

EU-type examination
I0387



**Radio Equipment Regulations 2017
Schedule 3, Module B, EU-type examination report**

Client: Robert Bosch GmbH

Model Brand and Name: CR5CPCCF

Date: 02/07/2021



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Modifications to approved type disclaimer: - Certification requirements

The manufacturer shall inform the notified body that holds the technical documentation relating to the EU-type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of this Directive or the conditions for validity of that certificate. Such modifications shall require additional approval in the form of an addition to the original EU-type examination certificate.

Updates to RED requirements disclaimer:

Where requirements of the RED have changed/been updated or there is a generally acknowledged change in the state of the art indicating that the approved product may no longer comply with the requirements, DTG Testing shall inform the manufacturer accordingly

Report prepared for:

Robert Bloch, Robert.Bloch@bosch.com

Device Under Test (DUT)

Documentation supplied by : **KL Certification GmbH**

Manufacturer : **Robert Bosch GmbH**

Model : **CR5CPCCF**

Type of Device : **76-77 GHz Vehicle Radar - Corner Radar 5 Car**
Plus CAN CAN Flexray

Aspects of essential requirements : **Article 6.1a, 6.1b, 6.2 of Radio Equipment**
Regulations 2017

1. Series model numbers

N/A

Version History

Report Version	Date of issue	Comments	Author
V1.0	02/07/2021	First issue	AB

DTG Job Reference: 10387

Report approved by: Alex Buchan, Head of Wireless Technologies, DTG Testing Ltd.

Signed:



2. Test Results Summary

Note:

- EU-Type examination certificate granted?: YES

3. Documentation received

As per Schedule 3 of the Radio Equipment Regulation 2017, the following checklist summarises the documentation required for any EU-type examination.

Requirement	Received (Y/N)
Name and address of manufacturer and authorised representative (if applicable)	Y
Declaration that application was not submitted to any other Notified Body	Y
The technical documentation. The technical documentation shall make it possible to assess the radio equipment's conformity with the applicable requirements of this Directive and shall include an adequate analysis and assessment of the risk(s).	(Further details of the technical documentation in section 4.1) Y
The supporting evidence for the adequacy of the technical design solution. That supporting evidence shall mention any documents that have been used, where the relevant harmonised standards have not been applied or have not been fully applied. The supporting evidence shall include, where necessary, the results of tests carried out in accordance with other relevant technical specifications by the appropriate laboratory of the manufacturer, or by another testing laboratory on his behalf and under his responsibility	(Further details of the supporting evidence in section 4.2) Y

4.1. Technical documentation received

Requirement the technical documentation shall include an adequate analysis of and assessment of the risk(s)

Risk assessment received:

The risk assessment was provided.

The risk assessment clearly stated the possible risks of the product not meeting the essential requirements of the regulations and how these had been mitigated using international standards.

Requirement: a general description of the radio equipment including:

- (i) photographs or illustrations showing external features, marking and internal layout;
- (ii) versions of software or firmware affecting compliance with essential requirements;
- (iii) user information and installation instructions;

General description documentation received:

Product description of the main components

References to photographs of the equipment showing front, rear and side aspects.

Block diagrams of the system components and how they are connected together

List of the firmware that affects compliance for component

Requirement: conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits and other relevant similar elements;

Conceptual design documentation received:

Inventory of the product PCB layouts and circuit diagrams.

A block diagram of the component parts and how they interconnect as also provided.

The technical file referenced further documents providing technical specifications for the sub-assemblies.

Requirement: descriptions and explanations necessary for the understanding of those drawings and schemes and the operation of the radio equipment;

Descriptions documentation received:

Technical description and operational of the system as well as further descriptions of the associated equipment referring to the block diagrams and schematics of each of the component parts.

A user guide was provided which gave a comprehensive description of setup, components, safety, diagnostics, and how to use the system.

Requirement: a list of the harmonised standards applied in full or in part the references of which have been published in the Official Journal of the European Union, and, where those harmonised standards have not been applied, descriptions of the solutions adopted to meet the essential requirements set out in Article 3, including a list of other relevant technical specifications applied. In the event of partly applied harmonised standards, the technical documentation shall specify the parts which have been applied.

Where harmonised standards have been applied: the NB should accept [at their sole discretion] the parts of the radio equipment testing to the harmonised standards with minimal review as they should have an effective presumption of conformity in terms of state of the art, providing the harmonised standards have been followed in full¹.

Standards documentation received:

International harmonised standards were applied for the testing.

¹ REDCA TGN28 Guidance on the RED article 3 requirements for a NB Type examination certificate covered by the RED: <http://www.redca.eu/Pages/Documents%201.htm>

Requirement: results of design calculations made, examinations carried out, and other relevant similar elements;

Results documentation received:

International harmonised standards were applied for the testing.

Requirement: any relevant test reports

Test report documents received:

A description of the process and tests applied in certifying the product compliance.

Tests were carried out in approved laboratories with a report clearly showing test setup, methodology, which standards were applicable and results.

Photos of the setup were also provided.

5. Assessment carried out

5.1. Article 6.1a – Health and Safety

The client provided a test report covering H&S requirements for the product which was assessed against EN 62368 as well as RF exposure covered by EN 62311

Comprehensive test reports were provided to support the test plan with detailed descriptions of the methodology, test equipment, and test personnel.

5.2. Article 6.1b – EMC

The client provided a test report covering EMC requirements for the product which was assessed against ETSI EN 301 489-51: Specific conditions for Automotive, Ground based Vehicles and Surveillance Radar Devices using 24,05 GHz to 24,25 GHz, 24,05 GHz to 24,5 GHz, 76 GHz to 77 GHz and 77 GHz to 81 GHz; Harmonised Standard covering the essential requirements of article 3.1b of Directive 2014/53/EU.

Comprehensive test reports were provided to support the test plan with detailed descriptions of the methodology, test equipment, and test personnel.

5.3. Article 6.2 – Spectrum

The client provided a complete set of documentation as required by the Radio Equipment Regulations 2017 for EU-Type Examination for article 6.2.

Harmonised standards were applied during product testing using EN 301 091-1 for Short Range Devices; Transport and Traffic Telematics; Ground based vehicular radar operating in the 76 and 77 GHz range.

Additionally EN 303 396 V1.1.1: Short Range Devices; Measurement techniques for automotive and surveillance radar equipment was applied.

Comprehensive test reports were provided to support the test plan with detailed descriptions of the methodology, test equipment, and lab accreditation.

Explanation was provided to aspects of the standards that were not applied such as receiver sensitivity.

5.4. Risk assessment review

A risk assessment was provided providing details of how standards have been used to mitigate against the risks highlighted. The risk assessment includes details of the conditions the risks could arise, how it is mitigated, and the standards used to for verification of the product performance relating to the risk.

6. Assessment conclusions

The CR5CPCCF has adequately demonstrated compliance to articles 6.1a, 6.1b and 6.2 of Radio Equipment Regulations 2017.

Robert Bosch GmbH has provided comprehensive documentation to demonstrate how the equipment is intended to be used, technical operation, test procedures and reports, their quality management system, and how international standards have been applied to demonstrate conformity.

The documentation included a risk assessment.



EU-type examination certificate

Issued by:

DTG Testing, 5th Floor, 89 Albert Embankment, London SE1 7TP

UK Approved Body Number: [2783](#)

In accordance with Schedule 3, Module B of Radio Equipment Regulations 2017, this EU-type examination certificate has been issued to:

Robert Bosch GmbH,
Daimlerstrasse 6, 71229 Leonberg, Germany,

For the following product(s)

Model	:	CR5CPCCF
Brand	:	Bosch
Manufacturer	:	Robert Bosch GmbH
Type of Device Plus CAN CAN Flexray	:	76-77 GHz Vehicle Radar - Corner Radar 5 Car
Technical document ref	:	10387

Which has demonstrated compliance to Articles 6.1a, 6.1b and 6.2 of Radio Equipment Regulations 2017

Issued on: 02/07/2021

Valid until: Ongoing

Reference number 10387

Authorised by: **Alex Buchan, Head of Wireless Technologies, DTG Testing Ltd.**

Signed:

A handwritten signature in blue ink, consisting of a stylized 'A' followed by a flourish.