Revision of Ordinance

60GHz band wireless system

Ministry of Internal Affairs and Communication (MIC) Ordinance promulgated and enforced "Partial revision of the Radio Act enforcement Ordinance" by the MIC ordinance No.99 which has issued on November 30, 2015. The primary change by this revision or notifications are the followings.

1. The revision of 60Ghz band wireless system classification.

Before the revision:

Certification Ordinance   Article 2, Paragraph 1, Item 8

-Specified Low Power Radio Station

Radio Act enforcement Ordinance   Article 6, Paragraph 4, Item 2 (12)   *deletion

-Use for the millimeter wave image transmission and data communications (57-66GHz)

Revised: Certification Ordinance   Article 2, Paragraph 1, Item 19-4-2   *addition

-60GHz Band Low Power Data Communication system (Antenna power: over 10mW)

Certification Ordinance   Article 2, Paragraph 1, Item 19-4-3   *addition

-60GHz Band Low Power Data Communication system (Antenna power: 10mW or less)

2. Improvement of the Technical Requirement

Before the revision:

Ordinance Regulating Radio Equipment   Article 49-14, Item 12   *deletion

-Specified Low-Power Radio Station (57-66GHz)

Revised: Ordinance Regulating Radio Equipment   Article 49-20, Item 7   *addition

-Low power data communication system (57-66GHz)

(1) Antenna Power

10mW or less → 250mW or less

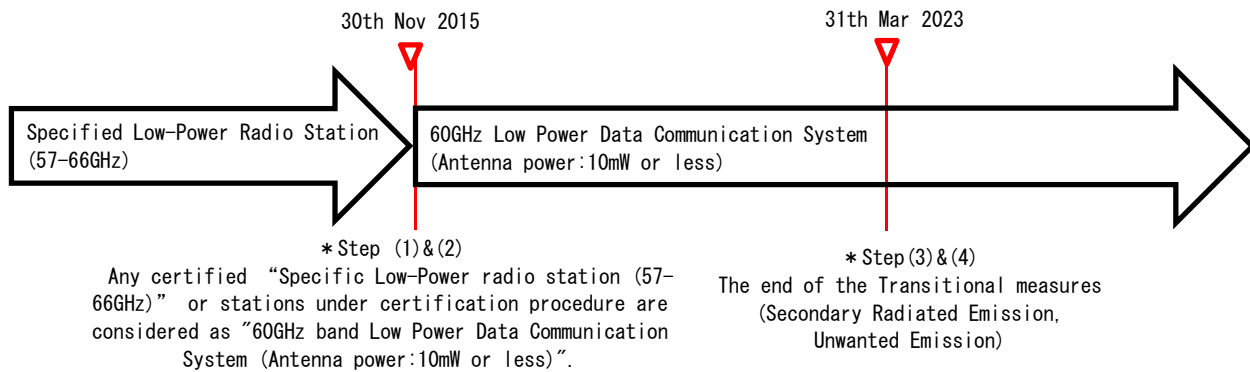(EIRP : 40dBm or less ← if antenna power is over 10mW)

(2) Occupied Bandwidth

2.5GHz → 9GHz

(3) Other revised Technical Requirements.

Any Antenna Power over 10mW should possess a carrier sensing function.

3. Step of procedures (e.g. shifting a certification class)


```
                    30th Nov 2015                          31th Mar 2023
                         ▽                                      ▽


┌──────────────────────────┐┌──────────────────────────────────────────────────┐
│ Specified Low-Power Radio ││ 60GHz Low Power Data Communication System         │──────▷
│ Station (57-66GHz)        ││ (Antenna power:10mW or less)                      │
└──────────────────────────┘└──────────────────────────────────────────────────┘

                    *Step (1)&(2)                           *Step(3)&(4)
          Any certified "Specific Low-Power radio     The end of the Transitional measures
          station (57-66GHz)" or stations under          (Secondary Radiated Emission,
          certification procedure are considered             Unwanted Emission)
          as "60GHz band Low Power Data
          Communication System (Antenna power:
          10mW or less)".
```

  (1) The radio equipment which have been certified as "Specified Low Power Radio Station for a Millimeter wave Image transmission or Data Communications" before this ordinance revision that are considered as the Radio equipment for "60GHz band low power data communication system (antenna power : 10mW or less)" by the revision.
 ＊Source: MIC Ordinance No.99 of 2015, Supplementary provision 2

  (2) The request procedures of certification for the radio equipment of "Specified Low Power Radio Station for a Millimeter wave Image transmission or data communications" within the transitional measurement that are followed as it for the Radio equipment of "60GHz Band Low Power Data Communication system (antenna power : 10mW or less)".
 ＊Source: MIC Ordinance No.99 of 2015, Supplementary provision 3

  (3) The limitation of Secondary Radiated Emission for "60GHz band Low Power Data Communication system (antenna power :10mW or less)" is "less than 100μW" from the date of the ordinances enforcement until March 31, 2023.
 ＊Source: MIC Ordinance No.99 of 2015, Supplementary provision 4

  (4) The permitted of Unwanted Emission strength for "60GHz band Low Power Data Communication system (antenna power :10mW or less) "are as followed contents from the date of the ordinances enforcement until March 31, 2023.
 ＊Source: MIC Ordinance No.99 of 2015 ,Supplementary provision 5

Spurious emission Strength in Outband area	Unwanted emission strength in Spurious area
100μW or less	50μW or less

Spurious emission band	Comparison bandwidth
"Over 9kHz" to "150kHz or less"	1kHz
"Over 150kHz" to "30MHz or less"	10kHz
"Over 30MHz" to "1GHz or less"	100kHz
"Over 1GHz"	1MHz

Condition for the frequency bandwidth	The boundary frequency in Outband area or spurious area
$BN < 1\,MHz$	$fc \pm 2.5MHz$
$1\,MHz \leqq BN \leqq 500MHz$	$fc \pm 2.5BN$
$BN > 500MHz$	$fc \pm (1.5BN + 500MHz)$

＊The boundary frequency shall include it in the spurious area

＊If the frequency of a emission wave extends over ranges more than two, the upper limitation range should be chosen.

Reference materials

Official Gazette extra No.269, November 30th, 2015

<Ordinance>

  * Partial revision of the Radio Act enforcement Ordinance (MIC ordinance No.99)

<Notification>

  * (MIC notification No.415, 418 and 419)

Contact to :

DSP Research, Inc.

Phone: +81-78-940-0377

Facsimile: +81-78-940-0378

E-mail: sch_rf@dspr.co.jp