

RF-30

High volume antenna material

RF-30 is an organic-ceramic laminate in the ORCER family of Taconic products. It combines the benefits of woven glass reinforced fluoropolymer chemistry with the thermal, mechanical and electrical enhancements of ceramic elements. RF-30 is the best value for the low cost, high performance demands of microwave and radio frequency antenna applications.

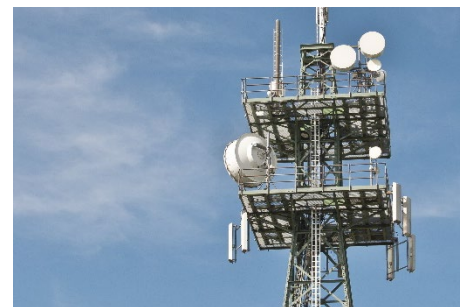
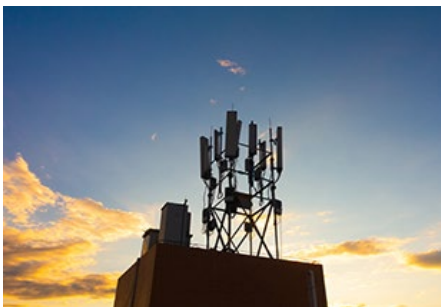
The low dissipation factor, thermal stability and smooth surface profile minimize phase shift with frequency and temperature, and yield exceptionally low intermodulation performance. RF-30 is ideally suited for long (up to 102") printed circuit base station antennas.

Benefits

- Low Cost
- Excellent Peel Strength
- Exceptionally Low Dissipation Factor
- Excellent Intermodulation Performance
- Low Moisture Absorption
- Enhanced Surface Smoothness

Applications

- Antennas
- Base station Antennas



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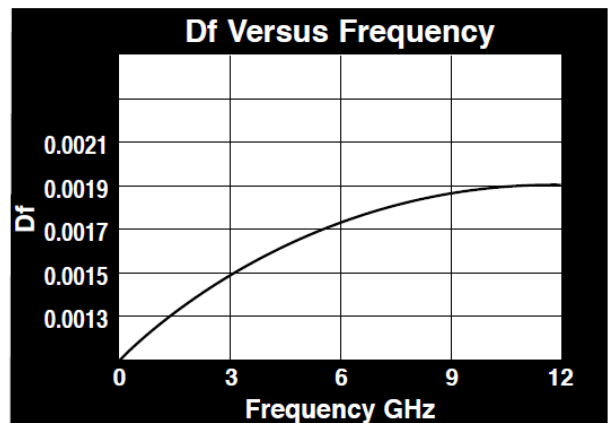
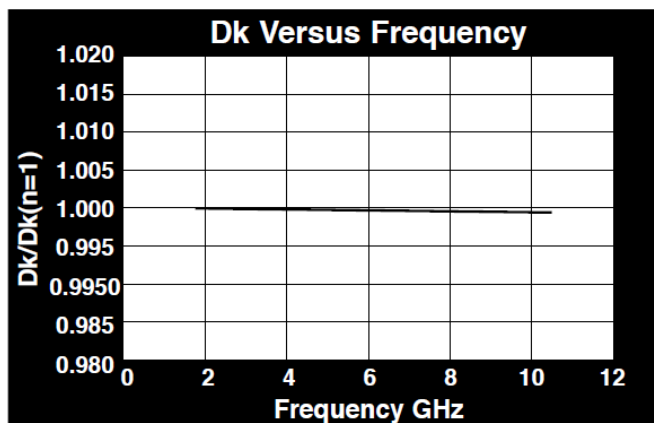
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RF-30 Typical Values

Property	Test Method	Unit	Value	Unit	Value
Dielectric Constant @ 1.9 GHz	IPC-TM-650 2.5.5		3.00		3.00
Dissipation Factor @ 1.9 GHz	IPC-TM-650 2.5.5		0.0014		0.0014
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.02	%	0.02
Dielectric Breakdown	IPC-TM-650 2.5.6	kV	>60	kV	>60
Volume Resistivity	IPC-TM-650 2.5.17.1 (Humidity Conditioning)	Mohm/cm	1.26 x 10 ⁹	Mohm/cm	1.26 x 10 ⁹
Surface Resistivity	IPC-TM-650 2.5.17.1 (Humidity Conditioning)	Mohm	1.46 x 10 ⁸	Mohm	1.46 x 10 ⁸
Arc Resistance	IPC-TM-650 2.5.1	Seconds	>180	Seconds	>180
Flexural Strength (MD)	ASTM D 790	psi	>13,000	N/mm ²	>90
Flexural Strength (CD)	ASTM D 790	psi	>9,000	N/mm ²	>62
Tensile Strength (MD)	ASTM D 638	psi	16,000	N/mm ²	111
Tensile Strength (CD)	ASTM D 638	psi	8,000	N/mm ²	55
Peel Strength (1 oz ED)	IPC-TM-650 2.4.8 (Thermal Stress)	lbs/linear inch	10.0	N/mm	1.8
Dimensional Stability (MD)	IPC-TM-650 2.4.39	in/in	0.00004	mm/mm	0.00004
Dimensional Stability (CD)	IPC-TM-650 2.4.39	in/in	-0.00010	mm/mm	-0.00010
Thermal Conductivity	ASTM F 433	W/m/K	0.23	W/m/K	0.23
CTE (x-y)	ASTM D 3386 (TMA)	ppm/°C	11-21	ppm/°C	11-21
CTE (z)	ASTM D 3386 (TMA, 25-100°C)	ppm/°C	125	ppm/°C	125
Outgassing (% TML)	ASTM E 595*	%	0.02	%	0.02
Outgassing (% CVCM)	ASTM E 595*	%	0.00	%	0.00
Outgassing (% WVVR)	ASTM E 595*	%	0.02	%	0.02

*As reported by NASA. See http://outgassing.nasa.gov/og_disclaimer.html.



Remarks : 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
RF-30	3.00 +/- 0.10
Typical Thicknesses 1	
Inches	mm
0.0100	0.25
0.0200	0.50
0.0300	0.76
0.0600	1.52

Other thicknesses may be available. Please call for availability.

Available Sheet Sizes 2		Long Laminates	
Inches	mm	Inches	mm
12 x 18	304 x 457	36 x 60	914 x 1526
16 x 18	406 x 457	36 x 76	914 x 1930
18 x 24	457 x 610	36 x 102	914 x 2590
16 x 36	406 x 914		
24 x 36	610 x 914		

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

An example of our part number is: **RF-30-0600-CV1/CV1 - 18" x 24" (457 mm x 610 mm)**

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