

RSS-132 – Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz

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[Expand all content / collapse all content](#)

[PDF](#)

▼ Contents

1. [Scope](#)
2. [Purpose and application](#)
3. [General requirements and references](#)
4. [Definitions](#)
5. [Transmitter Specifications](#)

▼ Preface

Radio Standards Specification RSS-132, issue 4, *Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz*, replaces RSS-132, issue 3, *Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz*, dated January 2013.

The main changes are listed below:

1. Removed the section on receiver spurious emission.
2. Added the definitions of mobile equipment and portable equipment.
3. Changed the transmitter radiated power for mobile equipment from effective isotropic radiated power (e.i.r.p.) to equivalent radiated power (e.r.p.).

4. Removed section 4 on external control, mobile equipment identifier (MEID) and international mobile equipment identity (IMEI).
5. Modified the frequency stability requirement.
6. Added requirements for portable equipment.
7. Modernized to reflect the current Radio Standards Specification structure.
8. Made editorial changes and clarifications, as appropriate.

Inquiries may be submitted by one of the following methods:

1. Online using the General Inquiry form (in the form, select the Directorate of Regulatory Standards radio button and specify "RSS-132" in the General Inquiry field)
2. By mail to the following address:

Innovation, Science and Economic Development Canada
Engineering, Planning and Standards Branch
Attention: Regulatory Standards Directorate
235 Queen Street
Ottawa ON K1A 0H5
Canada

3. By email to consultationradiostandards-consultationnormesradio@ised-isde.gc.ca

Comments and suggestions for improving this standard may be submitted online using the Standard Change Request form or by mail or email to the above addresses.

All Innovation, Science and Economic Development Canada publications related to spectrum and telecommunications are available on the [Spectrum Management and Telecommunications](#) website.

Issued under the authority of
the Minister of Innovation, Science and Industry

Martin Proulx

Director General

Engineering, Planning and Standards Branch

▼ 1. Scope

This Radio Standards Specification (RSS) sets out the certification requirements for cellular equipment operating in the bands 824-849 MHz and 869-894 MHz.

▼ 2. Purpose and application

This RSS applies to base station, mobile, and portable equipment operating in the bands 824-849 MHz and 869-894 MHz.

▼ 3. General requirements and references

This section sets out the general requirements and references related to this RSS.

3.1 Coming into force and transition period

This document will be in force as of the date of its publication on Innovation, Science and Economic Development Canada's (ISED) website.

However, a transition period of six months from the publication will be provided. During this transition period, applications for certification under either RSS-132, issue 3 or issue 4, will be accepted. After this period, only applications for the certification of equipment under RSS-

132, issue 4, will be accepted, and equipment manufactured, imported, distributed, leased, offered for sale, or sold in Canada shall comply with this present issue.

A copy of RSS-132, issue 3, is available upon request by email at consultationradiostandards-consultationnormesradio@ised-isde.gc.ca.

3.2 Certification requirement

Equipment covered by this standard is classified as Category I equipment. Either a technical acceptance certificate issued by the Certification and Engineering Bureau of ISED, or a certificate issued by a recognized Certification Body is required.

3.3 Licensing requirements

Equipment covered by this standard is subject to licensing requirements pursuant to subsection 4(1) of the *Radiocommunication Act*.

3.4 RSS-Gen compliance

Equipment being certified under this standard shall comply with the general requirements set out in RSS-Gen, *General Requirements for Compliance of Radio Apparatus*.

3.5 Related documents

ISED publications related to spectrum management and telecommunications are available on the [Spectrum management and telecommunications](#) website.

In addition to related documents specified in RSS-Gen, refer to the following document as needed:

- SRSP-503, *Technical Requirements for Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz*

Acronyms

- SRSP: Standard Radio System Plan

▼ 4. Definitions

The following terms are used in this document:

Mobile equipment

An equipment that is designed for use in motion as well as during halts at unspecified points in which the radiating antenna is at least 20 cm away from the human body.

Portable equipment

An equipment with an embedded radiating antenna having direct contact with or within 20 cm of the human body.

▼ 5. Transmitter Specifications

This section provides transmitter specifications.

5.1 Frequency sub-bands

The frequency bands 824-849 MHz and 869-894 MHz are divided into sub-bands as described in SRSP-503.

For mobile and portable transmission, the sub-bands are:

- 824-835 MHz
- 835-845 MHz
- 845-846.5 MHz
- 846.5-849 MHz

For base station transmission, the sub-bands are:

- 869-880 MHz

- 880-890 MHz
- 890-891.5 MHz
- 891.5-894 MHz

5.2 Types of modulation

Digital modulation shall be used.

5.3 Frequency stability

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within each of the sub-bands when tested at the temperature and supply voltage variations specified in RSS-Gen.

5.4 Transmitter output power and equivalent radiated power

The transmitter output power shall be measured in terms of average power. The equivalent radiated power (e.r.p.) shall not exceed 7 watts for mobile equipment and 3 watts for portable equipment.

The effective isotropic radiated power (e.i.r.p.) shall not exceed the limits specified in SRSP-503 for base station equipment.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

5.5 Transmitter unwanted emissions

Equipment shall meet the unwanted emission limits specified below:

- In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated below the transmitter output power P (dBW) by at least $43 + 10 \log(p)$ dB.

ii. After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated below the transmitter output power P (dBW) by at least $43 + 10 \log(p)$ dB. If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

p is the output power specified in watts.

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