

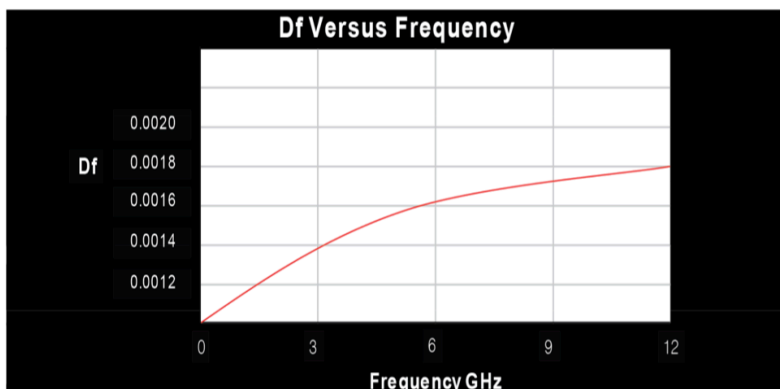
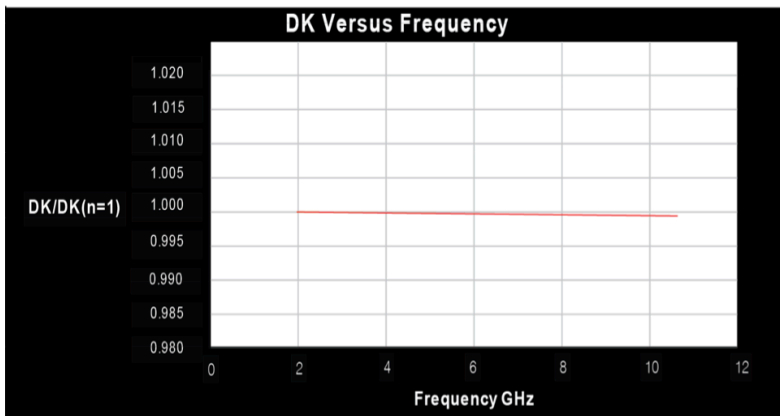
## RF-30-7H Cost Effective Antenna Laminate

RF-30-7H laminates are engineered to provide a cost effective substrate that offers 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.

### 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



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

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- Microwave Antennas
  - Radio Frequency Antennas

## RF-30-7H Typical Values

Property	TestMethod	Unit	Value	Unit	Value
Dielectric Constant @ 1MHz	IPC-TM 650 2.5.5.3	-	2.97	-	2.97
Dissipation Factor @ 1.9 GHz	IPC-TM 650 2.5.5.5.1 mod	-	0.0013	-	0.0013
Dissipation Factor @ 10 GHz	IPC-TM 650 2.5.5.5.1 Mod	-	0.0020	-	0.0020
Water absorption	IPC-TM 650 2.6.2.1	%	0.03	%	0.03
Peel Strength (1 oz. RT copper)	IPC-TM 650 2.4.8	Lbs./inch	12	N/mm	2.1
Volume Resistivity	IPC-TM 650 2.5.17.1	Mohm-cm	1.0 x 10 <sup>9</sup>	Mohm-cm	1.0 x 10 <sup>9</sup>
Surface Resistivity	IPC-TM 650 2.5.17.1	Mohm	5.0 x 10 <sup>8</sup>	Mohm	5.0 x 10 <sup>8</sup>
Flexural Strength (MD)	IPC-TM 650 2.4.4	psi	11,167	N/mm <sup>2</sup>	77
Flexural Strength (CD)	IPC-TM 650 2.4.4	psi	8,267	N/mm <sup>2</sup>	57
Flexural Modulus (MD)	IPC-TM 650 2.4.4	psi	168,244	N/mm <sup>2</sup>	1,160
Flexural Modulus (CD)	IPC-TM 650 2.4.4	psi	185,648	N/mm <sup>2</sup>	1,280
Tensile Strength (MD)	IPC-TM-650 2.4.18.3	psi	10,732	N/mm <sup>2</sup>	74
Tensile Strength (CD)	IPC-TM-650 2.4.18.3	psi	7,687	N/mm <sup>2</sup>	53
Tensile Modulus (MD)	IPC-TM-650 2.4.18.3	psi	800,611	N/mm <sup>2</sup>	5,520
Tensile Modulus (CD)	IPC-TM-650 2.4.18.3	psi	646,870	N/mm <sup>2</sup>	4,460
Elongation (MD)	IPC-TM-650 2.4.18.3	%	2.3	%	2.3
Elongation (CD)	IPC-TM-650 2.4.18.3	%	1.9	%	1.9
Dimensional Stability	IPC-TM-650 2.4.39(Etch)	% (30mil-MD)	0.023	% (30mil-CD)	0.029
Dimensional Stability	IPC-TM-650 2.4.39(Bake)	% (30mil-MD)	0.009	% (30mil-CD)	0.016
Dimensional Stability	IPC-TM-650 2.4.39(Stress)	% (30mil-MD)	0.006	% (30mil-CD)	0.012
Density	IPC-TM-650 2,3,5	g/cm <sup>3</sup>	2.28	g/cm <sup>3</sup>	2.28
Thermal Conductivity	IPC-TM-650 2.4.50	W/m/K	0.3	W/m/K	0.3
x-y CTE (50 ~ 150°C)	IPC-TM 650 2.4.41	ppm/°C	17-20	ppm/°C	17-20
z CTE (50 ~ 150°C)	IPC-TM 650 2.4.41	ppm/°C	150	ppm/°C	150
Hardness (Durometer)	ASTM D2240 (D-type)	-	82	-	82
Flammability	UL-94	-	V-0	-	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	Typical Thicknesses	
		Inches	mm
RF-30-7H	2.97	0.0300	0.76
		0.0600	1.52

Available Sheet Sizes	
Inches	mm
12 x 18	305 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

Standard sheet size is 36" x 48" (914 mm x 1220 mm). Please call 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-30-7H-0300-CL1/CL1 - 18" x 24" (457 mm x 610 mm)**