

# RF-41 · RF-43 · RF-45

## High Performance Laminates

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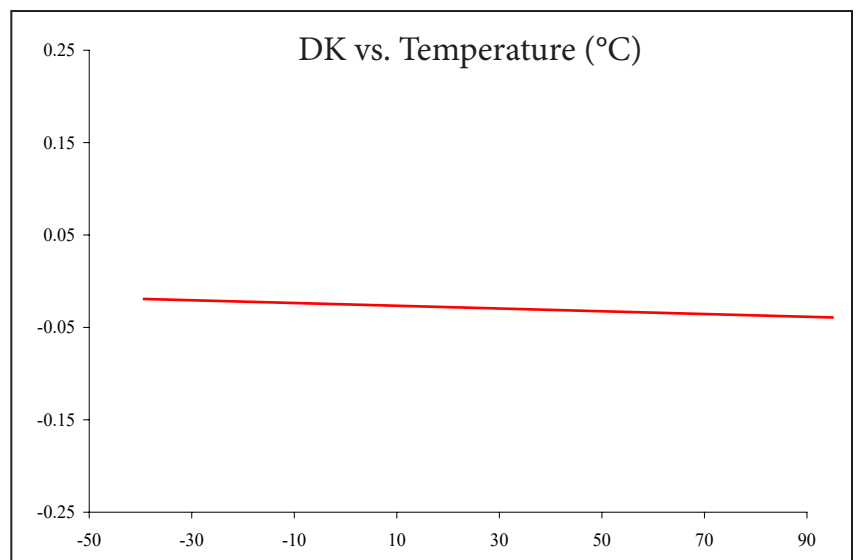
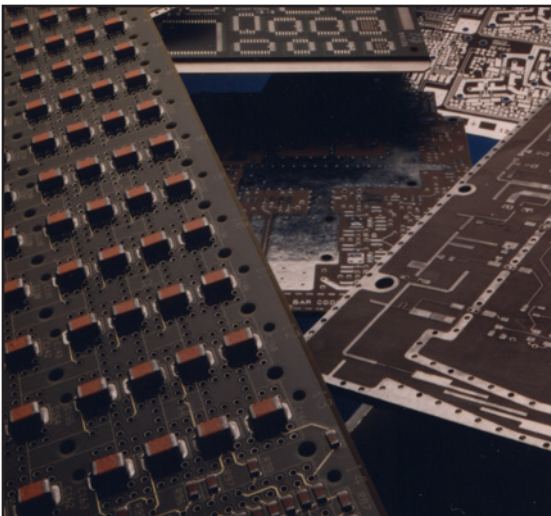
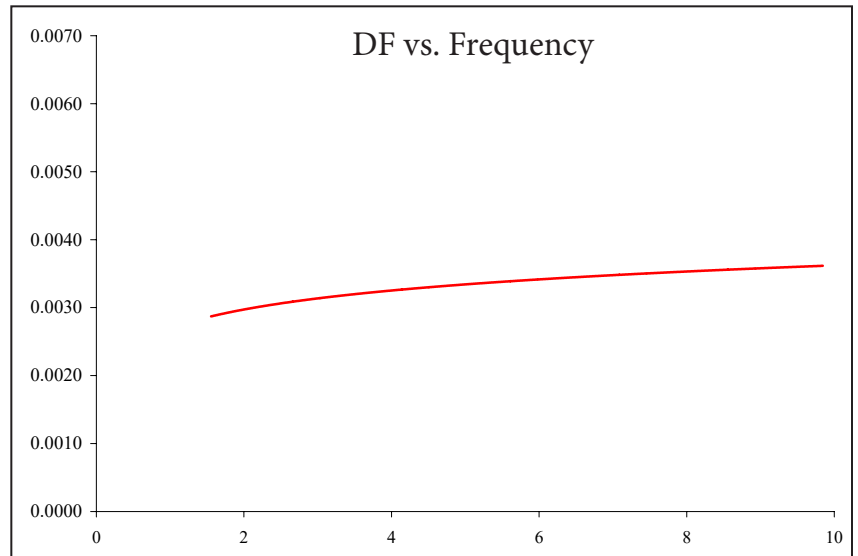
### Features:

- Low loss alternative to FR-4
- DK flat over temperature
- Stable DK & loss over frequency

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### Applications:

- Satellite Radio Antennas
- RFID Antennas
- GPS Antennas



## RF-41, 43 & 45 Typical Values

Property	Test Method	Unit	Value		
			RF-41	RF-43	RF-45
Material			RF-41	RF-43	RF-45
Dielectric Constant (FSR)	IPC-TM-650 2.5.5.6		4.10	4.30	4.50
Dissipation Factor @ 10 GHz	IPC-TM-650 2.5.5.5.1		0.0038	0.0033	0.0037
Moisture Absorption	IPC-TM-650 2.6.2.1	%	≤0.02	≤0.02	≤0.04
Flexural Strength (MD)	ASTM D 790	psi	20,700	20,100	20,700
Flexural Strength (CD)	ASTM D 790	psi	18,500	18,800	19,300
Peel Strength (1 oz VLP)	IPC-TM-650 2.4.8 (Thermal Stress)	lbs/linear inch	8	7	10
Thermal Conductivity	ASTM F 433	W/m/K	0.29	0.30	0.33
Volume Resistivity	IPC-TM-650 2.5.17.1	Mohm/cm	1.4 x 10 <sup>8</sup>	6.6 x 10 <sup>7</sup>	1.4 x 10 <sup>8</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	Mohm	1.2 x 10 <sup>7</sup>	6.2 x 10 <sup>5</sup>	3.3 x 10 <sup>6</sup>
CTE (x)	IPC-TM-650-2.4.41 (>RT - 125°C)	ppm/°C	9	9	9
CTE (y)	IPC-TM-650-2.4.41 (>RT - 125°C)	ppm/°C	12	11	13
CTE (z)	IPC-TM-650-2.4.41 (>RT - 125°C)	ppm/°C	93	96	96
Flammability Rating	UL 94		V-0		

Designation - Prepregs	Dielectric Constant
RF-41	4.10 +/- 0.15
RF-43	4.30 +/- 0.15
RF-45	4.50 +/- 0.15

Typical Thicknesses
0.0200", 0.0250", 0.0310", 0.0620", 0.1250" 0.51 mm, 0.64 mm, 0.79 mm, 1.57 mm, 3.18 mm

Available Sheet Sizes	
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
36 x 48	914 x 1219

Other thicknesses may be available. Please call for information.

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

An example of our part number is: **RF-45-0250-CV1/CV1 - 18" x 24" (457 mm x 610 mm)**

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