

## The Outline of Proposed Amendment to Ministerial Ordinance

### 1 Item

Partial revision of Regulations for Enforcement of the Radio Law etc

### 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

Recently, introduction of new wireless systems using broadband milliwave radars are expected. For example, motion sensors by gestures to remotely control mobile devices or TVs, biological information sensors that captures slight movement on the human body surface to measure heart rate with high accuracy and new radio system that enables both of data communication and radio evaluation. Further, considering that components of the data communication systems in 57-66GHz has been significantly changed, it has been desired to review the technical standards of the housing conditions of low power data communications system.

Japan will amend the current technical regulations for milliwave radar/sensor system based on these new usage needs.

### 4 Outline of the amendment

Technical requirements of milliwave radar system

| Item                                 |                               |                                |
|--------------------------------------|-------------------------------|--------------------------------|
| Name                                 | Milliwave radar/sensor system |                                |
| Frequency Allocation                 | 57GHz ~ 64GHz                 | 57GHz ~ 66GHz                  |
| Antenna Power                        | 10mW or less (Peak)           | 250mW or less(Peak or Average) |
| Occupied Bandwidth                   | 7GHz                          | 9GHz                           |
| Allowable deviation of Antenna Power | Max 50%, Min 70%              |                                |
| Antenna Gain                         | —                             | 10dBi or more                  |
| Equivalent Isotropic Radiated Power  | 13dBm or less                 | 400dBm or less                 |

|                                      |                                                                                                                                                                                                                                                                                           |                                                                                                                             |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Allowable deviation of Frequency     | depends on Designation Frequency                                                                                                                                                                                                                                                          | ±20ppm or depends on Designation Frequency.<br>(±500 ppm or depends on Designation Frequency in case of 10mW or less only.) |
| Unwanted Emission Strength           | Appendix 1                                                                                                                                                                                                                                                                                | Appendix 2                                                                                                                  |
| Secondary Radiated Emission Strength | Appendix 3                                                                                                                                                                                                                                                                                |                                                                                                                             |
| Modulation type                      | Frequency Modulated Continuous Wave except Frequency Modulated Continuous Wave                                                                                                                                                                                                            | —                                                                                                                           |
| Housing requirements                 | Both high-frequency portion and the modulation unit shall not be capable of being opened easily. Further, in the case where the high-frequency portion and the modulation unit are separated, oneness of them shall be kept and each of them shall not be capable of being opened easily. |                                                                                                                             |
| Transmission Time Control            | Duty 10%, in 33msec cycle                                                                                                                                                                                                                                                                 | —                                                                                                                           |
| Crosstalk Preventing Function        | By identifying the modulation type and other characteristics of the received radio wave, the radio equipment should have capacity to distinguish between the reflected radio wave that is transmitted by the local station and the radio wave that is transmitted by other station.       |                                                                                                                             |
| Others                               | Have a means that terminate the transmission of radio wave.                                                                                                                                                                                                                               | Transmitters is required a carrier sense function.                                                                          |

#### Appendix 1 (Unwanted Emission Strength)

|                   | Limit value (Peak) | Remarks  |
|-------------------|--------------------|----------|
| 55.62 GHz or less | -30dBm/MHz         | Spurious |
| 55.62 GHz - 57GHz | -26dBm/MHz         | Outband  |
| 64 GHz - 67.5GHz  | -26dBm/MHz         | Outband  |
| Over 67.5GHz      | -30dBm/MHz         | Spurious |

## Appendix 2 (Unwanted Emission Strength)

|                   | Limit value (Peak) | Remarks  |
|-------------------|--------------------|----------|
| 55.62 GHz or less | -30dBm/MHz         | Spurious |
| 55.62 GHz - 57GHz | -26dBm/MHz         | Outband  |
| 66 GHz - 67.5GHz  | -26dBm/MHz         | Outband  |
| Over 67.5GHz      | -30dBm/MHz         | Spurious |

## Appendix 3 (Secondary Radiated Emission Strength)

|              | Limit value (Average)                                       |
|--------------|-------------------------------------------------------------|
| below 1GHz   | Average power should be 4nW or less in any 100kHz bandwidth |
| 1GHz or more | Average power should be 20nW or less in any 1MHz bandwidth. |

- 5 Proposed date of entry into force  
January, 2020