



ISAP2020 Student Design Contest



Category A. Antenna Design

Goal

To design a character-shaped antenna that satisfies the following specifications.

Specifications

- A part or all of the radiating elements of the designed antenna should be constituted by an English word/acronym (e.g. Antenna, ISAP).
- The word/acronym should have 2 letters and more.
- All the letters should contribute to radiation.
- The design frequency of the antenna is 2402 MHz.
- The antennas size should be within 148 mm by 100 mm, and the antenna thickness should be within 10 mm.
- The antenna is composed of only passive materials. Active components such as amplifiers must not be used.
- A SMA plug-type connector should be attached to the antenna for feeding. The connector is excluded from the antenna size given above.
- Measured or simulated results of the designed antenna must be included in the submitted application form. The document should include the following information:
 - Description of the antenna design
 - Geometry
 - Reflection coefficient
 - Efficiency
 - Gain
 - Current distribution on the character-shaped elements
- In addition to the above indices, a photograph and measured reflection coefficient and gain of the designed antenna must be included in the final design submission.
- In the on-site competition, measurement and exhibition of the antenna performance will be performed. The measurement item will be the received power from a wave source at 2402 MHz (linear polarization). The appearance of the designed antenna will be also evaluated during the final presentation.

Evaluation

The designed antenna is comprehensively evaluated by the submitted documents, on-site measurements and presentation. The evaluation indices will include efficiency, gain, number of characters, and appearance.