

Property	Typical Value ⁽¹⁾			Direction	Unit	Condition	Test Method
	RO3203	RO3206	RO3210				
Dielectric Constant, ϵ_r Process	3.02± 0.04	6.15± 0.15	10.2± 0.50	Z	-	10 GHz 23°C	IPC-TM-650 2.5.5.5 Clamped Stripline
⁽²⁾ Dielectric Constant, ϵ_r Design	3.02	6.6	10.8	Z	-	8 GHz - 40 GHz	Differential Phase Length Method
Dissipation Factor, tan δ	0.0016	0.0027	0.0027	Z	-	10 GHz 23°C	IPC-TM-650 2.5.5.5
Thermal Coefficient of ϵ_r	-13	-212	-459	Z	ppm/°C	10 GHz 0-100°C	IPC-TM-650 2.5.5.5
Dimensional Stability	0.8	0.8	0.8	X,Y	mm/m	COND A	ASTM D257
Volume Resistivity	10 ⁷	10 ³	10 ³		MΩ•cm	COND A	IPC 2.5.17.1
Surface Resistivity	10 ⁷	10 ³	10 ³		MΩ	COND A	IPC 2.5.17.1
Tensile Modulus	409 351	462 462	579 517	MD CMD	kpsi	23°C	ASTM D638
Water Absorption	<0.1	<0.1	<0.1	-	%	D24/23	IPC-TM-650 2.6.2.1
Specific Heat	0.95	0.85	0.79		J/g/K		Calculated
Thermal Conductivity	0.48	0.67	0.81	-	W/m/K	80°C	ASTM C518
Coefficient of Thermal Expansion	13 58	13 34	13 34	X,Y, Z	ppm/°C	-55 to 288°C	ASTM D3386-94
Td	500	500	500		°C	TGA	ASTM D3850
Color	Tan	Tan	Off White				
Density	2.1	2.7	3.0		gm/cm ³		
Copper Peel Strength	10.2	10.7	11.0		pli	1 oz. EDC After Solder Float	IPC-TM-2.4.8
Flammability	V-0	V-0	V-0				UL 94
Lead Free Process Compatible	YES	YES	YES				

NOTES:

[1] References: Internal T.R.'s 1430, 2224, 2854. Tests at 23°C unless otherwise noted. Typical values are a representation of an average value for the population of the property. For specification values contact Rogers Corporation.

[2] The design DK is an average number from several different tested lots of material and on the most common thickness/s. If more detailed information is required please contact Rogers Corporation or refer to Roger's technical reports on the Rogers Technology Support Hub at <http://www.rogerscorp.com>.

Standard Thickness	Standard Panel Size	Standard Copper Cladding
RO3203: 0.010" (0.25mm) 0.020" (0.50mm) 0.030" (0.75mm) 0.060" (1.52mm)	12" X 18" (305 X 457mm) 24" X 18" (610 X 457mm)	½ oz. (17µm) electrodeposited copper foil (HH/HH) & rolled copper foil (5R/5R) 1 oz. (35µm) electrodeposited copper foil. (H1/H1) & rolled copper foil (1R/1R) 2 oz. (70µm) electrodeposited copper foil. (H2/H2) & rolled copper foil (2R/2R)
RO3206/RO3210: 0.025" (0.64mm) 0.050" (1.28mm)	12" X 18" (305 X 457mm) 24" X 18" (610 X 457mm)	½ oz. (17µm) electrodeposited copper foil (HH/HH) 1 oz. (35µm) electrodeposited copper foil. (H1/H1) 2 oz. (70µm) electrodeposited copper foil. (H2/H2) Other claddings may be available. Contact customer service.

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