

Polytetrafluoroethylene Woven Glass Fabric Copper-Clad Plate F4BM-1/2

This product was laminated with qualitative materials according Microwave PCB demands. It has good electric characters and better mechanical strength, so it is great microwave PCB material.

Technical Conditions

Appearance	Accord with Country and Military Stands of PCB Base Material					
Regular Board Dimension (mm)	300×250	440×550	500×500	460×610		
	600×500	550×880	660×880	1140×430		
Copper (OZ)	0.035mm 0.018mm 0.07mm					
Thickness Tolerance (mm)	Board Thickness	0.17、0.25	0.5、0.8、1.0	1.5、2.0		
	Tolerance	±0.01	±0.03	±0.05		
Top and Bottom Copper Clads Are Included. Accept customized Orders						
mechanical property	Warpage	Board Thickness (mm)	Max Warpage mm/mm			
			Board Without Copper Clads	Single Side Copper Clad Board	Double Side Copper Clad Board	
		0.25~0.5	0.03	0.05	0.025	
		0.8~1.0	0.025	0.03	0.02	
		1.5~2.0	0.02	0.025	0.015	
	3.0~5.0	0.015	0.02	0.01		
punching/Cutting Shear performance	No burrs after cutting if board less than (<) 1mm thickness, the minimum spacing between 2 punched holes is 0.55 mm without separation layers; No burrs after cutting if board larger than (>) 1mm thickness, the minimum spacing between 2 punched holes is 1.10 mm without separation layers.					
Antistripping strength	In ordinary state 15N/cm. In 260°C±2°C melted solder, more than 20 seconds without forming bubbles, nor separation, the antistripping strength can be ≥12 N/cm.					
Chemical Property	Depend on the base material character, reference PCB chemical etching method to work with this material. The material media character can't be changed. Need plasma or sodium naphthalide solution to metal process PCB holes.					
Physics Electric Characters	Parameter Name	Test Condition		Unit	Parameter Value	
	Specific Gravity	Normalcy		g/cm ³	2.2~2.3	
	Water Absorption	Dip 24 hours in distilled water under 20±2°C		%	≤0.02	
	Operating Temperature	High / Low Temperature cabinet		°C	-50~+260	
	Thermal Conductivity Coefficient			kilocalorie/Meter.Hour.C	0.8	
	Thermal Expansion Coefficient	Warning Up 96°C/ Hour		Thermal Expansion Coefficient X 1	≤5×10	
	Shrinking Percentage	Boiled in water 2 hours		%	0.0002	
	Surface Insulate Resistance	500VDC	Normalcy		M.Ω	≥5×10 ³
			Constant Damp and Hot			≥5×10 ²
	Bulk Resistance	Normalcy		MΩ.cm	≥5×10 ⁵	
		Constant Damp and Hot			≥5×10 ⁴	
Dielectric Coefficient	10GHZ		εr	2.2 2.3 2.55 2.65 3.0 3.5 (±2%)		
Media Loss Angle Tangent Value	10GHZ		tgδ	≤1×10 ⁻³		