Data Sheet

RO4835 LAMINATES

Standard Properties Table

Properties	Typical Value	Units	Test Conditions		Test Method
Electrical Properties					
Dielectric Constant (Process)[1]	3.48 ± 0.05	-	23°C	10 GHz	IPC TM-650 2.5.5.5
Dielectric Constant (Design)[2]	3.66	-	-	8 - 40 GHz	Differential Phase Length
Dissipation Factor	0.0037	-	23°C	10 GHz	IPC TM-650 2.5.5.5
Thermal Coefficient of Dielectric Constant	+50	ppm/°C	-50°C to 150°C		IPC TM-650 2.5.5.5
Volume Resistivity	5 X 10^8	MΩ•cm	Condition A		IPC-TM-650, 2.5.17.1
Surface Resistivity	7 X 10^8	MΩ			
Electrical Strength (dielectric strength)	30.2 (755)	KV/mm (V/mil)	-		IPC TM-650 2.5.6.2
Thermal Properties					
Decomposition Temp (Td)	390	°C TGA	-		ASTM D3850
Glass Transition Temp (Tg)	>280	°C TMA	A		IPC-TM-650 2.4.24.3
Coefficient of Thermal Expansion - x	10	ppm/°C	-55°C to 288°C		IPC TM-650 2.4.41
Coefficient of Thermal Expansion - y	12				
Coefficient of Thermal Expansion - z	31				
Thermal Conductivity	0.66	W/(m·K)	80°C		ASTM C518
Dimensional Stability (x,y)	<0.5	mm/m (mils/in)	after etch	+E2/150°C	IPC TM-650 2.4.39a
Mechanical Properties					
Copper Peel Strength	0.88 (5.0)	N/mm (pli)	After solder float 35 µm ED foil		IPC TM-650 2.4.8
Young's Modulus	7780 (1128)	MPa (kpsi)	RT		ASTM D638
Tensile Strength	136 (19.7)	MPa (kpsi)	RT		ASTM D638
Flexural Strength	186 (27)	MPa (kpsi)			IPC-TM-650 2.4.4
Physical Properties					
Flammability	V-0	-	-		UL 94
Moisture Absorption	0.05	%	50°C	48 Hr	ATSM D570
Density	1.92	g/cm^3	23°C		ASTM D792
Lead Free Process compatible	YES	-	-		-

Standard Offerings

Standard Thicknesses	Standard Panel Sizes	Standard Cladding
0.0066" (0.17mm) +/- 0.0007" 0.010" (0.25mm) +/- 0.0010" 0.020" (0.51mm) +/- 0.0015" 0.030" (0.76mm) +/- 0.0020" 0.060" (1.52mm) +/- 0.0040"	12" X 18" (305 X 457 mm) 24" X 18" (610 X 457 mm) 24" X 36" (610 X 915 mm) 48" X 36" (1219 X 915 mm)	Electrodeposited Copper Foil 1/2 oz. (18µm) 1 oz. (35µm)