
The AUSTRALIAN COMMUNICATIONS AUTHORITY makes this Standard under subsection 162 (1) of the Radiocommunications Act 1992.

Dated 2003

Chair

Deputy Chair

Australian Communications Authority

1 Name of Standard
This Standard is the Radiocommunications (Data Transmission Equipment Using Spread Spectrum Modulation Techniques) Standard 2003.

2 Commencement
This Standard commences 12 months after gazettal.

3 Application
This Standard applies to radiocommunications devices that are data transmission equipment used in the Industrial, Scientific and Medical (ISM) bands in the frequency ranges 915 to 928 MHz, 2.4 to 2.4835 GHz and 5.725 to 5.875 GHz, using spread spectrum modulation techniques.
4 Standard for performance

(1) For paragraph 162 (1) (a) of the Radiocommunications Act 1992, the standard for performance is the standard set out in AS/NZS 4771:2000 (the AS/NZ Standard) modified in accordance with this section, as in force from time to time, other than the following provisions:

(a) paragraphs 4.1 (a), (b), (c), (e), (f) and (h);
(b) subclause 4.3.1 (General);
(c) subclause 4.4 (Interpretation of the measurement results);
(d) subclause 5.1 (Modulation);
(e) clause 8 (Measurement uncertainty values);
(f) the variation of clause 5.2.2 in clause ZB2 of Appendix ZB.

(2) Clause 1 of the AS/NZ Standard is modified by omitting the words ‘2.4 to 2.483 5 GHz’, and substituting the words ‘915 to 928 MHz, 2.4 to 2.4835 GHz and 5.725 to 5.875 GHz’.

(3) Subclause 5.2.2 of the AS/NZ Standard is modified by substituting for the subclause the following words and note:

‘The peak power density is defined as the highest instantaneous level of power in Watts per Hertz generated by the transmitter within the power envelope.

Peak power density is not required to be measured for equipment using FHSS. Such equipment must, however, comply with the e.i.r.p limits in subclause 5.2.1. For DSSS and other forms of modulation, the peak power density from the transmitter output using the conducted test method must not exceed 8 dBm/3 kHz during any time interval of continuous transmission, when measured with a spectrum analyser or test receiver with a resolution bandwidth of 3 kHz and a video bandwidth of 100 kHz.

NOTE A reference to the e.i.r.p limits for class 2 equipment in subclause 5.2.1 is a reference to the e.i.r.p limits modified by subsection 4 (10) of this Standard.’.

(4) Appendix ZA, clause ZA1 of the AS/NZ Standard is modified by adding, after the words ‘Appendix ZA’ the words ‘or the European standard ETSI EN 300 328-1 V1.3.1 (2001-12)’.

(5) Appendix ZB, clause ZB1 of the AS/NZ Standard is modified by omitting the words ‘ETS 300 382’, and substituting the words ‘ETS 300 328’.

(6) Appendix ZB, clause ZB1 of the AS/NZ Standard is modified by adding, after the words ‘Appendix ZB’ the words and note:

‘and spread spectrum equipment that complies with Section 15.247 of the FCC Rules as at October 2000, where the frequency band and e.i.r.p meet the frequency band and e.i.r.p limits in subclause 5.2.1 of this Standard as varied by this Appendix ZB.

NOTE A reference to the e.i.r.p limits for class 2 equipment in subclause 5.2.1 is a reference to the modified e.i.r.p limits set out in subsection 4 (10) of this Standard.’.
(7) The modification of clause 2 made by clause ZB2 in Appendix ZB of the AS/NZ Standard is modified by adding, after the words ‘Section 15.247’ the words ‘as at January 1997’.

(8) The modification of clause 5.1.1 made by clause ZB2 of Appendix ZB of the AS/NZ Standard is modified by adding after paragraph 5.1.1 (b) the following paragraph and note:

‘(c) Frequency hopping systems operating in the 2.4 to 2.4835 GHz band with channel bandwidth greater than 1 MHz must use at least 15 non-overlapping hopping channels. The maximum radiated power of the hopping channel is 500 mW e.i.r.p. The average time of occupancy on any frequency must not exceed 0.4 seconds within the period required to hop through all channels.

NOTE: Table ZB1 in clause 5.2.1 of Appendix ZB sets out e.i.r.p limits for class 2 equipment. A reference to the e.i.r.p limits for class 2 equipment in subclause 5.2.1 is a reference to the modified e.i.r.p limits set out in subsection 4 (10) of this Standard.’.

(9) The modification of clause 5.1.1 made by clause ZB2 of Appendix ZB of the AS/NZ Standard is modified by omitting the paragraph:

‘In New Zealand, the number of hopping channels required is not defined, but the emission bandwidth of frequency hopping channels shall exceed 500 kHz at the 6 dB points as measured with a spectrum analyser or test receiver with an IF bandwidth of 30 kHz and a video bandwidth of 100 kHz. The emissions must be contained within the frequency bands specified in Clause 5.2.3.’.

(10) The modification of clause 5.2.1 by clause ZB2 of Appendix ZB of the AS/NZ Standard is modified by substituting for Table ZB1, the following table and notes:

<table>
<thead>
<tr>
<th>Frequency band MHz</th>
<th>EIRP W (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>915 to 928</td>
<td>1</td>
</tr>
<tr>
<td>2 400 to 2 483.5</td>
<td>4 (see note 1)</td>
</tr>
<tr>
<td>2 400 to 2 483.5</td>
<td>0.5 (see note 2)</td>
</tr>
<tr>
<td>5 725 to 5 875</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTES:

1. Frequency hopping systems with channel bandwidth equal to or less than 1 MHz bandwidth (20 dB bandwidth) must use at least 75 hopping frequencies, and have an average occupancy not greater than 0.4 seconds within a 30 second period, and are limited to 4 Watts e.i.r.p.

2. Frequency hopping systems with channel bandwidth greater than 1 MHz must use at least 15 non-overlapping hopping channels, with average occupancy not greater than 0.4 seconds within the period required to hop through all channels, and are limited to 500 mW e.i.r.p.
(11) The modification of clause 5.2.6 by clause ZB2 of Appendix ZB of the AS/NZ Standard is modified by omitting the word ‘DHSS’ wherever occurring and substituting the word ‘DSSS’.

5 Effect of standard for performance

(1) If a radiocommunications device is manufactured, imported, altered or modified less than 1 year after the standard for performance is amended, the device is taken to meet the standard for performance if it meets that standard as in force immediately before the amendment.

(2) A radiocommunications device that is manufactured, imported, altered or modified 1 year or more after the standard for performance is amended must meet the standard for performance as amended.

(3) A radiocommunications device that complies with the European standard ETSI EN 300 328-1 V1.3.1 (2001-12) is taken to comply with this Standard for performance.