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Report2: Single Patch Design
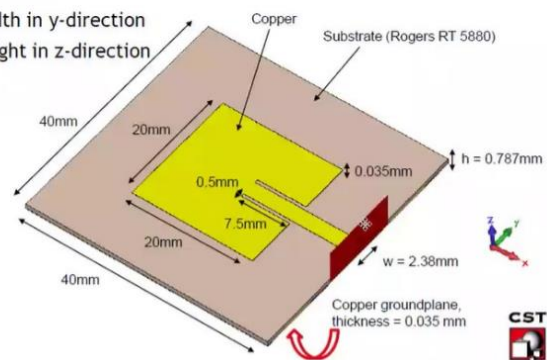

Given Dimensions

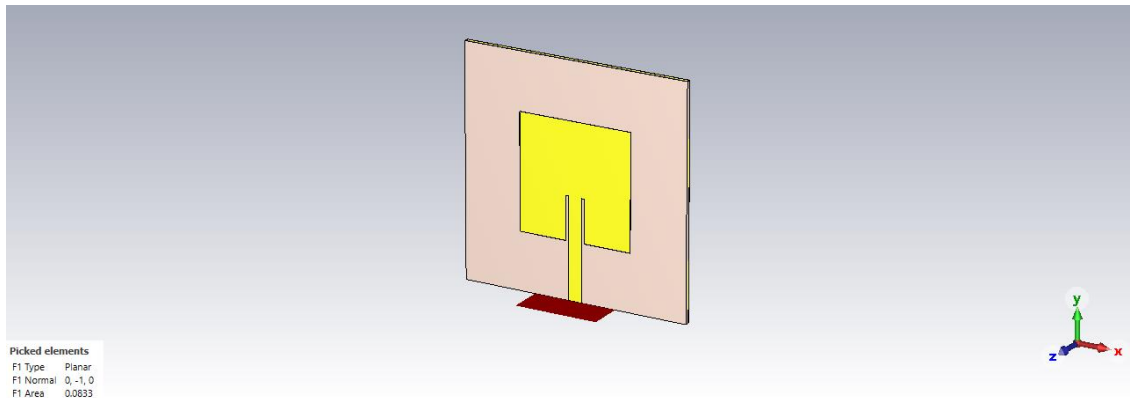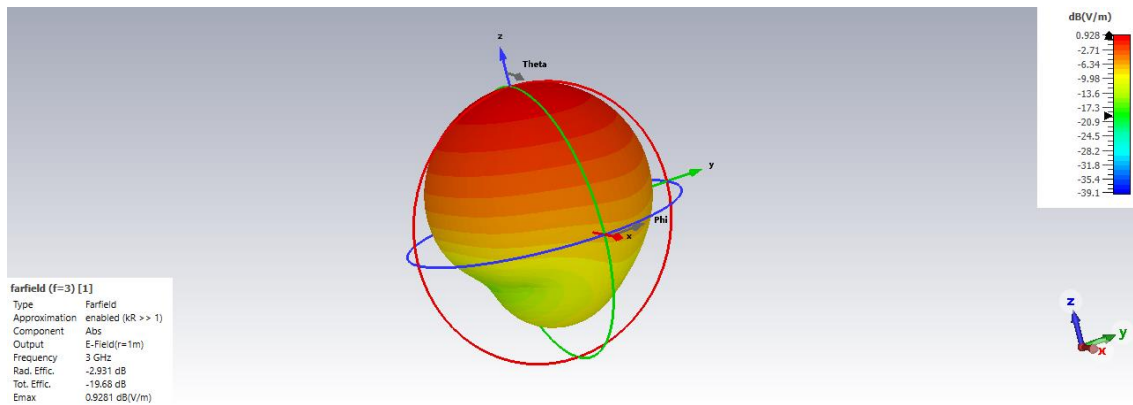- Frequency range: 3 - 8 GHz
- Port size:
  - ±2*width in y-direction
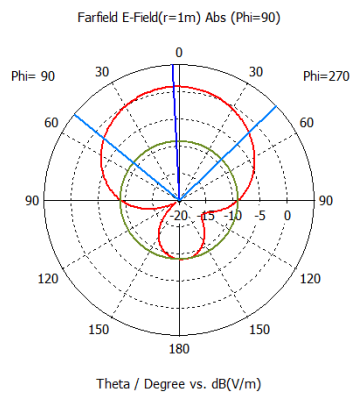 - ±5*height in z-direction

1) Structure

Picked elements
F1 Type   Planar
F1 Normal 0, -1, 0
F1 Area   0.0833

2) Farfield (1D/3D)

Farfield E-Field(r=1m) Abs (Phi=90)

— farfield (f=3) [1]

Phi= 90   30   0   30   Phi=270

60   60

90   90

120   120

150   180   150

Theta / Degree vs. dB(V/m)

Frequency = 3 GHz
Main lobe magnitude =   0.932 dB(V/m)
Main lobe direction =   3.0 deg.
Angular width (3 dB) =   96.2 deg.
Side lobe level = -10.0 dB

dB(V/m)
0.928
-2.71
-6.34
-9.98
-13.6
-17.3
-20.9
-24.5
-28.2
-31.8
-35.4
-39.1

farfield (f=3) [1]
Type   Farfield
Approximation enabled (kR >> 1)
Component   Abs
Output   E-Field(r=1m)
Frequency   3 GHz
Rad. Effic.   -2.931 dB
Tot. Effic.   -19.68 dB
Emax   0.9281 dB(V/m)

3) S-Parmeter

S-Parameters [Magnitude]

— S1,1

1 (4.892452, -10.05615)
2 (4.968822, -10.03445)

Frequency / GHz

4)