



POLYGUIDE™ MICROWAVE LAMINATES



TECHNICAL FEATURE

FEATURES AND BENEFITS

- Low Cost
- Low Loss
- High Thermal Conductivity

TYPICAL APPLICATIONS

- Commercial Antennas
- CPE Antenna
- Couplers

DESIGN NOTES

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.

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 ¹⁶	ohm • cm	Z	-	ASTM D 257
Maximum Temperature	125	°C	-	-	Short Duration
Thermal Conductivity	0.51	W/m/°C	Z	-	ASTM C 518
Specific Gravity	0.95	-	-	-	ASTM D 792
Thermal Expansion (Unclad Dielectric)	108 108 108	ppm/°C ppm/°C ppm/°C	X Y Z	- - -	ASTM E 831 ASTM E 831 ASTM E 831
Water Absorption	<.01	%	-	-	ASTM D 570
Copper Peel (Average)	4-6	lbs/in	-	-	
Operating Temperature	-55 to 175	°C	-	-	
RoHS Compliant	Yes	Compliance Statement Available Upon Request			

POLYGUIDE ORDERING INFORMATION

DIELECTRIC THICKNESS	PANEL SIZE	COPPER WEIGHT/THICKNESS
0.031" (0.787mm) 0.062" (1.575mm) 0.125" (3.175mm) 0.187" (4.750mm) 0.250" (6.350mm)	12" x 18" (305mm x 457mm)	½ oz/ft ² (17 microns) 1 oz/ft ² (35 microns) 2 oz/ft ² (70 microns)

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