

Enforcement of **Body SAR**

As of August 23, 2013, "Body SAR" requirements were made public by the Ordinance of the Ministry of Internal Affairs and Communications (MIC) No. 81 and related notifications. The new requirements are meant to supplement the previously existing "Head SAR" requirements. Body SAR, effective as of April 1, 2014, states that radio equipment used within 20 cm from the body is subject to Body SAR regulation.

Examples of some Radio equipment subjected to Body SAR

- A: Mobile phones
- B: Satellite cellular phones
- C: Broadband Wireless Access Systems

Also subject to Body SAR are the following radio equipment when sharing the same housing as those listed above:

- D: 2.4GHz Band Low Power Data communication System
- E: 5GHz Band Low Power Data Communication System
- F: PHS/Digital Cordless Telephone

Normal use condition	A/B/C only	D/E/F only	Both A/B/C and D/E/F	
			A/B/C	D/E/F
Temporal region of head	Subjected to Head SAR	No SAR necessary	Subjected to Head SAR	No SAR necessary
Within 20cm from the human body	Subjected to Body SAR	No SAR necessary	Subjected to Body SAR	Subjected to Body SAR

Additionally, it is the responsibility of the end product manufacturer or certified dealer to obtain Body SAR for the whole product even in cases where a component such as a module already has certification, wherever the end product will be used in close proximity to the temporal region and/or the human body.



Manufacturers and certified dealers also have the following obligations in addition to obtaining a "Certification of Construction Type":

"Obligations to Conform to Construction Types (Article 38-25, Paragraph 1 of the Radio Law)"

"Prepare and maintain the examination records (Article 38-25, Paragraph 2 of the Radio Law)"

"Mark of Specified Radio Equipment Based on Certified Construction Type (Article 38-26 of the Radio Law)"

FAQ

Q1: What is SAR?

A1: SAR (Specific Absorption Rate) is a measurement of the strength of a radio wave, and whether or not it has a thermic effect on the human body. It could raise the whole body's temperature or part thereof as a result of the following: the stimulation effect of induced current generated in the body by radio waves, and the heat created by the energy of radio waves absorbed into the human body.

The radio wave protection guideline by the MIC is the same as the international guideline supported by the World Health Organization (WHO), and is specified by a sufficient safety factor (1/50), indicating that the strength of a radio wave does not affect the human body.

Q2: Why has the area for SAR widened beyond the temporal region of the head?

A2: In response to the rapid growth of equipment containing multiple technologies emitting radio waves, Body SAR measurement methods were globally standardized and tolerances systematized.

The purpose of Body SAR is as follows:

- To ensure the safety of radio equipment whose regular use is in close proximity to the body beyond the side of the head.
- Maintain equipment emitting simultaneous radio waves from multiple components functions within a set of safe parameters

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Q3: The Body SAR requirement states "radio equipment used within 20 cm of the human body" is subject to Body SAR. Our equipment is a digital photo frame equipped with 3G function, but we are assuming the product will usually be used more than 20cm away from the human body. However, it might be touched by the end user during use.

How do I determine if our product is subject to Body SAR?

A3: The ICCJ (Information and communication Certification Conference of Japan) has published guidelines regarding the criteria for determining if equipment is subject to Body-SAR regulation. These guidelines, known as "Guidelines for operation of systems related to Body-SAR (published in Japanese)", are excerpted below:

When under "Normal Use" the distance between antennas and the human body falls within 20cm, the device is subject to Body SAR regulation, regardless of the length of time being used in close proximity to the human body.

In some circumstances, if the normal use and operation of the equipment does not require usage of radio equipment within 20 cm of the body, the equipment may be excluded.

It is considered that users, inspectors, and passengers might approach within 20cm, in other than the expected conditions of normal use.

Although an exclusion may be appropriate, it is highly recommended that each case be verified by checking the instruction manual for more details.

Q4: We are developing a product which uses a previously certified 3G/4G module. We have obtained antenna filings by using the existing module certification. If we continue to do so after April of 2014, will the product be subject to Body SAR?

A4: When installing previously certified wireless modules, the final product will be subject to Body SAR for equipment which is used in close proximity to the temporal region and the human body. Modification, after April of 2014, to an existing certification will necessitate Body SAR.

If you have questions regarding Body SAR requirements, please contact us for more information.

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Reference materials

No. 185, August 23, 2013

<Ordinance>

Partial revision of the Ordinance Regulating Radio Equipment and Ordinance concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment (Ordinance of the MIC No. 81)

<Notification>

Radio equipment specified separately in notification by the MIC (MIC ordinance No. 323)

Measurement method of SAR at human body (except head and both hands) and Measurement method of SAR at human head (MIC ordinance No. 324)

Partial Revision of the MIC notification, No. 279, 2011 (MIC ordinance No. 325)

Partial Revision of the MIC notification, No. 281, 2011 (MIC ordinance No. 326)

ICCJ Guidelines for operation of systems related to Body-SAR (Japanese ONLY)

<http://www.tele.soumu.go.jp/resource/j/equ/tech/faq/260401.pdf>

About ICCJ (Japanese ONLY)

<http://www.tele.soumu.go.jp/j/sys/equ/tech/iccj/iccj1/index.htm>