

Rules on Radio Equipment

MIC Rule No. 622 (Rev. on Jan 1, 1978)

MIC Rule No. 686 (Rev. on Dec 12, 1980)

MIC Rule No. 716 (Rev. on Apr 16, 1982)

MIC Rule No. 761 (Rev. on Feb 1, 1985)

MIC Rule No. 771 (Rev. on Dec 18, 1985)

MIC Rule No. 801 (Rev. on May 17, 1988)

MIC Rule No. 824 (Rev. on Aug 8, 1990)

MIC Rule No. 838 (Rev. on Feb 1, 1992)

MIC Rule No. 842 (Rev. on Mar 2, 1992)

(Enforcement Regulation of Electric Communication Service)

MIC Rule No. 845 (Rev. on Jul 25, 1992)

(Enforcement Regulation of Radio Waves Law)

MIC Rule No. 871 (Rev. on Mar 25, 1994)

MIC Rule No. 22 (Rev. on Mar 29, 1996)

MIC Rule No. 45 (Rev. on Jan 1, 1998)

MIC Rule No. 108 (Rev. on Feb 8, 2001)

MIC Rule No. 135 (Rev. on Nov 7, 2002)

MIC Rule No. 161 (Rev. on Dec 7, 2004)

MIC Rule No. 163 (Rev. on Dec 31, 2004)

MIC Rule No. 168 (Rev. on Feb 12, 2005)

MIC Rule No. 179 (Rev. on Aug 29, 2005)

Chapter 1: General

Article 1 (Purpose) The provisions set forth in this rule provide for the technical standards and safety facility standards for radio equipment and radio wave application equipment pursuant to the authority contained in the Articles 45, 47, and 58 of the Radio Waves Act.

Article 2 (Definitions) The terms used in this rule shall have the following meaning.

1. "Receiver" refers to apparatus, which receives radio waves, and apparatus added thereto (hereinafter, receiving antennas and power lines).

2. "Mean power (PY)" refers to the average power supplied to an antenna transmission line by a transmitter under normal operating conditions, during an interval of time sufficiently long compared to the lowest frequency encountered in a modulation.

3. "Peak envelope power (PX)" refers to the average power supplied to an antenna transmission line by a transmitter under normal operating conditions, during one radio frequency cycle at the peak of the modulation envelope.

4. "Carrier power (PZ)" refers to the average power supplied to the antenna transmission line by a transmitter under the condition of no modulation, during one radio frequency cycle.

5. "Rated power" refers to output power rated for the terminal amplifier of a transmitter.

6. "Equivalent isotropically radiated power (EIRP) refers to the power supplied to an antenna, multiplied by the antenna gain (absolute or isotropic gain) in a given direction relative to an isotropic antenna.

7. "Antenna gain" means the ratio of the power required at the input of a loss-free reference antenna to the power supplied to the input of a given antenna to produce the same field strength or the same power flux density, in a given direction, at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Antenna gain is usually expressed in decibels.

8. "Transmission line" refers to a line connected between a transmitter or receiver and an antenna to transmit radio energy.

9. "Assigned frequency" means the center frequency of each frequency assigned to a radio station.

10. "Reference frequency" refers to a frequency fixed to a specific location with respect to the assigned frequency. In this case, the displacement of the reference frequency with respect to the assigned frequency has the same absolute value and sign as the displacement of the characteristic frequency with respect to the center frequency of the frequency band occupied by an emission.

11. "Characteristic frequency" is a frequency that can be easily identified and measured in a given emission.

12. "Frequency tolerance" refers to the maximum permissible departure by the center frequency of the frequency band occupied by an emission from the assigned frequency, or by the characteristic frequency of an emission from the reference frequency. Frequency tolerance is expressed in parts per million (ppm) or hertz (Hz)."

13. "Necessary bandwidth" refers to the width of a frequency band that is sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions, for a given class of emission.

14. "Occupied bandwidth" refers to the frequency bandwidth in which the mean powers, emitted below the lower and above the upper frequency limits, occurring as a result of modulation, are each equal to 0.5% of the total mean power of a given emission, unless otherwise specified.

15. "Spurious emission" refers to emission at a frequency or frequencies outside the necessary frequency bandwidth (the level emission may be reduced without affecting the corresponding transmission of information; spurious emissions include harmonic emissions, parasitic emissions, intermodulation products, and frequency conversion products, but exclude out-of-band emissions. The same applies below.)

15-2."Out-of-band emission" refers to emission on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions.

15-3. “Spurious emission” refers to emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

15-4. “Out-of-band domain (of an emission)” refers to the frequency range, immediately outside the necessary bandwidth but excluding the spurious domain, in which out-of-band emissions generally predominate.

15-5. “Spurious domain (of an emission)” refers to the frequency range beyond the out-of-band domain in which spurious emissions generally predominate.

16. “Full carrier” refers to a frequency that transmits a carrier at a constant level, to be received by both sideband receivers.

17. “Reduced carrier” refers to a frequency at which a carrier is transmitted by reducing it to a level to be used for controlling a local frequency from the receiver side.

18. “Suppressed carrier” refers to a frequency at which a carrier is suppressed and not intended to be used for demodulation from the receiver side.

19. “Interference” refers to an emission/radiation or induction of frequency that interrupts normal operations of other radio stations.

20. “Emergency position indicating radiobeacon (EPIRP)” refers to radio equipment that automatically sends out the location of vessels or aircraft in distress to facilitate search and rescue operations.

21. “Digital selective calling (CIS)” refers to equipment performing various calls automatically, including general/distress/group/individual calls, and establishing contact between ship station and coast station, or contact among ship stations by means of

radiotelephone equipment operating on medium wave band/short wave band/medium frequency band or very-high frequency (VHF) band.

22. "Narrow band direct printing system" refers to transmitting/receiving equipment using medium short frequency or short frequency for the purpose of distress/safety communications or general telex communications between ship stations and coast stations or among ship stations.

23. "Very-high frequency two-way radiotelephone equipment" refers to equipment on the very-high frequency (VHF) band for communication among ships, survival craft (survival equipment, such as lifeboats, and life rafts) when a ship is in distress.

24. "Search and rescue radar transponder (SART)" refers to equipment designed for use in survival craft of ships in distress by indicating the survival craft's own location on the radar screen with several dots to facilitate search and rescue operations.

25. "Radio buoy" refers to a radio device mounted on a buoy, transmitting information about the location of buoy or about weather automatically.

26. "Polarized wave" refers to the characteristics of a plane electromagnetic wave directed toward the oscillation direction of the electric field.

27. "Rated voltage" refers to voltage in a standard state, required to operate radio equipment reliably.

28. "Narrow-band system" refers to a radio equipment that uses necessary bandwidth smaller than the reference value of narrow-band prescribed in Table 3-2.

29. "Wide-band system" refers to a radio equipment that uses necessary bandwidth larger than the reference value of wide-band prescribed in Table 3-2.

The terms used in this regulation shall be defined in accordance with the Radio Wave Act, except for the definitions in item .

Chapter 2: Technical Standards of Radio Equipment

Article 3 (Frequency Tolerance) Frequency tolerances of radio waves emitted from transmission equipment shall be in accordance with the Table 1.

Article 4 (Bandwidth Tolerance) Bandwidth tolerances of radio waves emitted from transmission equipment shall be in accordance with the Table 2.

Required bandwidths set by the International Telecommunication Union shall be used in case of having difficulties in applying the provision of item ,

Article 5 (Spurious Emission Tolerance) Spurious emission tolerances from transmission equipment are presented in Table 3.

Article 6 (Power) The power of transmission equipment shall be indicated by antenna power. However, in the case of No. 1 of the following, rated power shall be substituted for the antenna power.

1. Transmission equipment which uses frequencies of 500MHz or less and vacuum tubes below one (1) watt or less rated power
2. Emergency portable wireless telegraph used for survival craft; radio beacons for emergency position indication (excluding transmission equipment for radio buoy, or wireless transmission equipment for aeronautical mobile service or aeronautical radioaviation service)

3. Transmission equipment for amateur stations and experimental stations (excluding transmission equipment for experimental stations airing broadcast)

4. Transmission equipment that is difficult/not necessary to measure peak envelope power, mean power, or carrier power, in addition to equipment of nos. 1-3

For the power of transmission equipment, equivalent isotropically radiated power (EIRP) or effective radiated power can be indicated if it is necessary to maintain and protect the order of radio wave use, in addition to the power stipulated in item .

Antenna power and conversion ratios by radio wave types are presented in Table 4; antenna power tolerance in Table 5. Measurements and calculating methods of antenna power shall be based on the notice by the Minister of Information and Communication.

Article 7 (Modulation Characteristics, etc) For transmission equipment in which the amplitude of carriers is modulated by modulating signals, modulation rates should not exceed 100%, whereas for transmission equipment in which the frequency of carriers is modulated, modulation rates should not exceed a range of maximum frequency deviation.

Radio equipment should be operated dependably at maximum communication speed or maximum modulation frequency.

Article 8 (Antenna System) Antenna systems should meet each of the following conditions:

1. Antenna should have high gain.
2. Matching should be done with the minimal loss of the reflected signal.
3. Directivity should be stable, so that the radiated power doesn't deviate from its direction

Article 9 (Receiving Equipment) The strength of radio waves, which are emitted indirectly from receiving equipment, should be -54dBmW or less if the measurement is made using a pseudo antenna circuit with the same electric constant as the receiving antenna.

Receiving equipment should meet each of the following conditions:

1. Receiving frequency should be within the operating range
2. Large selectivity
3. Low internal noise
4. Sensitivity should be good even at low signal input
5. Deletion <August 29, 2005>

Article 10 (Protective and Special Equipment) Power circuit using radio equipment that exceeds 10watt of antenna power should be equipped with fuses or automatic circuit breakers.

Radio stations notified by the Minister of Information and Communication to be necessary for easy telecommunication should be equipped with selective calling devices or identification equipment.

Article 11 (Power) Power supply for the operation of radio equipment should maintain voltage fluctuation rates to be within $\pm 10\%$.

Compulsory ship stations and compulsory aircraft stations should be able to supply power to meet each of the following conditions:

1. Should operate radio equipment of radio stations in question during navigation
2. Should be able to charge spare batteries

The power of emergency radio stations should be acceptable for each of the following conditions:

1. Should be able to operate a manual generator, motor generator, uninterruptible power supply equipment, or battery for 24 hours a day

2. Should be able to use maximum performance immediately

Article 12 (Conditions for Safe Operation of Radio Equipment) Radio equipment under this rule must be able to be operated dependably even when power changes within $\pm 10\%$ range of rated power, except that, among radio equipment using batteries, the radio equipment, with a function for automatically shutting down power supply when the voltage is low, must be able to be operated dependably within a range between a minimum voltage, which shuts down the power of radio equipment automatically, and a maximum voltage used by the corresponding radio equipment.

Even under usual changes of temperature and humidity, vibration, or shock, radio equipment should be able to be operated without a hitch.

Radio equipment should be installed in a safe place where there are no disturbances, such as external mechanical noise.

Article 13 (Spare Power and Items) Compulsory ship stations and aircraft stations should be equipped with spare power facilities that can replace a main power facility when it breaks down.

Spare power of a compulsory aircraft station should be able to operate necessary radio equipment for more than 30 minutes for safe navigation of aircraft.

Compulsory ship stations should be equipped with a pseudo antenna which can be tested over the entire power range of transmission equipment.

Compulsory ship stations should be equipped with emergency lighting for lighting up emergency radio equipment as well as equipment that controls radio equipment. In this case, the power of the emergency lighting should be separate from the normal power supply used for lighting the radio equipment.

Chapter 3: Technical Standard of Radio Wave Application Equipment

Article 14 (Tolerance Rate of Field Strength) Maximum tolerance rates of field strength of spurious emission or fundamental frequency emission from radio wave application equipment, apart from telecommunication equipment, specified in Article 45 of the Enforcement Decree of Radio Waves Act (referred to as “Decree” hereinafter) are as follows:

1. Radio Wave Application Equipment for Industrial Use: In a distance of 100m, $100\mu V/m$ or less for every 1m (if a surrounding zone, where the equipment in question is installed, belongs to the installer, a boundary of the zone is applied)

2. Radio Wave Application Equipment for Medical Use: $100\mu V/m$ or less for a distance of 30m (if a surrounding zone, where the equipment in question is installed, belongs to the installer, a boundary of the zone is applied)

3. Other Radio Wave Application Equipment

A) If high frequency output is 500watt or less: $100\mu V/m$ or less for a distance of 30m (if a surrounding zone, where the equipment in question is installed, belongs to the installer, a boundary of the zone is applied)

B) If high frequency output is 500watt: $100\mu V/m$ for a distance of 100m (if a surrounding zone, where the equipment in question is installed, belongs to the installer, a boundary of the zone is applied); and $100 \times (P)\mu V/m$ or less, where P is the number indicating high frequency output in watts, for a distance of 30m (if a surrounding zone, where the equipment in question is installed, belongs to the installer, a boundary of the zone is applied)

Article 15 (Frequency Tolerance) Frequency tolerance emitted from power-line carrying equipment (hereinafter referred to as “Power-line carrying equipment) stipulated in Article 46.1.1 of the Decree, as well as induction telecommunication equipment (hereinafter referred to as “Induction telecommunication equipment) stipulated in Article 46.1.2 of the Decree, shall be set to 0.1%.

Article 16 (Tolerance of Leakage Electric Field Strength) Field strength of leakage electricity, emitted from the fundamental wave of high frequency current on power lines of power-line carrying facilities, should not be higher than $500\mu V/m$ when measured at a distance of one meter or more away from transmission equipment and at a distance of $1/2\pi$

times the fundamental wave length away from a power line.

Field strength of leakage electricity, emitted from the fundamental electricity of high frequency current on power lines of induction telecommunication equipment, should not be higher than $200\mu V/m$ when measured at a distance of one meter or more away from transmission equipment and at a distance of $1/2\pi$ times the fundamental wave length away from the power line. However, due to a geographical situation, such as coal mines, if measurements cannot be made, this shall not be applied.

Harmonic/subharmonic frequencies or parasite emission strength, emitted from power-line carrying facilities and induction telecommunication equipment, should be 30 or less decibels for the fundamental frequency.

Article 17 (Interference Prevention) Carrier of a power line should be acceptable for each of the following conditions so that high-frequency current on the power line shall not cause interference to other telecommunication equipment.

1. Choke coils should be used at branchpoints of power lines carrying high-frequency current, depending on the required transmission characteristics.
2. Power lines carrying high-frequency current should take routes where other lines and radio equipment are sparse.

Lines of induction telecommunication equipment of high-frequency current should not be set up together with other lines, if possible, to prevent interference to the other telecommunication equipment.

Article 18 (Calculation Method of High-Frequency Output) Measurements of the high-frequency output of radio wave application equipment and their calculation methods shall be based on the notification of the Minister of Information and Communication.

Chapter 4: Standard of Safety Facility

Article 19 (Safe Facility for Radio Equipment) If a generator, which generates high voltage (AC voltage and high frequency exceeding 600 volts; and DC voltage exceeding 750 volts. The same applies below.), or a transformer and rectifier, where high voltage enters, are used to supply power to radio equipment, the corresponding apparatus should be protected with insulation shielding or metal shielding connected to the ground, to prevent easy access from the outside. However, if they are installed in a place where no one except qualified handlers is allowed to enter, such standard shall not be applied.

If power lines connect each unit device of transmission equipment and pass high voltage, they should be enclosed in firm insulation shielding or grounded metal shielding. However, if they are installed in a place where no one except qualified handlers can enter, this standard may not be applied.

If power lines are exposed from the control panel of transmission equipment or from the case and pass high voltage, they should be protected by a required technical standard for safe management of electric equipment, stipulated in Article 39 of the Electricity Business Law, even when the lines are insulated.

Equipment of high voltage, such as antenna/power lines of transmission equipment, should be installed 2.5m above a plane on which people walk or live. However, if the equipment belongs to No.1 of the following, this standard shall not be applied.

1. If a part of equipment located at a height of less than 2.5m does not touch the human body easily
2. If it is not easy to install equipment, such as a mobile station, because of its moving structure, and if it is located at a place where no one except qualified radio professionals are allowed to enter

Article 20 (Safety Facility, such as Antenna) A lightning arrester and grounding device should be installed in an antenna system of radio equipment, and a separate grounding device should be installed in the arrester. However, this does not apply to an antenna of portable radio equipment, land mobile station and simple radio station.

An antenna of radio equipment should not be severed by the sway of the antenna pole.

Article 21 (Safety Facility of Radio Wave Application Equipment for Industrial Use)

As it is stipulated in Article 45.1 of the Decree, radio wave application equipment for industrial use should be acceptable for each of the following conditions so that operation of the equipment does not harm the human body or cause damage to property.

1. Apparatus and power lines, which are charged by high voltage, should be enclosed in insulation shielding or metal shielding connected to the ground so that it cannot be touched from the outside easily. However, high frequency welder, vacuum tube electrode, or heating equipment, which must expose an electrode to achieve the goal of use, shall be excluded.

2. If the operation of equipment can induce high frequency current in the human body and conductor approaching the equipment, necessary equipment should be installed to prevent any danger

3. A grounding device should be installed for the safety of the human body

Article 22 (Safety Facility of Radio Wave Application Equipment for Medical Use)

As it is stipulated in Article 45.2 of the Decree, radio wave application equipment for medical use should be acceptable for each of the following conditions so that operation of the equipment shall not harm or damage the human body.

1. Apparatus and power lines charged with high voltage should be enclosed in insulation shielding or metal shielding connected to the ground so that it cannot be touched from the outside easily.

2. Insulation resistance between a compulsory electrode and its conductor, as well as oscillator/output circuit/ power line shall be higher than 50Mohm, which is measured by 500volt insulation resistance tester.

3. A compulsory electrode and its conductor should be covered by good insulation so that they do not touch the human body directly. However, some parts, such as a radio scalpel, which must use exposed electrodes when touching the human body, shall be excluded.

4. Grounded equipment should be installed for the safety of the human body

Article 23 (Applicable Provisions) The provision of Article 19 shall be in conformity with the safety standard of radio wave application equipment--telecommunication equipment, specified in Article 46 Item of the Decree.

The provision of Article 21 shall be in conformity with the safety standard of radio wave application equipment stipulated in Article 45 No.3 of the Decree.

Chapter 5: Supplementary Regulations

Article 24 (Notice of Detailed Regulation) Detailed regulations for radio equipment and radio wave application equipment stipulated in Chapters 2 -4 (Articles 3 – 23) of the Standard of radio equipment and radio wave application equipment shall be determined and notified by the Minister of Information and Communication.

Detailed standards of item shall be based on the following classifications:

1. Radio equipment for broadcasting service
2. Radio equipment for maritime mobile service and maritime radionavigation service
3. Aeronautical mobile service and aeronautical radionavigation service
4. Radio equipment for telecommunication service (including radio equipment of radio station to receive telecommunication service)

5. Radio equipment for other service besides Nos. 1-4.
6. Radio wave application equipment
7. Safety facility standard of radio equipment and radio wave application equipment

Article 25 (Recommendation of Standard Test Method) The Minister of Information and communication can determine and recommend a standard test method for the technical standard of radio equipment to execute the standard of the regulation effectively.

ADDENDUM (MIC Rule No. 108, Feb. 8, 2001)

(Enforcement Date) This regulation will be effective one (1) month after it is promulgated.

(Interim Measures of Frequency Tolerance) For radio equipment, which has been already installed at the time of the enforcement of this regulation, frequency tolerance, Tolerance of occupied frequency bandwidth, spurious emission tolerance, and antenna power tolerance shall be based on previous regulations.

(Interim Measures for the Technical Conditions of Radio equipment of Radio stations using frequencies ranging from 138MHz to 174MHz) For radio equipment (including replacement or addition of radio equipment of a radio station, which has been approved by previous regulations before March 29, 1996) using frequencies ranging from 138MHz to 174MHz, which has already been installed before the enforcement date (Mar. 29, 1996) of the Revised Radio Equipment Regulations of the MIC Rule No. 22, its technical conditions shall be based on the previous regulations until December 31, 2004, despite the revised regulations of Tables 1-3 as well as Article 24.

ADDENDUM (MIC Rule No. 163, Dec. 31, 2004)

This regulation will be effective from January 1, 2005.

ADDENDUM (MIC Rule No. 135, Nov. 7, 2002)

(Enforcement Date) This regulation will be effective from January 1, 2003.

(Interim Measures) Spurious emission tolerance of the following radio equipment shall be based on Table 3.2 until December 31, 2011, despite the revised regulation of Table 3.

1. Radio equipment that has already been installed before the enforcement of this regulation
2. Radio equipment that has finished a formal examination or registration in accordance with Article 46 item 1 of the Radio Waves Act, before the enforcement of this regulation
3. Radio equipment that has applied for a formal examination or registration in accordance with Article 46 item 1 of the Radio Waves Act, before the enforcement of this regulation.

ADDENDUM (MIC Rule No. 161, Dec. 7, 2004)

This regulation will be effective from January 1, 2005.

ADDENDUM (MIC Rule No. 168, Feb. 12, 2005)

This regulation will be effective from the date of promulgation.

ADDENDUM (MIC Rule No. 179, Aug. 29, 2005)

This regulation will be effective from the date of promulgation.

[Table 1]

Frequency Tolerance (Related to Article 3)

Frequency Range	Type of Radio Station	Tolerance (use ppm except for the numbers with Hz)
9kHz to 535kHz	1. Fixed station	
	A. Radio equipment ranging from 9kHz to 50kHz	100
	B. Radio equipment ranging from 50kHz to 535kHz	50
	2. Land station	
	A. Coast station	100 1), 2)
	B. Aeronautical station	100
	3. Mobile station	
	A. Ship station	200 2), 3)
	B. Emergency transmission equipment for ships	500 4)
	C. Craft station	500
	D. Aircraft station	100
	4. Radiodetermination station	100
	5. Standard frequency station	0.005
6. Broadcasting station	10Hz	
535kHz to 1,606.5kHz	Broadcasting station	10Hz
1606.5kHz to 4,000kHz	1. Fixed and land stations	
	A. 200W or less radio equipment	100 1), 2), 5), 6), 7), 8)
	B. Over 200W radio equipment	50 1), 2), 5), 6), 7), 8)
	2. Mobile station	
	A. Ship station	40Hz 2), 3), 9)
	B. Mobile rescue station	100
	C. Emergency position indicating radiobeacon station	100
	D. Aircraft station	100 8)
	E. Land mobile station	50 10)
	3. Radiodetermination station	
A. 200W or less radio equipment	20 11)	

	B. Over 200W radio equipment	10 11)
	4. Broadcasting station	10Hz 12)
	5. Standard frequency station	0.005
	6. Amateur station	500
29.7MHz to 100MHz	1. Fixed station	
	A. 50W or less radio equipment	30
	B. Over 50W radio equipment	20
	2. Land station	20
	3. Mobile station	20 16)
	4. Radiodetermination station	50
	5. TV station	500Hz 17), 18)
	6. Digital TV station	1
	7. Other broadcasting stations	2,000Hz 19)
	8. Standard frequency station	0.005
	9. Amateur station	500
	10. Simple radio station	50
	11. Space station	20
	12. Earth station	20
100MHz to 470MHz	1. Fixed station	
	A. 138MHz - 174MHz radio equipment	
	(1) 2W or less radio equipment	8
	(2) Over 2W radio equipment	6
	B. 335.4MHz - 470MHz radio equipment	
	(1) 2W or less radio equipment	4 20), 21)
	(2) Over 2W radio equipment	3 20), 21)
	C. Other frequencies of radio equipment	
	(1) 50W or less radio equipment	20 20)
	(2) Over 50W radio equipment	10
	2. Land station	
	A. Coast station	10
	B. Aeronautical station	20 22)
	C. Base station	

(1) 100MHz - 138MHz radio equipment	15 23)
(2) 138MHz - 174MHz radio equipment	
(a) 2W or less radio equipment	8
(b) Over 2W radio equipment	6
(3) 174MHz - 235MHz radio equipment	15 23)
(4) 235MHz - 335.4MHz radio equipment	7 23)
(5) 335.4MHz - 470MHz radio equipment	
(a) 2W or less radio equipment	4
(b) Over 2W radio equipment	3
3. Mobile station	
A. Transmission equipment for ship stations and survival craft	
(1) 156MHz - 174MHz radio equipment	10
(2) 156MHz - 174MHz radio equipment	50 24)
B. Aeronautical station	30 22)
C. Land mobile station	
(1) 100MHz - 138MHz radio equipment	15 23)
(2) 138MHz- 174MHz radio equipment	
(a) 2W or less radio equipment	8
(b) Over 2W radio equipment	6
(3) 174MHz - 235MHz radio equipment	15 23)
(4) 235MHz- 335.4MHz radio equipment	7 23), 25)
(5) 335.4MHz - 470MHz radio equipment	
(a) 2W or less radio equipment	4
(b) Over 2W radio equipment	3
4. Radiodetermination station	500 26)
5. TV station	500Hz 17), 18)
6. Digital TV station	1
7. Other broadcasting station	2,000Hz 19)
8. Standard frequency station	0.005
9. Simple radio station	
A. 138MHz - 174MHz radio equipment	
(1) 2W or less radio equipment	8

	(2) Over 2W radio equipment	6
	B. 335.4MHz - 470MHz radio equipment	
	(1) 2W or less radio equipment	4
	(2) Over 2W radio equipment	3
	C. Other frequencies of radio equipment	20
	10. Amateur station	
	A. 1W or less radio equipment	1,000
	B. Over 1W radio equipment	500
	11. Space station	20
	12. Land station	20
	13. Specified low-power radio station	7
470MHz to 2,450MHz	1. Fixed station	
	A. 100W or less	100
	B. Over 100W	50
	2. Land station	20
	3. Mobile station	20
	4. Radiodetermination station	500 26)
	5. Amateur station	500
	6. TV station (frequencies ranging from over 470MHz to 960MHz or less)	500Hz 17), 19)
	7. Digital TV station	1
	8. Other broadcasting stations	100
	9. Space station	20
	10. Earth station	20
2,450MHz to 10.5GHz	1. Fixed station	
	A. 100W or less	200
	B. Over 100W	50
	2. Land station	100
	3. Mobile station	100
	4. Radiodetermination station	1,250 26)
	5. Amateur station	500
	6. Space station	50

	7. Earth station	50
10.5GHz - 40GHz	1. Fixed station	300
	2. Radiodetermination station	5,000 26)
	3. Broadcasting station	100
	4. Space station	100
	5. Earth station	100

Remark:

1. In the table, Hz is the unit of radio wave frequency and indicates cycles per second; W and kw indicate the amount and unit of antenna power.

2. In the table, antenna power is peak envelope power (PX) for single-sideband transmission equipment and mean power (PX) for other transmission equipment.

3. If the same transmission equipment and the same frequency are used for more than two (2) services, smaller tolerance shall be used.

Note:

1) Although a frequency tolerance of radio wave for equipment transmitting a coast station's printing telegraph or data is specified in this table, the following shall be applied:

A) Transmission equipment using narrow-band phase-shift keying (PSK): 5Hz

B) Transmission equipment (installed before Jan. 1, 1992) using frequency-shift keying (FSK): 15Hz

C) Transmission equipment (has already been installed or is to be installed since Jan, 2, 1992) using frequency-shift keying (FSK): 10Hz

2) Although a frequency tolerance of radio waves for equipment transmitting a ship station or coast station's digital selective calling is specified in this table, 10Hz shall be used.

3) Although a frequency tolerance of radio waves for equipment transmitting a ship station's printing telegraph or data is specified in this table, the following shall be applied:

A) Transmission equipment using narrow-band phase-shift keying (PSK): 5Hz

B) Transmission equipment (installed before Jan. 1, 1992) using frequency-shift keying (FSK): 40Hz

C) Transmission equipment (has already been installed or is to be installed since Jan, 2, 1992) using frequency-shift keying (FSK): 10Hz

4) If a ship's emergency transmission equipment is used as spare equipment of main

transmission equipment, the frequency tolerance of a ship station shall be applied to the emergency transmission equipment in question.

5) Although a frequency tolerance for single sideband radio telephone transmission equipment (excluding transmission equipment for coast stations and aeronautical stations) is specified in this table, 20Hz shall be used.

6) Although a frequency tolerance of radio waves for radio telegraph transmission equipment, which uses frequency-shift keying (FSK), is specified in this table, 10Hz shall be used.

7) Although a frequency tolerance for a coast station's single sideband radio telephone transmission equipment is specified in this table, 20Hz shall be used.

8) Although a frequency tolerance of radio waves for single sideband radio telephone transmission equipment used for aeronautical mobile (R) service, which uses a band ranging from over 1,606.5kHz to 4,000kHz or less as well as a band ranging from over 4MHz to 29.7MHz or less, is specified in this table, the following shall be applied.

A) Aeronautical station: 10Hz

B) Aircraft station performing international business: 20Hz

C) Aircraft station not performing international business: 50Hz(If possible, 20Hz)

9) Although there is a specified value for A1A emission in this table, 50(10-6) shall be applied.

10) Although a frequency tolerance of radio wave for transmission equipment of single sideband radio telephone, or for radio telegram transmission equipment using frequency-shift keying (FSK) is specified in this table, 40Hz shall be used.

11) Although a frequency tolerance of radio waves for transmission equipment for radiobeacons, which uses frequencies ranging from over 1,606.5kHz to 1,800kHz or less, is specified in this table, 50(10-6) shall be used.

12) Although a frequency tolerance for transmission equipment using carrier power of 10kW or less as well as radio wave A3E is specified in this table, the following shall be applied:

A) From over 1,606.5kHz to 4,000kHz or less radio equipment: 20(10-6)

B) From over 4MHz to 5.95MHz or less radio equipment: 15(10-6)

C) From over 5.95MHz to 29.7MHz or less radio equipment: 10(10-6)

13) Although there is a specified value for A1A emission in this table, 10(10-6) shall be

applied.

14) Although a frequency tolerance for a ship station's transmission equipment, which is installed in small vessels at sea near the coast and which uses radio wave A3E at a frequency band ranging from over 26,175kHz to 27,500kHz or less, is specified in this table, 40(10-6) shall be applied.

15) Although a frequency tolerance of radio waves for transmission equipment of single sideband radio telephone (excluding such transmission equipment if peak envelope power is 15W or less at a frequency band ranging from over 26,175kHz to 27,500kHz or less) is specified in this table, 50Hz shall be applied.

16) For portable equipment that is not installed in a vehicle, a frequency tolerance of radio waves for transmission equipment running on the mean 5W or less is specified in this table, 40(10-6) shall be applied.

17) A frequency tolerance of radio waves for radio equipment of a low-power TV station is specified in this table, the following shall be applied:

A) A frequency tolerance for radio equipment of TV station, using a frequency band ranging from over 29.7MHz to 100MHz or less, as well as a frequency band ranging from over 100MHz to 960MHz or less; and their image peak envelope power 50W or less as well as 100W, respectively; and receiving inputs from other TV stations and broadcasting them to a few viewers: 2000Hz

B) A frequency tolerance for radio equipment, using a frequency band ranging from over 100MHz to 470MHz or less and image peak envelopes power 1W or less: 5kHz

C) A frequency tolerance for radio equipment, using a frequency band ranging from over 470MHz to 960MHz or less and image peak envelopes power 1W or less: 10kHz

18) Although a frequency tolerance of radio waves for radio equipment, which cannot be applied to the case of Note 17) but transmits NTSC signals, is specified in this table, 1000Hz shall be applied.

19) Although a frequency tolerance of radio waves for transmission equipment, which runs on a frequency band of 108MHz or less and the mean power 50W or less, is specified in this table, 3000Hz shall be applied.

20) Although a frequency tolerance for radio equipment of multistage radio relaying, which uses frequency conversion directly, is specified in this table, 30(10-6) shall be applied.

21) Although a frequency tolerance of radio waves for radio equipment of a radio station, which runs a broadcasting business, is specified in this table, the following shall be applied.

A) 50W or less radio equipment: 20(10-6)

B) Over 50W radio equipment: 10(10-6)

22) Although a frequency tolerance for the channel gap of 50kHz is specified in this table, 50(10-6) shall be applied.

23) This applies to a channel gap of 20kHz or more.

24) Although a frequency tolerance of radio waves for equipment used for on-board telecommunication is specified in this table, 5(10-6) shall be applied.

25) For portable equipment that is not installed in a vehicle, a frequency tolerance of radio waves for transmission equipment running on the mean 5W or less is specified in this table, 15(10-6) shall be applied.

26) If a specific frequency is not assigned to a radar system, an occupied bandwidth of radio waves emitted by the system in question should be maintained within a band distributed to the corresponding business. In this case, the specified frequency tolerance shall not be applied.

[Table 2]

Tolerance of Occupied Frequency Bandwidth (Related to Article 4, Paragraph 1)

Frequency Type	Radio Equipment	Tolerance of Occupied Frequency Bandwidth
A1A	1. Radio equipment of radio stations using 100kHz or less frequencies of radio waves	250Hz
A1B	2. Radio equipment of radio stations which cannot be applied to No.1 (excluding emergency position indicating radiobeacon as well as emission equipment of survival craft)	500Hz
A2A	1. Radio equipment of radiobeacon stations emitting radio waves of 75MHz	6.5kHz
A2B	2. Radio equipment of meteorological aid service stations using frequencies ranging from 400.15MHz to 406MHz	1MHz
	3. Radio equipment of meteorological aid service stations using frequencies ranging from 1,668.4MHz to 1,700MHz	6MHz
	4. Radio equipment of radio stations in the maritime mobile service, using modulation frequencies ranging from 1,000Hz to 2,200Hz (excluding emergency position indicating radiobeacons as well as transmission equipment for survival craft)	5kHz
	5. Radio equipment of radio stations, not belonging to nos. 1-4	2.5kHz
H2A	1. Radio equipment of radio stations in the maritime mobile service, using modulation frequencies ranging from 1,000Hz to 2,200Hz (excluding emergency position indicating radiobeacons as well as transmission equipment for survival craft)	3kHz
H2B	2. Radio equipment of radio stations not belonging to No.1 (excluding emergency position indicating radiobeacons as well as transmission equipment for survival craft)	1.5kHz
A3E	1. Radio equipment of radio stations for international public telecommunication, transmitting broadcasting	8kHz

	programs	
	2. Radio equipment for radio stations and broadcasting relay (i.e., broadcasting program relay, not for the direct reception from the general public. The same applies below)	10kHz
	3. Radio equipment for stereophonic broadcasting stations and for broadcasting relay	15kHz
	4. Radio equipment of radio station, not belonging to Nos. 1-3	6kHz
R3E,H3E,J3E	Radio equipment for all radio stations	3kHz
C3F,C9F,F3E, F8E,G3E,C2 W, C7W,G7W	Radio equipment of broadcasting stations for TV broadcast	6MHz
F1A, F1B, F1D,	1. Radio equipment of ship stations and coast stations for digital selective calling/ narrow band direct-printing telegraph apparatus/ printing telegraph, or for data transmission	0.5kHz
G1A, G1B,	2. Emergency position indicating radiobeacons using frequencies of radio waves, which range from 1,644.3MHz to 1,646.5MHz	0.6kHz
G1D	3. Radio equipment communicating via scattering waves, not belonging to radio equipment of radio stations,	2kHz
	4. Radio equipment of radio stations using frequency bands ranging: 1) from 138MHz to 174MHz; 2) from 335.4MHz to 470MHz; and 3) from 457.5MHz to 467.6MHz (limited to port stations). (excluding radio stations for broadcasting relay and in the maritime mobile service)	8.5kHz
	5. Radio equipment of specified low-power radio stations using a frequency band of radio waves 200MHz	16kHz
	6. Satellite emergency position-indicating radiobeacon equipment using a frequency band of radio waves ranging from 406.0MHz to 406.1MHz	20kHz
	7. Radio equipment of radio stations, not belonging to nos. 1-6	3kHz
F2A,	1. Radio equipment of radio stations using frequency	8.5kHz

F2B, F2D, F9D,	bands ranging: 1) from 138MHz to 174MHz; 2) from 335.4MHz to 470MHz; and 3) from 457.5MHz to 467.6MHz (limited to port stations). (excluding radio stations of broadcasting relay and maritime mobile service, as well as amateur stations)	
F9X, G2A, G2B, G2D, K2A,	2.. Radio equipment of radio stations using frequency bands ranging: 1) from 72MHz to 76MHz; 2) from 335.4MHz to 470MHz; 3) from 146MHz to 174MHz; and 4) from 457.5MHz to 467.6MHz (excluding amateur stations)	16kHz
K2B	3. Radio equipment of specified low-power radio stations using a frequency band of radio waves 200MHz	
	4. Radio equipment of radio stations using a frequency band of radio waves 940MHz - 960MHz	400kHz
	5. Radio equipment of meteorological aid service stations using a frequency band of radio waves, which ranges from 400.15MHz to 406MHz	1MHz
	6. Radio equipment of meteorological aid service stations using a frequency band of radio waves, which ranges from 1668.4MHz to 1,700MHz	6MHz
	7. Radio equipment of radio stations, not belonging to nos. 1-6	3kHz
F3E, G3E	1. Radio equipment of radio stations using frequency bands of radio waves ranging: 1) from 29.7MHz to 50MHz; 2) from 138MHz to 174MHz; 3) from 335.4MHz to 470MHz; and 4) from 457.5MHz to 467.6MHz (limited to port stations). (excluding radio stations of broadcasting relay and maritime mobile service, as well as amateur stations)	8.5kHz
	2. Radio equipment of radio stations using frequency bands of radio waves ranging: 1) from 25.11MHz to 27.5MHz; 2) from 29.7MHz to 50MHz; 3) from 72MHz to 76MHz; 4) from 146MHz to 174MHz (limited to amateur stations as well as radio stations in the maritime mobile service); 5) from 216MHz to 223MHz; and 6) from 457.5MHz to 467.6MHz (excluding radio stations of broadcasting relay)	16kHz
	3. Radio equipment of radio stations, not belonging to nos. 1-2, using a frequency range of radio waves 200MHz or less	40kHz

	4. Radio equipment of very high frequency (VHF) broadcasting stations	180kHz
	5. Radio equipment of radio stations in the mobile service relaying broadcast using frequencies ranging from 174MHz - 585MHz	100kHz
	6. Broadcasting stations as well as radio equipment of fixed stations relaying broadcasts using frequencies in the range of 72MHz - 585MHz	200kHz
	7. Radio equipment of radio stations using frequencies in the range of 942MHz-960MHz	400kHz
F8E,F9W, F9E	Radio equipment of VHF broadcasting stations	260kHz
F7W,G7W	Radio equipment of radio stations in the subscription service of mobile telephone communication using a frequency band of radio waves 800MHz; and radio equipment for personal portable telephone using a frequency band of radio waves 1800MHz	1.32MHz
P0N,K2A	Radio equipment of meteorological aid service stations using a frequency band of radio waves, ranging from 1,670MHz to 1,690MHz	6MHz

[Table 3]

Tolerance of Spurious Emission (Related to Article 5)

Category	Service or Radio Equipment	Antenna Power Attenuation (decibel)
1	Space service	A less strict value between $43+10\log(PY)$ and 60dBc
2	Radio position determination service	A less strict value between $43+10\log(PX)$ and 60dB
3	TV broadcasting service	A less strict value between $46+10\log(PY)$ and 60dBc; not exceeding the mean power 1mW for VHF radio stations and the mean power 12mW for UHF radio stations
4	VHF broadcasting service	A less strict value between $46+10\log(PY)$ and 70dBc; not exceeding the mean power 1mW
5	MF/HF broadcasting service	50dBc and not exceeding the mean power 50mW
6	Single-sideband mobile station	43dB lower than the peak envelope power (PX)
7	Amateur service for less than 30MHz band (including single-sideband telecommunication system)	A less strict value between $43+10\log(PX)$ or 50dB
8	Service for less than 30MHz band (excluding space service, radio position determination service, broadcasting service, single-sideband mobile service, and amateur service)	A less strict value between $43+10\log(X)$ and 60dBc. In this case, X takes PX for single-sideband modulation method and PY for other modulation methods
9	Specified low-power radio apparatus	A less strict value between $56+10\log(PY)$ and 40dBc
10	Emergency transmission equipment	No restriction
11	Other services and radio equipment	A less strict value between $43+10\log(PY)$ and 70dBc

Note:

1) A measurement method of spurious emission tolerance shall follow the International Telecommunication Union (ITU) Recommendation SM329

2) The base boundary of out-of-band area and spurious area shall be the frequency separated by 250 percents from the center frequency of necessary bandwidth. Provided, the boundary for narrow/wide band system shall be subject to Table 3-2.

3) A measurement standard bandwidth for spurious emission is set to 1kHz at frequencies

9kHz-150kHz; 10kHz at 150kHz-30MHz; 100kHz at 30MHz~1GHz; and 1MHz at 1GHz or more. However, for space service, it is set to 4kHz regardless of frequencies.

4) The symbol dBc is dB (decibel) based on unmodulated carrier power. However, if there is no carrier, or no carrier can be measured, dBc is dB based on the mean power.

5) The unit of mean power (PY) and peak envelope power (PX) is watt (W).

6) For earth stations of amateur services standard of less than 30MHz amateur service shall be applied; for space stations that are more than 2×10^6 km away from the earth, a spurious emission limit shall not be applied.

7) If radio interference should be prevented, a stricter tolerance standard of spurious emission than the one specified in this table shall be applied.

8) “Specified low-power radio apparatus” refers to radio devices stipulated by Article 30.6 of the Enforcement Decree of Radio Waves Act.

9) “Emergency transmission equipment” refers to emergency position indicating radiobeacons, emergency position indicating transmitters, personal location beacons (PLB), search and rescue transponders, survival craft transmitters, as well as emergency land, aeronautical or maritime transmitters.

[Table 3.2]

Tolerance of Spurious Emission (related to Item 2 of Appendics)

1. Base boundary

Frequency Range	Narrow-Band		Wide-Band	
	Reference	Boundary	Reference	Boundary
9 kHz < f_c 150 kHz	250 Hz	625 Hz	10 kHz	1.5 B_N +10 kHz
150 kHz < f_c 30 MHz	4 kHz	10 kHz	100 kHz	1.5 B_N +100 kHz
30 MHz < f_c 1 GHz	25 kHz	62.5 kHz	10 MHz	1.5 B_N +10 MHz
1 GHz < f_c 3 GHz	100 kHz	250 kHz	50 MHz	1.5 B_N +50 MHz
3 GHz < f_c 10 GHz	100 kHz	250 kHz	100 MHz	1.5 B_N +100 MHz
10 GHz < f_c 15 GHz	300 kHz	750 kHz	250 MHz	1.5 B_N +250 MHz
15 GHz < f_c 26 GHz	500 kHz	1.25 MHz	500 MHz	1.5 B_N +500 MHz
26 GHz < f_c	1 MHz	2.5 MHz	500 MHz	1.5 B_N +500 MHz

2. Base boundaries of narrow-bands for specific services

Service Name	Frequency Range	Narrow-band		
		Reference	Boundary	
Fixed service	14 kHz ~ 1.5 MHz	20 kHz	50 kHz	
	1.5 ~ 30 MHz	$P_T \leq 50$ W	30 kHz	75 kHz
		$P_T > 50$ W	80 kHz	200 kHz

3. Base boundaries of wide-bands for specific services

Service Name	Frequency Range	Wide-band	
		Reference	Boundary
Fixed service	14 ~ 150 kHz	20 kHz	1.5 B_N +20 kHz
Fixed satellite service	3.4 ~ 4.2 GHz	250 MHz	1.5 B_N +250 MHz
Fixed satellite service	5.725 ~ 6.725 GHz	500 MHz	1.5 B_N +500 MHz
Fixed satellite service	7.25 ~ 7.75 GHz, 7.9 ~ 8.4 GHz	250 MHz	1.5 B_N +250 MHz
Fixed satellite service	10.7 ~ 12.75 GHz	500 MHz	1.5 B_N +500 MHz
Broadcasting-satellite service	11.7 ~ 12.75 GHz	500 MHz	1.5 B_N +500 MHz
Fixed satellite service	12.75 ~ 13.25 GHz	500 MHz	1.5 B_N +500 MHz
Fixed satellite service	13.75 ~ 14.8 GHz	500 MHz	1.5 B_N +500 MHz

Note:

- 1) f_C , B_N and P_T refer to center frequency, necessary bandwidth and antenna power, respectively.
- 2) When the assigned bandwidth of system comes across two frequency ranges, the base boundary in higher frequency range shall be applied.
- 3) For multi-carrier satellite system and the first radar, the base boundary of out-of-band and spurious emission shall be subject to Recommendation SM.1541 of Convention of the International Telecommunication Union.

[Table 3.3]

Tolerance of Spurious Emission (related to Paragraph 2 of ADDENDUM)

Fundamental Frequency Band		Tolerance of the mean power of spurious emission at each frequency supplied to power lines 1)	Remark
Over 9kHz to 30MHz or less		50milliwatt or less; 40dB lower than the mean power of fundamental frequency 2)	
Over 30MHz to 235MHz or less	Transmission equipment of the mean power 25W or less	25microwatt or less; 40dB lower than the mean power of fundamental frequency 3), 4), 5)	For transmission equipment of multiplex communication, 40 decibels (dB) lower than the mean power of fundamental frequency
	Transmission equipment of the mean power over 25W	1milliwatt or less; 60dB lower than the mean power of fundamental frequency 3), 5)	
Over 235MHz to 960MHz or less	Transmission equipment of the mean power 25W or less	25microwatt or less; 40dB lower than the mean power of fundamental frequency 3), 5)	
	Transmission equipment of the mean power over 25W	20milliwatt or less; 60dB lower than the mean power of fundamental frequency 3),5)	
Over 960MHz to 17.7GHz or less	Transmission equipment of the mean power 10W or less	100microwatt or less 3)	
	Transmission equipment of the mean power over 10W	100milliwatt or less; 50dB lower than the mean power of fundamental frequency 3)	
Over 17.7GHz		40dB lower than the mean power of fundamental frequency 3)	

Note:

1) This tolerance of spurious emission shall not be applied if emergency position indicating radiobeacons (ERIRB), emergency position-indicating transmitters (ELT), personal-location beacons (PLB), search and rescue transponders, survival craft transmitters, and maritime-service transmitters are used in the case of emergency.

2) For transmission equipment of the mean power of 50kw or more, when a frequency range of one (1) octave or more is converted and used, the mean power of spurious emission per frequency supplied to power lines shall be lower than 50milliwatt, and a tolerance rate shall be 60dB lower than the mean power of fundamental frequency, even if

specified in the table.

3) For frequencies of over 30MHz, a spurious emission of transmission equipment for ship stations and portable mobile stations (limited to ship use) using F3E and G3E radio waves and for portable mobile stations (limited to stations which are mounted in aircraft and uses frequencies of radio waves according to Table S18 of Addenda of the Radio Regulations of the International Telecommunication Union) using F3E and G3E radio waves shall take a tolerance rate of 2.5microwatt or less if the mean power of spurious emission per frequency supplied to power line ranges from 146MHz to 174MHz, and shall take a tolerance rate of 10microwatt or less for other frequency bands, even if specified in the table. However, if the mean power of the fundamental frequency is over 20watt, these tolerance rates shall be increased in proportion to the mean power of the fundamental frequency.

4) Spurious emission of the transmission equipment for radio stations in aeronautical mobile service using frequencies of radio wave ranging from 118MHz to 144MHz and the mean power of 25watt or less shall take the spurious emission mean power per frequency of 25 microwatt or less and a tolerance rate of over 40dB lower than the mean power of fundamental frequency, even if specified in the table.

5) Spurious emission of the transmission equipment for oneway radio stations (excluding transmission equipment for radio stations in amateur station/maritime mobile service, and for ship communication stations using a frequency band of radio wave ranging from 457.5MHz to 467.6MHz) that use frequency bands of radio waves ranging 1) from 138MHz to 174MHz; and 2) from 335.4MHz to 470MHz, and that use F1D, G1D, F2D, G2D, F3E, G3E radio wave, shall take a tolerance rate of 2.5 microwatt or less if the mean power of fundamental frequency for transmission equipment is 25 watt or less; and shall take a tolerance rate of 70dB lower than the mean power of fundamental frequency, even if specified in the table.

[Table 4]

Indication and Conversion Ratio of Antenna Power by Frequency Class

(Related to Article 6, Paragraph 3)

1. Indication of Antenna Power by Radio Wave Type

Class	Wave Type	Indication or Power
A.	<p>A1A A1B</p> <p>A1D A2A</p> <p>A3C (limited to the control of full carrier)</p> <p>A8W (limited to the control of full carrier)</p> <p>A9W (limited to the control of full carrier)</p> <p>B7W B8C B8E B9B B9W</p> <p>C3F(limited to the equipment for broadcasting stations)</p> <p>C9F J2A</p> <p>J2B J3C</p> <p>J3E J8E</p> <p>K1A K2A</p> <p>K3E L1D</p> <p>L2A L3E</p> <p>M2A M3D</p> <p>M3E M7E</p> <p>P0N Q0N</p> <p>R3C R3E</p> <p>R7B V3E</p>	Peak envelope power (PX)
B.	A3E (limited to the equipment for broadcasting stations)	Carrier power (PZ)
C.	Frequency class, except for those in A and B	Mean power (PY)(unless otherwise specified by the notice of the Minister of Information and Communication)

2. Conversion Ratio Class of Antenna Power by Class	Modulation Characteristics	Conversion Ratio			Remark
		Carrier power (PZ)	Mean power (PY)	Peak power (PX)	
A1A A1B			0.5	1	
A2A A2B	A. Key operation of audio frequency for modulation B. Key operation of modulation frequency	1 1	1.25 0.75	4 4	
A3E		1	1	4	
R3E			0.14	1	1)
B8E			0.075	1	2)
J3E			0.16	1	1)
A3C	A. Control of main carrier B. Others	1	0.5 1	1 4	
R3C			0.14	1	
J3C			0.16	1	
C3F C9F			1	1.68	Limited to broadcasting stations 3)
C2W C7W			1	4	Limited to broadcasting stations
R7B			0.14	1	
R7A			0.075	1	
P0N			1	1/d	4)
K1A			0.5	1/d	
K2A K2B	A. Key operation of audio frequency for modulation B. Key operation of modulation frequency		1.25 0.75	4/d 4/d	
L2A L2B	A. Key operation of audio frequency for modulation B. Key operation of modulation frequency		1 0.5	1/da 1/da	4)
M2A M2B	A. Key operation of audio frequency for modulation B. Key operation of modulation frequency		1 0.6	1/da 1/da	
K3E			1	4/da	
L3E			1	1/da	
M3E			1	1/da	

Note:

1) Peak envelope power of single-channel transmission equipment using reduced carrier or

suppressed carrier shall be set to the mean power if it is modulated to a saturation level of transmitting power by one modulation frequency.

2) Peak envelope power of transmission equipment using reduced carrier or of multiplex communication transmission equipment shall be set to 4 times of the mean power modulated by modulation. In this case, if a frequency applies other arbitrary modulation at the same strength with the above modulation on the same communication route, 25dB shall be assumed to be decreased compared to when the third cross modulation signals applies a single modulation only at harmonic power of the transmission equipment.

3) If broadcasting transmission equipment sends images of pedestal (experimental image signals), the mean power shall be set to one (1).

4) In the table, d and d_a indicates an impact coefficient (a ratio of pulse width and pulse frequency) and the average impact coefficient, respectively.

[Table 5]

Tolerance Deviation of Antenna Power (related to Article 6, Paragraph 3)

Transmission Equipment	Tolerance Deviation	
	Upper Limit Percent	Lower Limit Percent
1. Transmission equipment for broadcasting stations (excluding VHF broadcasting or TV broadcasting)	5	10
2. Transmission equipment for broadcasting stations providing VHF broadcasting or TV broadcasting	10	20
3. Transmission equipment for digital TV stations	5	5
4. Transmission equipment of radiobeacon stations for coast stations, aeronautical stations, or ships using frequencies of radio waves 25.11MHz or less	10	20
5. Transmission equipment for ship stations belonging to the following: A. Radio equipment for compulsory ship stations using frequencies of radio waves ranging from 405kHz to 535kHz or less B. Radio equipment for compulsory ship stations using frequencies of radio waves ranging from 1,605kHz to 3,900kHz or less		
6. Transmission equipment of each of the following: A. Emergency position indicating radiobeacons B. Transmission equipment for survival craft C. Survival radio equipment for aircraft D. VHF twoway radio telephone	50	20
7. Transmission equipment of each of the following: A. Transmission equipment for amateur stations B. Transmission equipment for radio stations providing electric communication service	20	-
8. Other transmission equipment	20	50