

Approved Body Type Examination Certificate

Manufacturer company name: Molex CVS Hildesheim GmbH
Manufacturer address: Daimlerring 31
D-31135 Hildesheim
Germany
Description of the radio equipment: In-Glass Amplifier Module
Trade /brand name or registered trademark: Molex
Model/type indication: Molex P/N: 21013 / FCA P/N: 68519865AB
Software version: Not applicable
Hardware version: A0
Frequency bands of operation: 515 kHz to 1715 kHz
76 MHz to 108 MHz
174 MHz to 240 MHz

Technical documentation (TD) reference: Molex_FCA_GrainedSealedModule_21013
ACB project number: ATCB030438
Certificate number: ATCB030438, issue 1

ACB, Inc. is designated as an Approved Body under the
U.S.-UK Mutual Recognition Agreement (Telecommunications Equipment & EMC Annexes)

ACB, Inc.
Approved Body Number 1588
313 Park Avenue Suite 300
Falls Church, VA 22046, USA

In the opinion of ACB, Inc., the examination of the technical documentation as drawn up by the manufacturer demonstrates that the essential requirements of Regulation 6 (2) of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206) have been met. The conformity assessment on the radio equipment listed above and as described in Annex 1 to this type examination certificate has been carried out in accordance with Schedule 3, Module B, of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206). This type examination certificate relates only to the documents as provided to ACB, Inc. A list of documentation forming the basis for the type examination is provided in Annex 2 to this type examination certificate.



Approved Body: *P.A.J.M. Robben*

3 May 2022
Date



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The radio equipment as described and documented in the technical documentation as drawn up by the manufacturer is an In-Glass Amplifier Module for vehicular use and is intended for the reception and amplification of AM, FM, FM2 and DAB signals.

Details of operation:

Description of service: AM broadcast signals amplification and reception
Transmit frequency: Not applicable
Receive frequency: 515 - 1715 kHz
Modulation: AM
Gain: S21: 21 dB \pm 2 dB
Duty cycle: Not applicable
Transmit power: Not applicable
Models: Molex P/N: 21013 / FCA P/N: 68519865AB

Description of service: FM broadcast signals amplification and reception
Transmit frequency: Not applicable
Receive frequency: 76 - 108 MHz
Modulation: Not applicable
Gain: $3 \text{ dB} \leq S21 \leq 8.5 \text{ dB}$
Duty cycle: Not applicable
Transmit power: Not applicable
Models: Molex P/N: 21013 / FCA P/N: 68519865AB

Description of service: FM broadcast signals amplification and reception (FM2)
Transmit frequency: Not applicable
Receive frequency: 76 - 108 MHz
Modulation: Not applicable
Gain: $3 \text{ dB} \leq S21 \leq 8.5 \text{ dB}$
Duty cycle: Not applicable
Transmit power: Not applicable
Models: Molex P/N: 21013 / FCA P/N: 68519865AB

Description of service: DAB signals amplification and reception
Transmit frequency: Not applicable
Receive frequency: 174 - 240 MHz
Modulation: OFDM
Gain: $18 \text{ dB} \leq S21 \leq 30 \text{ dB}$
Duty cycle: Not applicable
Transmit power: Not applicable
Models: Molex P/N: 21013 / FCA P/N: 68519865AB



Annex 2 to type examination certificate for the Radio Equipment Regulations 2017 (S.I. No. 2017/1206)

Date of issue: 3 May 2023

ACB project number: ATCB030438

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- 1 Test report: Report number: Dated:
Radio Molex_Stellantis_JL_JT_21013 19 April 2023
- 2 Technical documentation provided:
- | | | |
|----------------------------|------------------------------|---------------------------|
| Circuit diagram/schematics | External photographs | Internal photographs |
| Label drawing/location | Parts list/bill of materials | PCB layout |
| Risk assessment document | Test reports | Declaration of conformity |
- 3 Standards used to demonstrate conformity with the essential requirements of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206):
- Radio spectrum (Regulation 6 (2)): PF 90101 *)
- EMC (Regulation 6 (1)(b)): Not included in this review at the request of the manufacturer
- RF safety (Regulation 6 (1)(a)): Not included in this review at the request of the manufacturer
- Product safety (Regulation 6 (1)(a)): Not included in this review at the request of the manufacturer

*) Customer specification

Note: Essential requirements of Regulation 6 (3) of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206) not listed above have been deemed as not being applicable to the radio equipment as described in this type examination certificate.



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4 Additional information:

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 11: Manufacturers shall keep the technical documentation and the declaration of conformity for 10 years after the radio equipment has been placed on the market.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 12 (1): Manufacturers shall ensure that radio equipment which they have placed on the market bears a type, batch or serial number or other element allowing its identification, or, where the size or nature of the radio equipment does not allow it, that the required information is provided on the packaging, or in a document accompanying the radio equipment.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 12 (2)-(5): Manufacturers shall indicate on the radio equipment their name, registered trade name or registered trade mark and the postal address at which they can be contacted or, where the size or nature of radio equipment does not allow it, on its packaging, or in a document accompanying the radio equipment. The address shall indicate a single point at which the manufacturer can be contacted. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 13 (1): Manufacturers shall ensure that the radio equipment is accompanied by instructions and safety information in a language which can be easily understood by consumers and other end-users, as determined by the UK. Instructions shall include the information required to use radio equipment in accordance with its intended use. Such information shall include, where applicable, a description of accessories and components, including software, which allow the radio equipment to operate as intended. Such instructions and safety information, as well as any labelling, shall be clear, understandable and intelligible.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 13 (2): The following information shall also be included in the case of radio equipment intentionally emitting radio waves:

- (a) frequency band(s) in which the radio equipment operates;
- (b) maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 13 (3): Manufacturers shall ensure that each item of radio equipment is accompanied by a copy of the declaration of conformity or by a simplified declaration of conformity drawn up in accordance with regulation 43 (simplified declaration of conformity). Where a simplified declaration of conformity is provided, it shall contain the exact internet address where the full text of the declaration of conformity can be obtained.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 14: In cases of restrictions on putting into service or of requirements for authorization of use, information available on the packaging shall allow the identification of the geographical area within the UK where restrictions on putting into service or requirements for authorization of use exist. Such information shall be completed in the instructions accompanying the radio equipment.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 44 (1)-(2): The UK marking shall be affixed visibly, legibly and indelibly to the radio equipment or to its data plate, unless that is not possible or not warranted on account of the nature of radio equipment. The UK marking shall also be affixed visibly and legibly to the packaging.



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Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Regulation 44 (3): On account of the nature of radio equipment, the height of the UK marking affixed to radio equipment may be lower than 5 mm, provided that it remains visible and legible.

Radio Equipment Regulations 2017 (S.I. No. 2017/1206), Schedule 7 (2): The manufacturer shall inform the approved body that holds the technical documentation relating to the type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206) or the conditions for validity of that certificate. Such modifications shall require additional approval in the form of an addition to the original type examination certificate.

This Approved Body type examination certificate has a validity of 10 years from the date of issue.

This type examination certificate automatically expires in the following cases:

- Changes in the product identification and/or the manufacturer's identification at stated on this type examination certificate (without any technical change);
- Technical modifications in the product(s) covered by this type examination certificate that affect the compliance of the product(s) with the essential requirements of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206);
- Revisions and/or updates in the (designated) standards applied in full or in part or other solutions adopted as listed in this type examination certificate which affect the demonstration of compliance of the product(s) with the essential requirements of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206).

To avoid the automatic expiration of the type examination certificate, any of the three cases above would require a re-assessment of (parts of) the updated technical documentation of the product(s) and an update/re-issue of the type examination certificate by the Approved Body.

A non-designated standard was used by the manufacturer to assess the conformity with the essential requirements in Regulation 6 (2) of the Radio Equipment Regulations 2017 (S.I. No. 2017/1206).

5 Contact information:

For contact with ACB or questions regarding this type examination certificate:

Web: www.acbcert.com

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