



## POLYGUIDE™ Microwave Laminates

POLYGUIDE Laminates are manufactured from an irradiated polyolefin which combine low loss and low cost to produce a superior laminate that is ideal for commercial antenna applications. The irradiation process permanently imparts improved electrical homogeneity and mechanical toughness while significantly enhancing the temperature and chemical resistance properties.

- |                              |                       |               |                             |
|------------------------------|-----------------------|---------------|-----------------------------|
| <b>Features and Benefits</b> | • Low Cost            | • Low Loss    | • High Thermal Conductivity |
| <b>Typical Applications</b>  | • Commercial Antennas | • CPE Antenna | • Couplers                  |

Property	Value	Units	Direction	Frequency	Test Method/Condition
Dielectric Constant (Cu Clad)	2.320 +/- .005	-	Z	10 GHz	IPC-TM-650
Dissipation Factor	0.0005	-	Z	10 GHz	IPC-TM-650
Dielectric Strength (0.020")	500	V/mil	Z	-	ASTM D 149
Volume Resistivity	10 <sup>16</sup>	ohm • cm	Z	-	ASTM D 257
Maximum Temperature	125	°C	-	-	Short Duration
Thermal Conductivity	.51	W/m/°C	Z	-	ASTM C 518
Specific Gravity	.95	-	-	-	ASTM D 792
Thermal Expansion	108	ppm/°C	X	-	ASTM E 831
(Unclad Dielectric)	108	ppm/°C	Y	-	ASTM E 831
	108	ppm/°C	Z	-	ASTM E 831
Water Absorption	<.01	%	-	-	ASTM D 570
Copper Peel (Average)	4-6	lbs/in	-	-	
Operating Temperature	-55 to 85	°C	-	-	
RoHS Compliant	Yes	Compliance Statement Available Upon Request			

### Polyguide Ordering Information

Dielectric Thickness	Panel Size	Copper Weight/Thickness
0.031" (0.787mm)	22.5" x 32" (572mm x 813mm)	½ oz/ft <sup>2</sup> (17 microns)
0.062" (1.575mm)		1 oz/ft <sup>2</sup> (35 microns)
0.125" (3.175mm)		2 oz/ft <sup>2</sup> (70 microns)
0.187" (4.750mm)		
0.250" (6.350mm)		

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