

# Specific Absorption Rate of Mobile Phones, etc.

## Specific Absorption Rate (SAR) of Mobile Phones

This model phone KMP7N2R1-2A meets the MIC's technical regulation for exposure to radio waves. The technical regulation established permitted levels of radio frequency energy, based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The regulation employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit is 2 watts/kilogram (W/kg)\* averaged over ten grams of tissue. The limit includes a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The value of the limit is equal to the international guidelines recommended by ICNIRP. All phone models should be confirmed to comply with the regulation, before they are available for sale to the public. The highest SAR value for this model phone KMP7N2R1-2A is 0.713 W/kg. It was taken by the Telecom Engineering Center (TELEC), a Registered Certification Agency on the Radio Law. The test for SAR was conducted in accordance with the MIC testing procedure using standard operating positions with the phone transmitting at its highest permitted power level in all tested frequency bands. While there may be differences between the SAR levels of various phones and at various positions, they all meet the MIC's technical regulation. Although the SAR is determined at the highest certified power level, the actual SAR of the phone during operation can be well below the maximum value.

For further information about SAR, please see the following websites:

World Health Organization (WHO): <http://www.who.int/peh-emf/>

ICNIRP: <http://www.icnirp.de/>

MIC: <http://www.tele.soumu.go.jp/e/ele/body/index.htm>

TELEC: [http://www.telec.or.jp/ENG/Index\\_e.htm](http://www.telec.or.jp/ENG/Index_e.htm)

NTT DOCOMO: <http://www.nttdocomo.co.jp/english/product/>

NEC: <http://www.n-keitai.com/lineup/> (Japanese)

Association of Radio Industries and Businesses: <http://www.arib-emf.org/index.html> (Japanese)

\*: International Commission on Non-ionizing Radiation Protection

## Radio Frequency (RF) Signals

**THIS MODEL PHONE MEETS THE U.S. GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.**

Your wireless phone contains a radio transmitter and receiver. Your phone is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR limit set by the FCC is 1.6W/kg.\* Tests for SAR are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the U.S. government-adopted requirement for safe exposure. The tests are performed on position and locations (for example, at the ear and worn on the body) as required by FCC for each model. The highest SAR value for this model phone as reported to the FCC when tested for use at the ear is 0.619 W/kg, and when worn on the body, is 0.713 W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the U.S. government requirement.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section at <https://gulfoss2.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> after search on FCC ID A98-7N2R12A. For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body.

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\* In the United States, the SAR limit for wireless mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. SAR values may vary depending upon national reporting requirements and the network band.

## FCC Regulations

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This mobile phone complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This mobile phone has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.