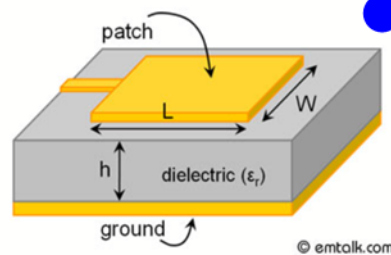


## Microstrip Patch Antenna Calculator



### Substrate Parameters

Dielectric Constant ( $\epsilon_r$ ): 4.3  
Dielectric Height (h): 1.6 mm

### Resonant Frequency

f<sub>r</sub>: 2.4 GHz

Synthesize

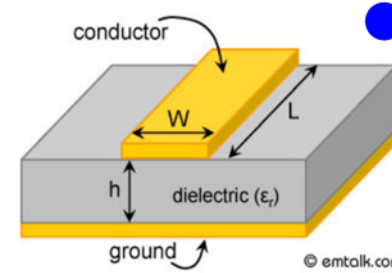
Analyze

### Physical Parameters

Length (L): 29.779400795279 mm  
Width (W): 38.393444802122 mm

Input Impedance (Edge): 238.5 Ohm

## Microstrip Line Calculator



### Substrate Parameters

Dielectric Constant ( $\epsilon_r$ ): 4.3  
Dielectric Height (h): 1.6 mm  
Frequency: 2.4 GHz

### Electrical Parameters

Z<sub>0</sub>: 50 Ω  
Elec. Length: 90 deg

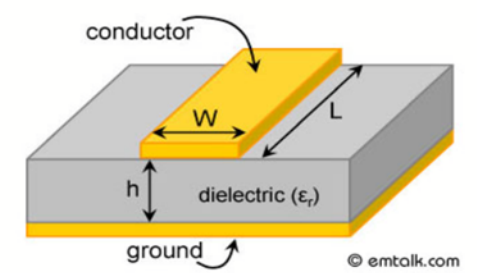
Synthesize

Analyze

### Physical Parameters

Width (W): 3.1118431162959 mm  
Length (L): 17.291326694351 mm

## Microstrip Line Calculator



### Substrate Parameters

Dielectric Constant ( $\epsilon_r$ ): 4.3  
Dielectric Height (h): 1.6 mm  
Frequency: 2.4 GHz

### Electrical Parameters

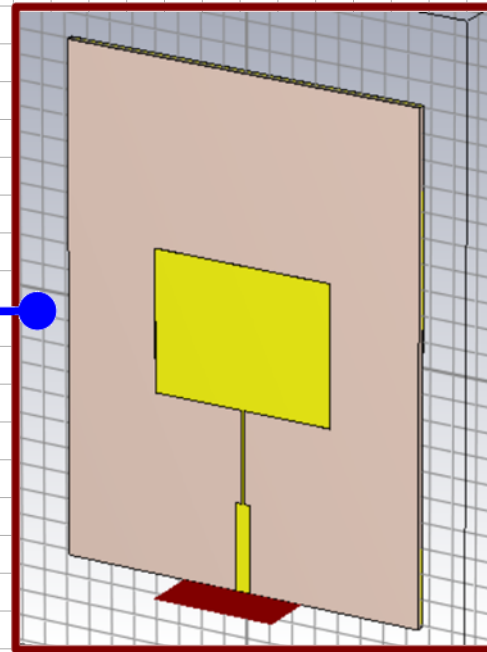
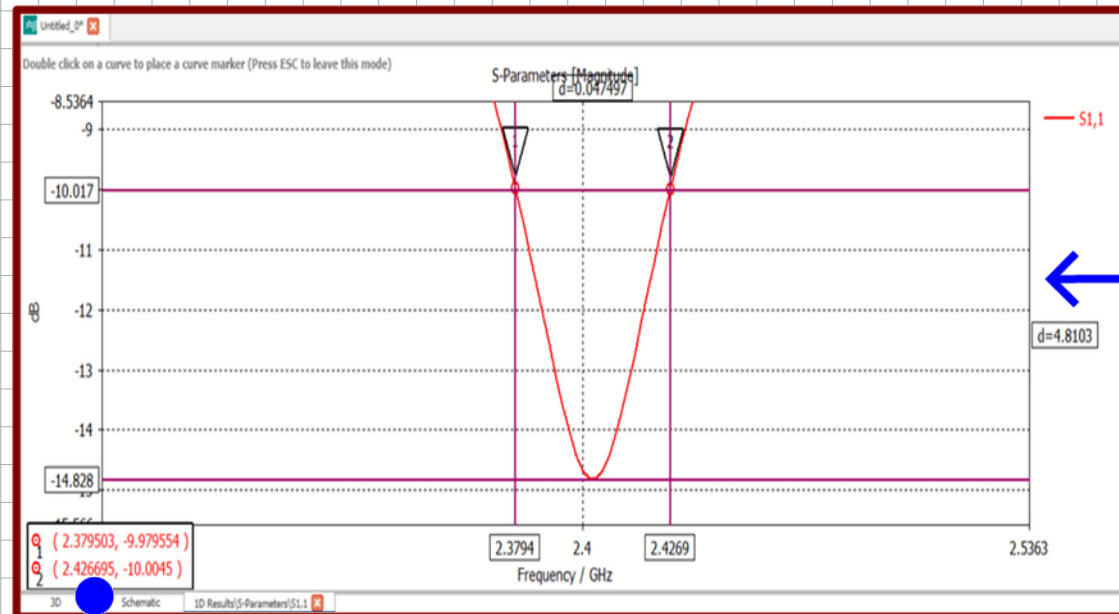
Z<sub>0</sub>: 109.2016483 Ω  
Elec. Length: 90 deg

Synthesize

Analyze

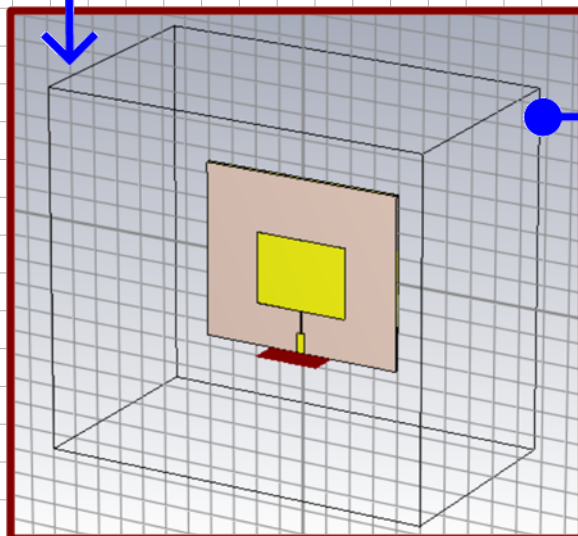
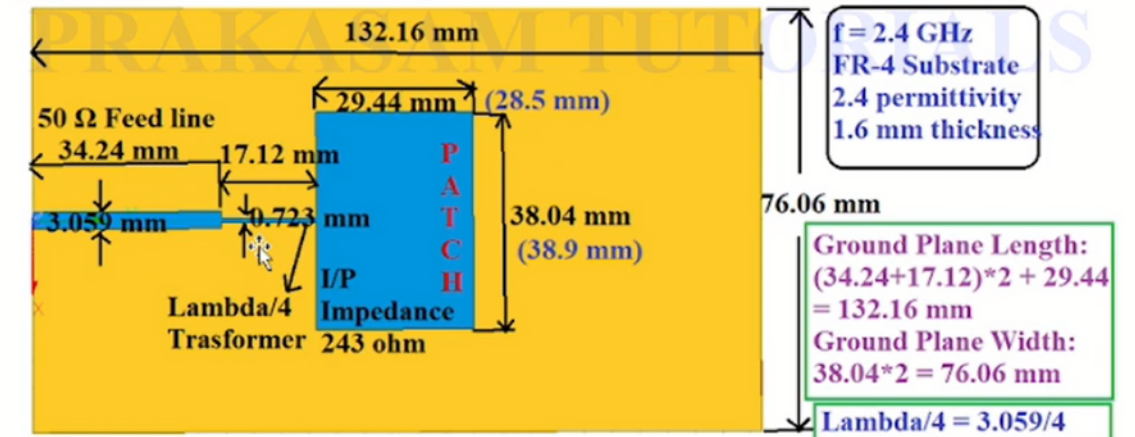
### Physical Parameters

Width (W): 0.5663244125542 mm  
Length (L): 18.258660819636 mm



## Edge-Fed with Quarter Wavelength Transformer Section to 50 Ω Transmission Line

### Edge-Fed with Quarter Wavelength Transformer Section to 50 Ω Transmission Line



Name	Expression	Value	Description
Ws	= 80	80	
Ls	= 70	70	
Hs	= 1.6	1.6	
Wf	= 3.1	3.1	
Lf	= 8	8	
Hf	= 0.035	0.035	
Wm	= 0.56	0.56	
Lm	= 9	9	
Hm	= 0.035	0.035	
Wp	= 37	37	
Lp	= 28.6	28.6	
Hp	= 0.035	0.035	
Wg	= 80	80	
Lg	= 70	70	
Hg	= 0.035	0.035	

