Coplanar Waveguide Analysis/Synthesis Calculator

Metal width (W)	1	mm ▾	calc
Metal spacing (S)	0.9	mm	calc
Trace length (L)	10	mm ▾	calc
Metal thickness (Tmet)	0.035	mm	
Metal resistivity (RHO)	1.7e-08	Ohm ▾ - m ▾	
Metal surface roughness (RGH)	0.001	mil ▾ -rms	
Substrate thickness (H)	0.5	mm	calc
Substrate relative dielectric constant (Er)	4.45		calc
Substrate loss tangent (tand)	0.02		
Frequency	500	MHz ▾	
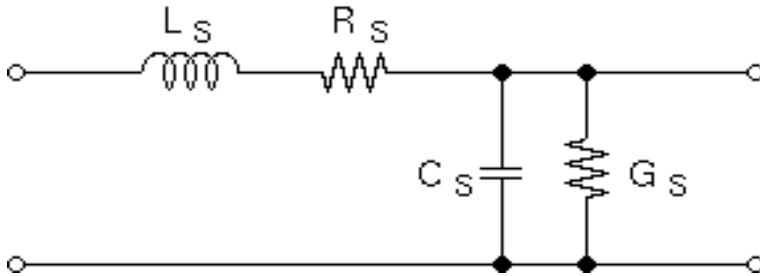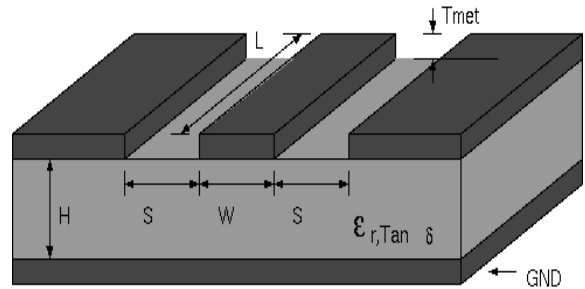
Ls =   7.59382   nH ▾ / inch ▾

Rs =   105.851   mOhm ▾ / inch ▾

Cs =   3.18333   pF ▾ / inch ▾

Gs =   239.681   uMho ▾ / inch ▾

Z0 =   48.8415 + j 0 [ohm]

Loss =   0.0237216   dB ▾

Loss/len =   0.0602529   dB ▾ / inch ▾

Skin depth =   0.115538   mil ▾

Delay =   0.0612121   ns ▾

End correction =   0   inch ▾

Corrected length = 10   mm

Values In Sync

[Analyze] [Reset]

☑ Include bottom side ground

Characteristic Impedance	48.8415	[ohms]
Electrical Length	11.0182	[degrees]

Return to the main CGI-Wcalc Page.

CREDITS

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