

RF-301

Excellent price / Performance Ratio

Excellent Peel Strength

Exceptionally Low Loss

Excellent Intermodulation Performance

Enhanced Surface Smoothness

Low Moisture Absorption

RF-301 exceeds PIM requirements in PCBs of -153 dBc (measured between 880 and 960 MHz, between 1710 and 1880 MHz and between 1920 and 2170 MHz at 20 W power) with CL1/CL1 cladding when processed with today's state-of-the-art processes and process parameters.

TACONIC

An ISO 9001:2008 Registered Company

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www.taconic-add.com

Applications

Antennas

RF-301

Taconic has over 50 years of experience coating fiberglass fabric with PTFE (PolyTetraFluoroEthylene). This enables Taconic to manufacture copper clad PTFE/woven glass laminates with exceptionally well controlled electrical and mechanical properties.

Taconic RF-301 laminates are engineered to provide a cost effective substrate. RF-301 is the best value for the low cost, high performance demands of microwave and radio frequency antenna applications.

The dielectric constant (Dk) 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.

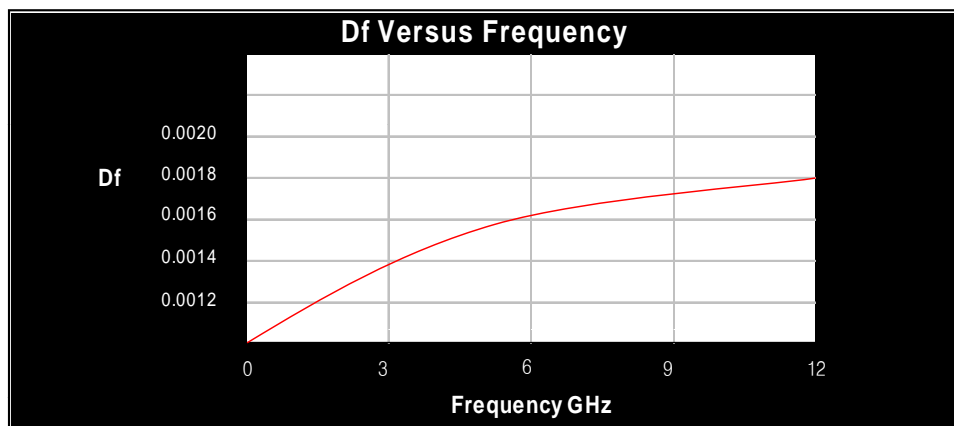
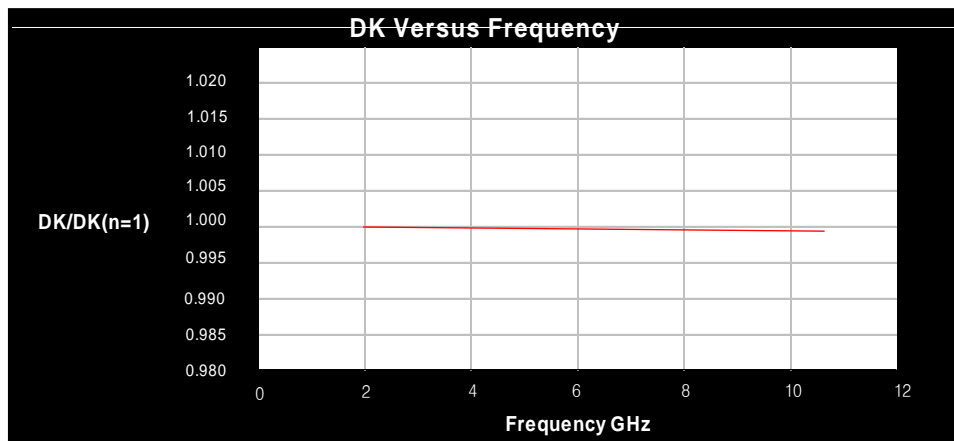
RF-301 laminates are generally ordered clad on both side with 1 oz electrodeposited copper. Contact our customer service department for alternate claddings.

RF-301 laminate are tested in accordance with IPC-TM 650. A certificate of compliance containing lot-specific test data accompanies each shipment.

See “How to Order” on the back page for a complete product listing.

RF-301 TYPICAL VALUES

Property	Test Method	Units	Value
Dielectric Constant @ 1 MHz	IPC-TM 650 2.5.5.3	-	2.97
Dielectric Constant @ 1.9 GHz	IPC-TM 650 2.5.5.5.1 Mod	-	2.97
Dissipation Factor @ 1.9 GHz	IPC-TM 650 2.5.5.5.1 Mod	-	0.0012
Water absorption	IPC-TM 650 2.6.2.1	%	0.02
Dielectric Thickness (30mil)	IPC-TM 650 2.2.18	mm	0.762
Dielectric Thickness (60mil)	IPC-TM 650 2.2.18	mm	1.524
Peel Strength (1 oz. RTF copper)	IPC-TM 650 2.4.8 (Thermal stress)	Lbs./linear inch	10
Volume Resistivity	IPC-TM 650 2.5.17.1	Mohm-cm	10 ⁹
Surface Resistivity	IPC-TM 650 2.5.17.1	Mohm	10 ⁸
Flexural Strength (MD)	IPC-TM 650 2.4.4	psi	11,000
Flexural Strength (CD)	IPC-TM 650 2.4.4	psi	8,500
Thermal Conductivity	IPC-TM 650 2.4.50	W/m/K	0.23
x-y CTE (50 ~ 150°C)	IPC-TM 650 2.4.41	ppm/°C	17 ~ 20
z CTE (50 ~ 150°C)	IPC-TM 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.

How to order

Designation	Dielectric Constant	Typical Thickness	
		RF-301	2.97
		0.0600"	1.52mm

Available Sheet Sizes ¹	
12"x18"	305mmx457mm
16"x18"	406mmx457mm
18"x24"	457mmx610mm
16"x36"	406mmx914mm
24"x36"	610mmx914mm
18"x48"	457mmx1220mm

¹Our standard sheet size is 36" x 48" (914mm x 1220mm). Please contact our Customer Service Department for availability of other sizes.

Available Copper Cladding						
Designation	Weight	Copper Thickness		R _{ms} Treated Side		Description
CL1	1 oz./sq. ft.	~ .0014"	~ 35 μ m	13 μ in	0.3 μ m	Reverse treated / Electrodeposited

Other copper claddings can be made available on request. Please call for information

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



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