

ETSI EN 302 858-1 V1.2.1 (2011-07)

European Standard

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Road Transport and Traffic Telematics (RTTT);
Short range radar equipment operating in the 24,05 GHz to
24,25 GHz frequency range for automotive application;
Part 1: Technical characteristics and test methods**

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

For non EU countries the present document may be used for regulatory (Type Approval) purposes.

Equipment compliant with the present document is intended for fitment into road vehicles, therefore it is subject to automotive EMC type approval and needs to comply with Directive 95/54/EC [i.3].

For use on vehicles outside the scope of Directive 95/54/EC [i.3] compliance with an EMC directive/standard appropriate for that use is required.

The present document is part 1 of a multi-part deliverable covering Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Short range radar equipment operating in the 24,05 GHz to 24,25 GHz frequency range for automotive application, as identified below:

Part 1: "Technical characteristics and test methods";

Part 2: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".

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1 Scope

The present document specifies the technical requirements and methods of measurement for Short Range Devices (SRD) operating in the 24,05 GHz to 24,25 GHz frequency range intended for Narrow Band Short Range Radar (NB SRR) for Road Transport and Traffic Telematics (RTTT) applications such as Automotive Cruise Control (ACC), Collision Warning, Anti-Collision (AC) systems, obstacle detection, Stop and Go, blind spot detection, parking aid, precrash, backup aid and other safety relevant automotive applications.

The present document contains the technical characteristics and test methods for narrowband short range radar equipment fitted with integral antennas and applies to transmitters and receivers with integral antennas operating in all or part of the range from 24,05 GHz to 24,25 GHz.

The present document does not necessarily include all the characteristics which may be required by a user, nor does it necessarily represent the optimum performance achievable.

The present document covers only NB SRR equipment for vehicles.

The present document complies with field limits for human exposure to electromagnetic fields as provided by the EC Recommendation 1999/519/EC [i.4] and the methods for compliance demonstration in EN 50371 [i.5].

Table 1 shows the frequency bands as designated to narrow band short range radar devices.

Table 1: Narrow band short range radar devices frequency of operation

	Frequency Bands/frequencies	Applications
Transmit and Receive	24,05 GHz to 24,25 GHz	Short range radar for vehicle applications

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] CISPR 16 (2006) (parts 1-1, 1-4 and 1-5): "Specification for radio disturbance and immunity measuring apparatus and methods; Part 1: Radio disturbance and immunity measuring apparatus".
- [2] ETSI TR 100 028 (V1.4.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [3] ETSI TR 102 273 (V1.2.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties".