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Hemispherical DRA Antennas Mounted on or Embedded

in Circular Cylindrical Surface for Producing

Omnidirectional Radiation Pattern

Saber H. Zainud-Deen

1

, Noha A. El-Shalaby

2

, Kamal H. Awadalla

3

,

1,3

Faculty of Electronic Engineering

,

Menoufia University

,

Shibin el Kom

,

Egypt

2

Faculty of Engineering

,

Kafrelsheikh University

,

Kafr el-Sheikh

,

Egypt

E-mail

:

anssaber@yahoo.com

,

Noha

1511

ahm@yahoo.com

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Abstract

The radiation characteristics of hemispherical DRA elements mounted on or embedded in a hollow circular

cylindrical ground structure are investigated. The performance of the DRA array which operates at about 1.8

Ghz, is studied. Factors influencing the array performance, such as the number of elements and element

spacing are explained. The perforated dielectric technique

is used to design the array from a single dielectric

sheet. The overall profile of the antenna can be signifi

cantly reduced. The radiation patterns with respect to

the number of DRA elements are depicted.

Keywords:

DRAs, FEM, FIT