

RF-301 Cost Effective Antenna Laminate

RF-301 laminate is engineered to provide a cost effective substrate. This material is the best value for the low cost, high performance demands of microwave and radio frequency antenna applications. Dielectric constant is typically offered as 2.97.

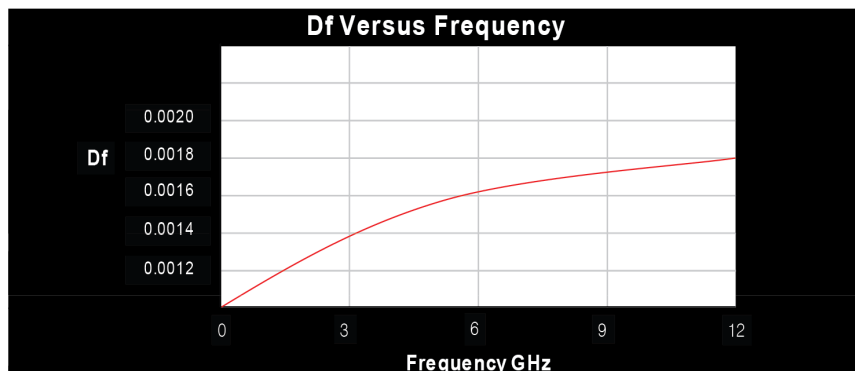
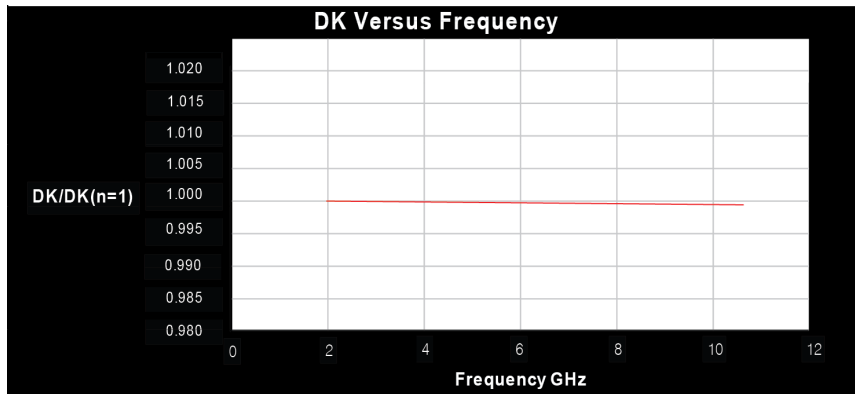
The low dissipation factor, thermal stability and smooth surface profile minimize phase shift with frequency and temperature and yield exceptionally low intermodulation performance.

Taconic is a world leader in RF laminates and high speed digital materials, offering a wide range of high frequency laminates and prepregs. These advanced materials are used in the fabrication of antennas, multilayer RF and high speed digital boards, interconnections and devices.

Benefits & Applications:

- Excellent PIM values in PCBs (measured at lower than -160 dBc*)
- High Peel Strength
- Exceptionally Low Loss
- Excellent Price/Performance Ratio
- Enhanced Surface Smoothness
- Low Moisture Absorption

- Microwave Antennas
- Radio Frequency Antennas



*Measurement using manufactured PCB coupon with 20 watts per channel @ 800 and 1800 MHz.

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An ISO 9001 Registered Company

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Commercial and Government Entity (CAGE) Code: 1C6Q9

RF-301 Cost Effective Antenna Laminate

RF-301 Typical Values			
Property	Test Method	Unit	Value
Dk @ 1 MHz	IPC-650 2.5.5.3		2.97
Dk @ 1.9 GHz	IPC-650 2.5.5.5.1 (Mod.)		2.97
Df @ 1.9 GHz	IPC-650 2.5.5.5.1 (Mod.)		0.0012
Moisture Absorption	IPC-650 2.6.2.1	%	0.02
Dielectric Thickness (30 mil)	IPC-650 2.2.18	mm	0.762
Dielectric Thickness (60 mil)	IPC-650 2.2.18	mm	1.524
Peel Strength (1 oz.RTF copper)	IPC-650 2.4.8 (Thermal Stress)	lbs./linear inch	10
Volume Resistivity	IPC-650 2.5.17.1	Mohms/cm	10 ⁹
Surface Resistivity	IPC-650 2.5.17.1	Mohm	10 ⁸
Flexural Strength (MD)	IPC-650 2.4.4	psi	11,000
Flexural Strength (CD)	IPC-650 2.4.4	psi	8,500
Thermal Conductivity	IPC-650 2.4.50	W/M*K	0.23
CTE (X-Y axis) (50-150 °C)	IPC-650 2.4.41	ppm/°C	17 - 20
CTE (Z axis) (50-150 °C)	IPC-650 2.4.41	ppm/°C	150
Flammability	UL-94		V-0

All reported values are typical and should not be used for specification purposes. In all instances, the user shall determine suitability in any given application.

Designation	Dk
RF-301	2.97

Typical Thicknesses	
Inches	mm
0.0300	0.76
0.0600	1.52

Available Sheet Sizes ²	
Inches	mm
12 x 18	304 x 457
16 x 18	406 x 457
18 x 24	457 x 610
16 x 36	406 x 914
24 x 36	610 x 914
18 x 48	457 x 1220

Our standard sheet size is 36" x 48" (914 mm x 1220 mm). Please contact our customer service department for availability of other sizes.

Please see our Product Selector Guide for information on available copper cladding.

An example of our part number is: RF-301-0300-CL1/CL1 - 18" x 24" (457 mm x 610 mm)