

**TARGET PLATE THICKNESS CALCULATIONS**

Guitar                      013 Classical  
Plate                        Left top

**MEASURED TOP DATA**

SI Units

Plate length LI (mm)	540	mm	0.54	m
Plate width Lc (mm)	200	mm	0.2	m
Plate thickness h (mm)	4.25	mm	0.004	m
Plate mass (gm)	190	gram	0.19	Kg
F Long (Hz)	82.7	Hz	82.7	Hz
F Cross (Hz)	76	Hz	76	Hz
F diag (Hz)	56	Hz	56	Hz
Density (Kg/m3)			413.94	Kg/m3

**Poissons Rations**

African Mahogany  
Honduras Mahogany  
Sugar Maple  
Red Maple  
Black Walnut  
  
WR Cedar  
Redwood  
Sitka Spruce  
Eng Spruce  
Average

**CALCULATIONS**

Youngs Modulus (along grain EL)	1.25473E+16 Pa	12547320.36 Gpa
Youngs Modulus (cross grain EC)	1.99394E+14 Pa	199394.00 Gpa
Shear Modulus (GLC)	1.01922E+15 Pa	1019216.91 Gpa
Elong/Across		
Vibratioal Stiffness (f)	75	
Overall Top Length (a)	480	mm      0.48 m
Overall Lower Bout Width (b)	360	mm      0.36 m

Panel Type      Vib T  
  
SS Top  
SS Back  
Trad Class Top  
Trad Class Back

Target Thickness	1.59725E-06 mm	6E-08 Thou "
	73154.89789	

0.0098
0.0104
0.0276
0.0273
0.0257
0.0149
0.035
0.0215

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thickness (f)
75
55
60
50