# Outline of Proposed Amendment to Ministerial Ordinance

1 Item

Partial amendment of Regulations for Enforcement of the Radio Law, etc.

2 Scope of the amendment to ministerial ordinance

Regulations for Enforcement of the Radio Law

Regulations for Radio Equipment

Notices related

3 Reasons for amendment

Recently, the millimeter-wave devices has become popular, and it has led to increase demand for systems that use millimeter-wave as a small power sensor.

Especially in the 60 GHz band, it is possible to use a very wide band as the unlicensed band, and it is expected to use high-precision positioning functions such as a motion sensor which detect fingertip movements or a high-precision positioning function of a biometric sensor which measures the heart rate and a heart rate interval by capturing motion of the human body surface's slight movements.

Based on these circumstances, the technical conditions of the FMCW modulated system were examined in fiscal 2019, and the system was established in January 2020.

In order to further expand the application of wide-band sensors, the introduction of the technology standard is revised for the introduction of a sensor modulated by pulse wave, which has advantages such as excellent coexistence among sensors and relatively low power consumption of the equipments.

4 Outline of the amendment

Technical requirements of millimeter-wave radar system (to be added)

| Item | |
|---|---|
| Name | Millimeter-wave radar/sensor system |
| Frequency Allocation | 57GHz ~ 64GHz |
| Antenna Power | 0dBm or less（average）<br>12dBm or less（Peak） |
| Occupied Bandwidth | 7GHz |
| Allowable deviation of Antenna Power | Max 50%, Min 70% |
| Antenna Gain | — |
| Equivalent Isotropic Radiated Power | 5dBm or less（average）<br>17dBm or less（Peak） |
| Allowable deviation of Frequency | depends on Designation Frequency |
| Unwanted Emission Strength | Appendix 1 |
| Secondary Radiated Emission Strength | Appendix 2 |
| Modulation type | Pulse amplitude modulation |
| Housing requirements | Both high-frequency portion and the modulation unit shall not be capable of being opened easily. In addition, when 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 which is transmitted by the local station and the radio wave which is transmitted by other station. |
| Others | The system has means which terminate the transmission of radio wave. |

Appendix 1（Unwanted Emission Strength）

| | Limit value |
|---|---|
| 55.62 GHz or less | -30dBm/MHz |
| Over 55.62 GHz , 57GHz or less | -26dBm/MHz |
| Over 64 GHz , 67.5GHz or less | -26dBm/MHz |
| Over 67.5GHz | -30dBm/MHz |

Appendix 2（Unwanted Emission Strength）

| | Limit value |
|---|---|
| 55.62 GHz or less | -30dBm/MHz |
| Over 55.62 GHz, 57GHz or less | -26dBm/MHz |
| Over 64 GHz, 67.5GHz or less | -26dBm/MHz |
| Over 67.5GHz | -30dBm/MHz |

5　Proposed date of entry into force

July, 2021