

11/5/21

The PCB itself must be **1.57mm thick!**

We are planning on using Rogers 4350 which has  $\epsilon_r = 3.48 \pm 0.05$  ([see here](#))


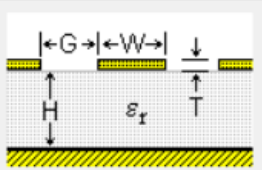
Rogers thickness is 4mil

Top copper is 0.035mm thick

Objective lenses:

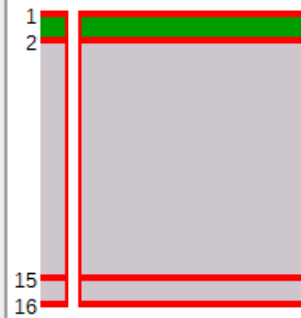
Big one:  $f = 10\text{mm}$ ,  $d = 45\text{mm}$

Small one:  $f = 7\text{mm}$ ,  $d = 25\text{mm}$

Microstrip	Stripline	CPW	CPW Ground	Round Coaxial	Slotline	Coupled MSLine	Coupled Stripline
<b>Material Parameters</b>							
Dielectric		GaAs		Conductor		Silver	
Dielectric Constant		3.48		Conductivity		5.88E+07 S/m	
Loss Tangent		0.0037					
							
<b>Electrical Characteristics</b>				<b>Physical Characteristic</b>			
Impedance		50.8125 Ohms		Physical Length (L)		294.771 mil	
Frequency		10 GHz		Width (W)		6 mil	
Electrical Length		133.484 deg		Gap (G)		3 mil	
Phase Constant		17828.3 deg/m		Height (H)		4 mil	
Effective Diel. Const.		2.20423		Thickness (T)		35 um	
Loss		14.2113 dB/m					

FileLayersClearanceDistanceSizesAnnular RingShapesSupplyMasksMisc

121516



Layer Pairs:

Layer	Material	Thickness
1	Copper	0.035mm
	Core	4mil
2	Copper	0.035mm
	Prepreg	1.2268mm
15	Copper	0.035mm
	Prepreg	4mil
16	Copper	0.035mm

Via Pairs:

Type	From	To
Through	1	16

4 layers

-

+

-

+

Setup

(1\*2+15+16)

Total Board Thickness: 1.57mm

Check

Select

Cancel

Apply