: Remote Control (00-04700KI, high power) Test Voltage: 13.5V

Test Mode: On Test Result: Pass

**Measurement result:**

| Polarity of pulse amplitude | Maximum allowed value for vehicles with 12V systems | Measured Pulse amplitude True value |
|-----------------------------|---|-------------------------------------|
| Positive                    | + 75V   | + 18.4V                             |
| Negative                    | - 100V  | - 18.9V                             |

**Annex 2c Immunity of ESA to conducted transient interferences**

Tested Model: Variant 1: Manual (00-05100KI40, low power) Test Voltage: 13.5V

Test Mode: On Test Result: Pass

**Measurement result:**

| Test pulse | Test level | Number of pulse / test time | Burst cycle / pulse repetition time | Required minimum functional status (clause 2.5) | Status of function true value | Test result |
|------------|------------|-----------------------------|-------------------------------------|---|-------------------------------|-------------|
| 1          | -75V       | 5000 pulses                 | 0.5s                                | C   | C                             | Pass        |
| 2a         | +37V       | 5000 pulses                 | 0.2s                                | B   | A                             | Pass        |
| 2b         | +10V       | 10 pulses                   | 0.5s                                | C   | C                             | Pass        |
| 3a         | -112V      | 1 h                         | 90ms                                | A   | A                             | Pass        |
| 3b         | +75V       | 1 h                         | 90ms                                | A   | A                             | Pass        |
| 4          | -6V        | 1 pulse                     | N.A.                                | C   | B                             | Pass        |



Test Report No.: 17-00528-CX-SHA-00  
 Manufacturer: RV Products – A division of Airxcel, Inc  
 Type: 00-04500KIT/00-06200KI40T Page 13 of 14

Tested Model: Variant 2: Remote Control (00-04700KI, high power) Test Voltage: 13.5V  
 Test Mode: On Test Result: Pass

**Measurement result:**

| Test pulse | Test level | Number of pulse / test time | Burst cycle / pulse repetition time | Required minimum functional status (clause 2.5) | Status of function true value | Test result |
|------------|------------|-----------------------------|-------------------------------------|---|-------------------------------|-------------|
| 1          | -75V       | 5000 pulses                 | 0.5s                                | C   | C                             | Pass        |
| 2a         | +37V       | 5000 pulses                 | 0.2s                                | B   | A                             | Pass        |
| 2b         | +10V       | 10 pulses                   | 0.5s                                | C   | C                             | Pass        |
| 3a         | -112V      | 1 h                         | 90ms                                | A   | A                             | Pass        |
| 3b         | +75V       | 1 h                         | 90ms                                | A   | A                             | Pass        |
| 4          | -6V        | 1 pulse                     | N.A.                                | C   | B                             | Pass        |

**Remark:**

\* Class A: all functions of a device/system perform as designed during and after exposure to disturbance.  
 Class B: all functions of a device/system perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.  
 Class C: one or more functions of a device/system do not perform as designed during exposure but return automatically to normal operation after exposure is removed.

**Annex 2d Immunity of ESAs to electromagnetic radiation**

Tested Model: Variant 1: Manual (00-05100KI40, low power) Test Voltage: 13.5V  
 Test Mode: On Test Result: Pass

**Measurement result:**

| Frequency range (MHz) | Test level | Type of modulation | Test distance | Antenna position | Result  |
|-----------------------|------------|--------------------|---------------|------------------|---------|
| 20~400                | 60mA       | AM, 80%            | 150mm         | /                | Passed* |
| 400~800               | 30volts/m  | AM, 80%            | 1 m           | Vertical         | Passed* |
| 800~2000              | 30volts/m  | PM, 577µs, 217 Hz  | 1 m           | Vertical         | Passed* |



Test Report No.: 17-00528-CX-SHA-00

Manufacturer: RV Products – A division of Airxcel, Inc

Type: 00-04500KIT/00-06200KI40T

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Tested Model: Variant 2: Remote Control (00-04700KI, high power) Test Voltage: 13.5V

Test Mode: On Test Result: Pass

**Measurement result:**

| Frequency range (MHz) | Test level | Type of modulation | Test distance | Antenna position | Result  |
|-----------------------|------------|--------------------|---------------|------------------|---------|
| 20~400                | 60mA       | AM, 80%            | 150mm         | /                | Passed* |
| 400~800               | 30volts/m  | AM, 80%            | 1 m           | Vertical         | Passed* |
| 800~2000              | 30volts/m  | PM, 577µs, 217 Hz  | 1 m           | Vertical         | Passed* |

\* no degradation of performance of 'immunity-related functions'.

**RV Products – A division of Airxcel, Inc**

Type: 00-04500KIT/00-06200KI40T  
Information Document No.: 00-04500KIT/00-06200KI40T-00  
Date: May 04, 2017  
Pages 1 of 13

**APPLICATION FOR APPROVAL  
PURSUANT TO THE ECE REGULATION No. 10.05  
UNIFORM PROVISIONS CONCERNING THE APPROVAL  
OF MOTOR VEHICLES WITH REGARD  
TO ELECTROMAGNETIC COMPATIBILITY**

**Company name: RV Products–A division of Airxcel, Inc**

**Type: 00-04500KIT/00-06200KI40T**

Taizhou, May 04, 2017

Name of responsible person



Xu Yang

**RV Products – A division of Airxcel, Inc**

|   |
|---|
| Type: 00-04500KIT/00-06200KI40T<br>Information Document No.: 00-04500KIT/00-06200KI40T-00 |
| Date: May 04, 2017  |
| Pages 2 of 13   |

**List of documentation**

|                      |            |
|----------------------|------------|
| Confirmation         | Page 3     |
| Information document | Page 4-5   |
| List of attachments  | Page 5     |
| Drawings             | Page 6-10  |
| Bill of material     | Page 11-13 |

**RV Products – A division of Airxcel, Inc**

Type: 00-04500KIT/00-06200KI40T

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Date: May 04, 2017

Pages 3 of 13

### **Confirmation**

We hereby declare that the product of RV Products – A division of Airxcel, Inc, type 00-04500KIT/00-06200KI40T submitted for the type approval

1. is compatible with the enclosed documentation

and

2. has been manufactured under condition of mass production.

**INFORMATION DOCUMENT FOR TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUB-ASSEMBLY WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY ACCORDING ANNEX 2B**

1 Make (trade name of the manufacturer) :



2 Type : 00-04500KIT/00-06200KI40T

2.1 Variant : Variant 1: Manual

00-05100KI40, 00-06200KI40, 00-05100KI, 00-05101KI, 00-06200KI, 00-06201KI, 00-04001KI, 00-04050KI, 00-04051KI, 00-04000KI, 00-06200KIT, 00-06200KI40T

Variant 2: Remote Control

00-07000KI40, 00-07500KI40, 00-07501KI, 00-07500KIT, 00-07500KI40T, 00-07000KI, 00-07001KI, 00-07500KI, 00-08000KI, 00-08001KI, 00-08500KI, 00-08501KI, 00-08700KI, 00-08900KI, 00-04500KI, 00-04501KI, 00-04540KI, 00-04541KI, 00-04700KI, 00-04800KI, 00-04801KI, 00-04900KI

Note: (-) in model numbers designate a revision level, which may be “-“ or any alpha character which do not affect the product evaluation and or compliance .

2.2 General commercial description(s) : MaxxFan (RECREATIONAL VEHICLE FAN)

2.3 Category of vehicle : All categories of vehicle

3 Means of identification of type if marked on the ~~vehicle~~/component/STU : Letters and digits

3.1 Location of that marking : Adhesive label on the housing

4 Name and address of the manufacturer : RV Products – A division of Airxcel, Inc  
3050N.ST. FRANCIS WICHITA.KS 67219

4.1 Name and address of sale representative, if any : SHANGHAI INSTRUMENTS & ELECTRONICS USA CORP.  
14243 CANYON VINE COVE, DRAPER, UT84020, USA

5 In the case of components and separate technical units, location and method of affixing of the approval mark : Adhesive label on the housing

6 Address(es) of assembly plant(s) : Taizhou Puan Lighting Technology Co., Ltd.  
Building 1, 2, 4, 5, No.1111, East Section of Tiyuchang Road, Taizhou City, Zhejiang, P.R. China

7 This ESA shall be approved as a : Component

8 Any restrictions of use and conditions for fitting : No restrictions

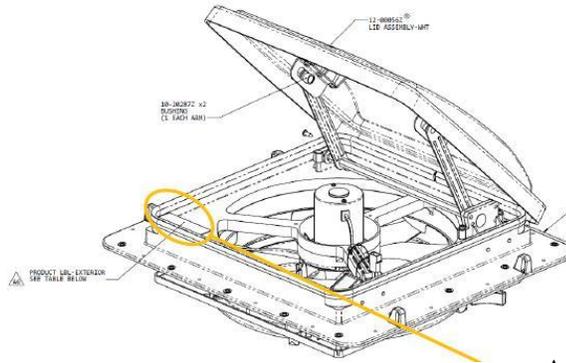
9 Electrical system rated voltage : DC 12V ... ~~pos-/neg.~~ ground

|   |   |
|---|---|
| <b>RV Products – A division of Airxcel, Inc</b> | Type: 00-04500KIT/00-06200KI40T<br>Information Document No.: 00-04500KIT/00-06200KI40T-00 |
|   | Date: May 04, 2017  |
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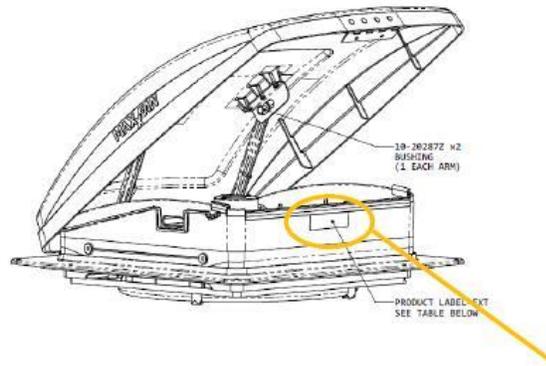
- 10 Charger: on board/external : N/A
- 11 Charging current: DC /AC : N/A  
(number of phases/frequency)
- 12 Maximal nominal current (in each mode if necessary) : N/A
- 13 Nominal charging voltage : N/A
- 14 Basic ESA interface functions: ex. L1/L2/L3/N/PE/control pilot : N/A
- 15 Minimum Rsce value (see paragraph 7.11. of this Regulation) : N/A
- 16 Statement for model difference (if applicable) : The variants have the same circuit diagram and PCB with main type, but different of appearance, color and power.

**List of attachments:**

- Assembly Drawing                      Drawing No.1
- Circuit Diagram                        Drawing No.2
- PCB Layout                                Drawing No.3
- Bill of materials                         Consists of 3 pages

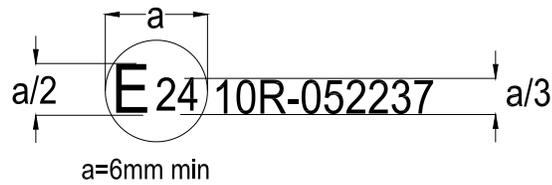


Approval mark



Approval mark

Approval mark

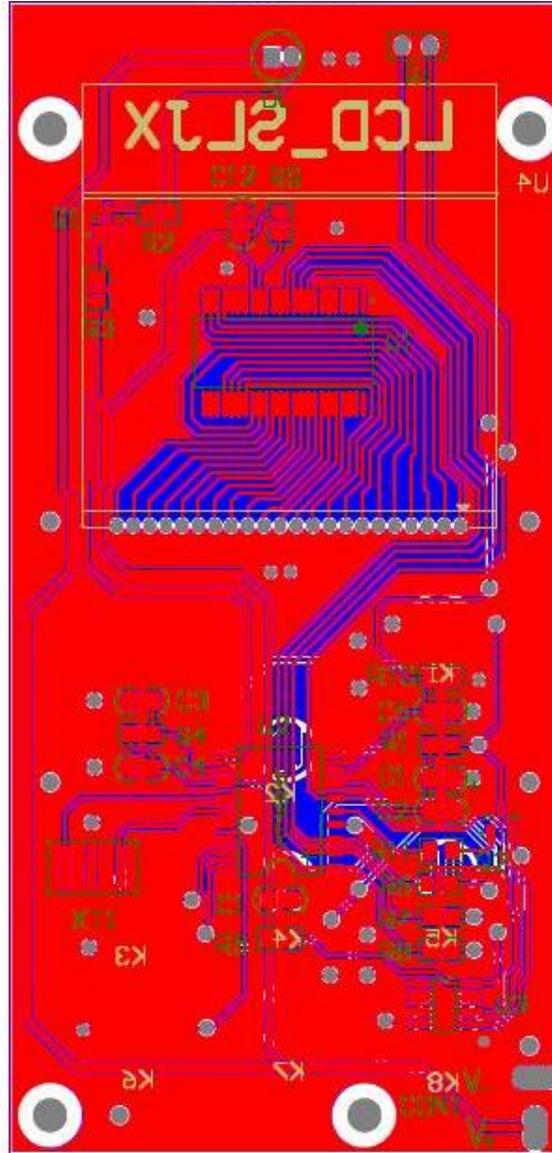




**DRW.1**

**Assembly Drawing**





DRW. 3

PCB Layout



DRW.3

PCB Layout

## Bill of Material

| No. | Name                    | Position                  | QTY(PC) | Specification                  |
|-----|-------------------------|---------------------------|---------|--------------------------------|
| 1   | resistor                | R27                       | 1       | 1Ω, ±1%, 3W                    |
| 2   | capacitance             | C14                       | 1       | Y2/222/250V/±10%               |
| 3   | capacitance             | C13                       | 1       | 102/630V/±5%                   |
| 4   | Schottky diode          | D5                        | 1       | SB20100CT/20A/100V/T0-220      |
| 5   | light coupling          | U1                        | 1       | EL817/B/DIP-4                  |
| 6   | field effect tube       | Q4                        | 1       | IRF3205/110A/55V/T0-220AB      |
| 7   | Semiconductor vibration | Y1                        | 1       | 2MHz/HC-49U/30PF±30PPM/<br>DIP |
| 8   | Power cable             | CON1                      | 1       | 17-CTP0268001/02/1200MM        |
| 9   | AIR cable               | CN1                       | 1       | 17-CTP0268002/02/230MM         |
| 10  | LIFT cable              | CN7                       | 1       | 17-CTP0268003/02/280MM         |
| 11  | circular                | --                        | 1       | DYR-110-A                      |
| 12  | Infrared receiver       | CN6                       | 1       | HS0038B/1838                   |
| 13  | Needle base             | CN4                       | 1       | RJ11-623-6pin                  |
| 14  | Needle base             | CN3                       | 1       | RJ45-8pin                      |
| 15  | Single needle           | CN2                       | 0.2     | 2.54mm,40pin,11.5mm            |
| 16  | Single needle           | PIN1(4PIN);<br>PIN2(6PIN) | 0.25    | 2.54mm,40pin,17mm              |
| 17  | Needle base             | CN5                       | 1       | B2P2-XH, 2.54mm,black          |
| 18  | Needle base             | T2                        | 1       | B2P2-XH, 2.54mm,white          |
| 19  | relay                   | K3,K4                     | 2       | HFD27-012S/12VDC/1A            |
| 20  | Isolated pillar         | PIN1(1); PIN2(2)          | 3       | Ø5*8/2                         |
| 21  | Isolated pillar         | CN6                       | 1       | Ø5*18mm/2                      |
| 22  | Chip Resistor           | R14                       | 1       | 33Ω/±5%, 0805/ROHS             |

|    |                        |                                       |    |                              |
|----|------------------------|---------------------------------------|----|------------------------------|
| 23 | Chip Resistor          | R1,R18,R2,R6                          | 4  | 1K $\Omega$ ±5%, 0805/ROHS   |
| 24 | Chip Resistor          | R19                                   | 1  | 10K $\Omega$ ±1%, 0805/ROHS  |
| 25 | Chip Resistor          | R11,R24,R26,R32,R33,R5                | 6  | 10K $\Omega$ ±5%, 0805/ROHS  |
| 26 | Chip Resistor          | R12,R16,R23,R29                       | 4  | 100K $\Omega$ ±5%, 0805/ROHS |
| 27 | Chip Resistor          | R28                                   | 1  | 15K $\Omega$ ±5%, 0805/ROHS  |
| 28 | Chip Resistor          | R22,R3,R30,R31,R4                     | 5  | 2K $\Omega$ ±5%, 0805/ROHS   |
| 29 | Chip Resistor          | R13,R15,R17,R25,R7,R9                 | 6  | 3K $\Omega$ ±5%, 0805/ROHS   |
| 30 | Chip Resistor          | R10                                   | 1  | 330K $\Omega$ ±5%, 0805/ROHS |
| 31 | Chip Resistor          | R20                                   | 1  | 17K $\Omega$ ±5%, 0805/ROHS  |
| 32 | Chip Resistor          | R21                                   | 1  | 470K $\Omega$ ±5%, 0805/ROHS |
| 33 | Chip Capacitor         | C11,C12,C16,C17,C2,C20,C21,C22,C23,C3 | 10 | 104/50V, ±20%,0805/X5R       |
| 34 | Chip Capacitor         | C15,C18                               | 2  | 105/50V, ±20%,0805/X5R       |
| 35 | Chip Capacitor         | C19                                   | 1  | 106/6.3V, ±20%,0805/X5R      |
| 36 | Chip Capacitor         | CC22,CC23                             | 2  | 30P/50V, ±5%,0603/X7R        |
| 37 | diode                  | D10,D3,D4,D7,D8,D9                    | 6  | LL4148/200MA/150V/1/2 W/1206 |
| 38 | burn program           | IC2                                   | 1  | OTP/HT46R48A/SOP-24          |
| 39 | IC                     | IC3                                   | 1  | LM258/SOP-8                  |
| 40 | audion                 | Q1,Q2,Q3,Q5,Q6,Q7,Q8,Q9               | 8  | SS8050/800MA                 |
| 41 | Chip Bead              | L1                                    | 1  | 120 $\Omega$ /100M           |
| 42 | PCB                    | --                                    | 1  | CTP0268A/5.3/85*80*1.6 MM    |
| 43 | electrolytic capacitor | C4,C5                                 | 2  | 470uf/25v/±20%               |
| 44 | electrolytic capacitor | C1                                    | 1  | 1000uf/25v/±20%              |
| 45 | capacitor              | C6,C7                                 | 2  | 474J/100v/±5%                |
| 46 | diode                  | D2                                    | 1  | 10A10/10A/1KV/R-6            |

**RV Products – A division of Airxcel, Inc**Type: 00-04500KIT/00-06200KI40T  
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|    |                 |           |   |                  |
|----|-----------------|-----------|---|------------------|
| 47 | stabilivolt     | IC1       | 1 | L7805/5v/1A      |
| 48 | mode inductance | T1        | 1 | 21-CTP0268004/02 |
| 49 | Insurance tube  | F1        | 1 | JK30-400         |
| 50 | Chip capacitor  | C10,C8,C9 | 3 | 104/50v/±20%     |
| 51 | diode           | D1        | 1 | M7/IN4007/1A/1KV |