

Property	Typical Value RO4835	Direction	Units	Condition	Test Method
⁽¹⁾ Dielectric Constant, ϵ_r Process	3.48 ± 0.05	Z	--	10 GHz/23°C	IPC-TM-650 2.5.5.5 ⁽²⁾ Clamped Stripline
⁽²⁾ Dielectric Constant, ϵ_r Design	3.66	Z	--	8 GHz-40 GHz	Differential Phase Length Method
Dissipation Factor tan, δ	0.0037	Z	--	10 GHz/23°C	IPC-TM-650 2.5.5.5
Thermal Coefficient of ϵ_r	+50	Z	ppm/°C	-100°C to 250°C	IPC-TM-650 2.5.5.5
Volume Resistivity	10 ¹⁰		MΩ•cm	COND A	IPC-TM-650 2.5.17.1
Surface Resistivity	10 ⁹		MΩ	COND A	IPC-TM-650 2.5.17.1
Electrical Strength	30.2 (755)	Z	KV/mm (V/mil)		IPC-TM-650 2.5.6.2
Tensile Modulus	7780 (1128)	Y	MPa (kpsi)	RT	ASTM D638
Tensile Strength	136 (19.7)	Y	MPa (kpsi)	RT	ASTM D638
Flexural Strength	186 (27)		MPa (kpsi)		IPC-TM-650 2.4.4
Dimensional Stability	<0.5	X,Y	mm/m (mils/inch)	after etch +E2/150°C	IPC-TM-650 2.4.39A
Coefficient of Thermal Expansion	10 12 31	X Y Z	ppm/°C	-55 to 288°C	IPC-TM-650 2.4.41
Tg	>280		°C TMA	A	IPC-TM-650 2.4.24.3
Td	390		°C TGA		ASTM D3850
Thermal Conductivity	0.66		W/m/°K	80°C	ASTM C518
Moisture Absorption	0.05		%	48 hrs immersion 0.060" sample Temperature 50°C	ASTM D570
Density	1.92		gm/cm ³	23°C	ASTM D792
Copper Peel Strength	0.88 (5.0)		N/mm (pli)	after solder float 1 oz. EDC Foil	IPC-TM-650 2.4.8
Flammability	V-0				UL 94
Lead-Free Process Compatible	Yes				

Standard Thickness		Standard Panel Size	Standard Copper Cladding
ED Copper	LoPro Copper		
0.0066" (0.168mm)	0.0040 (0.102mm)	12" X 18" (305 X457 mm)	½ oz. (17µm) electrodeposited copper foil (5E/5E)
0.0100" (0.254mm)	0.0073 (0.186mm)	24" X 18" (610 X 457 mm)	
0.0133" (0.338mm)	0.0107 (0.272mm)	24" X 36" (610 X 915 mm)	
0.0166" (0.422mm)	0.0140 (0.356mm)	48" X 36" (1.224 m X 915 mm)	1 oz. (35µm) electrodeposited copper foil (1E/1E)
0.0200" (0.508mm)	0.0173 (0.440mm)		2 oz. (70µm) electrodeposited copper foil (2E/2E)
0.0233" (0.591mm)	0.0207 (0.526mm)		For PIM Sensitive Applications and Reduced Conductor Loss:
0.0266" (0.676mm)	0.0240 (0.609mm)		
0.0300" (0.762mm)	0.0273 (0.694mm)		½ oz. (17µm) LoPro™ Reverse Treated EDC (.5TC/.5TC)
0.0600" (1.524mm)	0.0307 (0.780mm)		1 oz. (35µm) LoPro Reverse Treated EDC (1TC/1TC)
	0.0607 (1.542mm)		

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