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Radio Standards Specification

Land Mobile and Fixed Equipment Operating in the Band 1670-1675 MHz

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Canada

Preface

Radio Standards Specification 112, Issue 1, *Land Mobile and Fixed Equipment Operating in the Band 1670-1675 MHz*, will be in force as of the publication date of Notice No. SMSE-006-08 in *Canada Gazette*, Part I. Upon publication, the public has 120 days to submit comments. The comments received will be taken into account in the preparation of the next version of this document.

Issued under the authority of
the Minister of Industry

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Robert W. McCaughern
Director General
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Contents

1. Scope 1

2. General Information 1

2.1 Licensing Requirements 1

2.2 Related Documents 1

2.3 Definition of Bandwidth 1

3. General Requirements 1

3.1 RSS-Gen Compliance 1

4. Measurement Method 2

4.1 Transmitter Output Power 2

4.2 Transmitter Unwanted Emissions 2

5. Transmitter and Receiver Standard Specifications 2

5.1 Band Plan 2

5.2 Types of Modulation 2

5.3 Frequency Stability 2

5.4 Transmitter Output Power 2

5.5 Transmitter Unwanted Emissions Limits 2

5.6 Receiver Spurious Emissions 3

1. Scope

This Radio Standards Specification (RSS) sets out requirements for the certification of transmitters and receivers for the land mobile and fixed services in the band 1670-1675 MHz.

2. General Information

Equipment certified under this standard is classified as Category I equipment and a technical acceptance certificate (TAC), issued by the Certification and Engineering Bureau of Industry Canada, or a certificate issued by a Certification Body (CB) is required.

2.1 Licensing Requirements

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

2.2 Related Documents

All Spectrum Management and Telecommunications publications are available on Industry Canada's website at http://ic.gc.ca/spectrum under *Official Publications*.

In addition to related documents specified in RSS-Gen, *General Requirements and Information for the Certification of Radiocommunication Equipment*, the following Industry Canada document should be consulted:

SRSP-514 *Technical Requirements for Land Mobile and Fixed Radio Services in the Band 1670-1675 MHz*

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SRSP – Standard Radio System Plan

2.3 Definition of Bandwidth

Emission bandwidth is, for the purpose of this document, defined as the width of the signal between two points, one below the carrier frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 20 dB below the transmitter power (i.e. -20 dBc), when measured with a resolution bandwidth of 1% (approximately) of the occupied bandwidth. In lieu of the -20 dBc bandwidth, the 99% emission bandwidth may be used.

3. General Requirements

3.1 RSS-Gen Compliance

RSS-112 shall be used in conjunction with RSS-Gen for general specifications and information relevant to the equipment for which this standard applies.

4. Measurement Method

4.1 Transmitter Output Power

Transmitter output power measurements shall be carried out before the test for unwanted emissions. The transmitter output power value obtained from this test shall be used as the reference level to determine the unwanted emission limits.

4.2 Transmitter Unwanted Emissions

The emission limits in section 5.5 shall be measured with the carrier frequency set at both the highest and lowest settable operating frequency permitted by the design of the equipment.

5. Transmitter and Receiver Standard Specifications

5.1 Band Plan

The band plan can be found in SRSP-514.

5.2 Types of Modulation

The devices shall employ digital modulation. The type of modulation used shall be reported.

5.3 Frequency Stability

The frequency stability shall be sufficient to ensure that the emission bandwidth stays within the authorized frequency block, when tested to the temperature and supply voltage variations specified in RSS-Gen.

5.4 Transmitter Output Power

The power shall be within ± 1.0 dB of the manufacturer's rated power.

Consult SRSP-514 for equipment's equivalent isotropically radiated power (e.i.r.p.) limits.

5.5 Transmitter Unwanted Emissions Limits

The power of any unwanted emissions in any 1 MHz bandwidth outside the frequency band 1670-1675 MHz shall be attenuated below the transmitter output power P (in watts) by at least $43 + 10 \log_{10}(P)$, dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least 1% of the emission bandwidth, provided that the energy is integrated over a 1 MHz bandwidth.

5.6 Receiver Spurious Emissions

Receiver spurious emissions shall comply with the limits specified in RSS-Gen.