

Directivity

According to the standard definition, “The ratio of maximum radiation intensity of the subject antenna to the radiation intensity of an isotropic or reference antenna, radiating the same total power is called the **directivity**.”

Aperture Efficiency

According to the standard definition, **“Aperture efficiency** of an antenna, is the ratio of the effective radiating area (or effective area) to the physical area of the aperture.”

Antenna Efficiency

According to the standard definition,
“**Antenna Efficiency** is the ratio of the radiated power of the antenna to the input power accepted by the antenna.”

Gain

According to the standard definition, “**Gain** of an antenna is the ratio of the radiation intensity in a given direction to the radiation intensity that would be obtained if the power accepted by the antenna were radiated isotropically.”

Beam width is the aperture angle from where most of the power is radiated. The two main considerations of this beam width are Half Power Beam Width (**HPBW**) and First Null Beam Width (**FNBW**).

Antenna Polarization

An Antenna can be polarized depending upon our requirement. It can be linearly polarized or circularly polarized. The type of antenna polarization decides the pattern of the beam and polarization at the reception or transmission.

Elevation

Elevation refers to the angle between the beam pointing direction, directly towards the satellite, and the local horizontal plane. It is the up-down angle.

Azimuth

Azimuth refers to the rotation of the whole antenna around a vertical axis. It is the side to side angle.