

## Rogers Corporation RT/duroid® 6202 High Frequency Laminate

Category : Polymer

### Material Notes:

Features:Low loss for excellent high frequency performanceTight dielectric constant and thickness controlExcellent electrical and mechanical propertiesExtremely low thermal coefficient of dielectric constantIn-plane expansion coefficient matched to copperVery low etch shrinkageCladding - EDCLead-free process compatibleTypical Applications:Phase Array AntennasGround Based and Airborne Radar SystemsGlobal Positioning System AntennasPower BackplanesHigh Reliability Complex Multilayer CircuitsCommercial Airline Collision Avoidance SystemsBeam Forming NetworksInformation provided by Rogers Corporation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Rogers-Corporation-RTduroid-6202-High-Frequency-Laminate.php](http://www.lookpolymers.com/polymer_Rogers-Corporation-RTduroid-6202-High-Frequency-Laminate.php)

Physical Properties	Metric	English	Comments
Density	2.10 g/cc	0.0759 lb/in <sup>3</sup>	ASTM D792
Moisture Absorption at Equilibrium	0.10 %	0.10 %	D23/24; D48/50; IPC-TM-650 2.6.2.1; ASTM D570
Thickness	127 - 1520 microns	5.00 - 60.0 mil	Range of Standard Thicknesses

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	30.0 MPa	4350 psi	X, Y direction; ASTM D638
Elongation at Break	4.9 %	4.9 %	X, Y direction; ASTM D638
Tensile Modulus	1.01 GPa	146 ksi	X, Y direction; ASTM D638
Compressive Modulus	1.035 GPa	150.1 ksi	Z direction; ASTM D638
Peel Strength	1.60 kN/m	9.10 pli	Copper; IPC-TM-650 2.4.8

Thermal Properties	Metric	English	Comments
CTE, linear	15.0 μm/m-°C	8.33 μin/in-°F	X-Direction; TMA; 10°C/min; ASTM D3386; IPC-TM-650 2.4.41
	15.0 μm/m-°C	8.33 μin/in-°F	Y-Direction; TMA; 10°C/min; ASTM D3386; IPC-TM-650 2.4.41
	30.0 μm/m-°C	16.7 μin/in-°F	Z-Direction; TMA; 10°C/min; ASTM D3386; IPC-TM-650 2.4.41
Specific Heat Capacity	0.930 J/g-°C	0.222 BTU/lb-°F	calculated
Thermal Conductivity	0.680 W/m-K	4.72 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C518
	@Temperature 80.0 °C	@Temperature 176 °F	
Decomposition Temperature	500 °C	932 °F	TGA; ASTM D3850

Flammability III 94 Thermal Properties	V-0 Metric	V-0 English	Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	Condition A; Z direction; ASTM D257
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	Condition A; Z direction; ASTM D257
Dielectric Constant	2.9 - 2.98	2.9 - 2.98	Z direction; IPC-TM-650 2.5.5.5
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
Dissipation Factor	0.0015	0.0015	Z direction; IPC-TM-650 2.5.5.5
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	

Descriptive Properties	Value	Comments
Thermal Coefficient of Dielectric Constant	13 ppm/°C	Preliminary; IPC-TM-650 2.5.5.5; 10 GHz; 0°C to 100°C; Z-Direction

## Contact Songhan Plastic Technology Co.,Ltd.

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