Antenna Spec
RE103P

Rev 2, 09/14/2022

The device uses a printed circuit antenna structure. It is a loop type printed structure. The antenna is not accessible or changeable by the user. No modifications can be made to the radiating mechanism (antenna or tuning elements) by the user.
The peak antenna gain is estimated to be -20.3 dBi.

Peak antenna gain estimation :

Peak antenna gain is estimated by extracting the Gain (G_T) from the Friis transmission equation.

$$\frac{P_R}{P_T} = \frac{\lambda^2 G_T G_R}{(4\pi R)^2}$$

Assuming polarization match (linearly polarized) and no mismatch loss (tuned) in the direction of peak antenna gain at 3m separation;

Freq = 319.5 MHz

Rx antenna and gain : Com-Power Log Periodic (ALP-100) at 300 MHz (5.9 dBi)

Tx : DUT

P_T : 13 dBm (conducted measurement at antenna input)

P_T : -33.4 dBm (received power at Log periodic antenna input)

G_T= -20.3 dBi (estimated)