

The Outline of Proposed Amendment to Ministerial Ordinance

1 Item

Partial amendment of Regulations for Enforcement of the Radio Law

2 Amendment to ministerial ordinance

Regulations for Enforcement of the Radio Law

Regulations for Radio Equipment

Concerning Technical Regulations Conformity Certification of Specified Radio Equipment

3 Reasons for amendment

Expanding sensor network increases the usages of 920MHz band low power wireless system which include the low speed radio communication using for detection sensors. Based on these usages, technical regulations such as the channel use, transmission time and antenna gain are required amendment to promote the development of the radio systems and services.

The reason for this amendment is to expand the new purpose of use of the 920MHz band low power wireless system and to meet demands for heavily use of radio frequency.

4 Outline of the amendment

Technical requirements of radio equipment (Red underlined character is amended)

○Technical requirements of Passive tag system 【Amended parts】

	1W RFID system	250mW RFID system
Radio type	No regulation	
Power	1W or less	250mW or less <u>The power can exceed 250mW up to 500mW when the radio equipment is inside one component which cannot be opened easily and EIRP (Effective Isotropically Radiated Power) is less than 27dBm.</u>

Antenna gain	6dBi or less	3dBi or less  <u>The antenna gain can exceed 3dBi up to 27dBm EIRP.</u>
Carrier sense level	-74dBm	-74dBm (-64dBm when power is less than 10mW.)  <u>In case of the power exceed 250mW, make carrier sense level decrease in dB which exceeded power beyond 250mW.</u>

○Technical requirements of Active tag system **【Amended part】**

	250mW system	20mW system	1mW system
Frequency tolerance	$\pm 20 \times 10^{-6}$ or less  <u>The frequency tolerance can exceed above value within the assigned frequency band when using one unit channel.</u>		
Power	250mW or less	20mW or less  <u>The power can exceed 20mW up to 250mW when the radio equipment is inside one component which cannot be opened easily and EIRP is less than 16dBm.</u>	1mW or less  <u>The power can exceed 1mW up to 250mW when the radio equipment is inside one component which cannot be opened easily and EIRP is less than 3dBm.</u>
Antenna gain	3dBi or less  The antenna gain can exceed 3dBi up to 27dBm EIRP.	3dBi or less  The antenna gain can exceed 3dBi up to 16dBm EIRP.	3dBi or less  The antenna gain can exceed 3dBi up to 3dBm EIRP.
Transmission time	[Carrier sense time : 5ms or more]  Sending duration: 4s or less  Pause duration: 50ms or more	[Carrier sense time : 5ms or more]  Sending duration: 4s or less  Pause duration: 50ms or more	[Carrier sense : No need]  (1) 916-928MHz  Sending duration: 100ms or less, cannot exceed 3.6s/h.  Pause duration: 100ms or

	<p>[Carrier sense time : 128μs or more]</p> <p>Sending duration: 400ms or less, cannot exceed 360s/h.</p> <p>Pause duration: 2ms or more</p> <p><u>The sending duration can be excluded from 360s/h limitation for ACK which starts within 2ms when receiving the request and finishes within 5ms (50ms for systems using one unit channel) when receiving the request.</u></p>	<p>[Carrier sense time : 128μs or more]</p> <p>Sending duration: 400ms or less, cannot exceed 360s/h.</p> <p>Pause duration: 2ms or more</p> <p><u>*The sending duration can be excluded from 360s/h limitation for ACK which starts within 2ms when receiving the request and finishes within 5ms (50ms for systems using one unit channel) when receiving the request.</u></p>	<p>more</p> <p>(2) 928.15-929.65MHz</p> <p>Sending duration: 50ms or less</p> <p>Pause duration: 50ms or more</p>
Carrier sense level	-80dBm	<p>-80dBm</p> <p><u>In case of the power exceed 250mW, make carrier sense level decrease in dB which exceeded power beyond 250mW.</u></p>	No need
Identification code	<u>32 bits or more which required operations for telecommunication business.</u>		

5 Proposed date of entry into force  
August, 2017