

RF-41 · RF-43 · RF-45

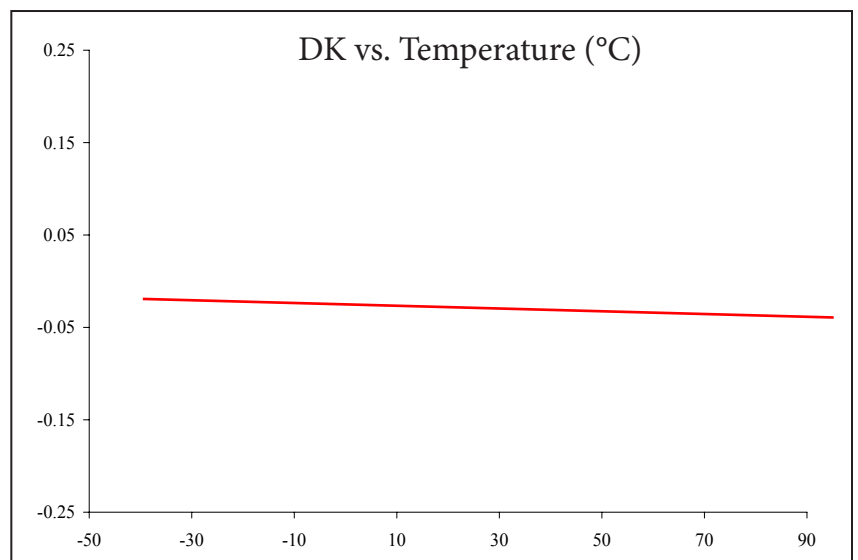
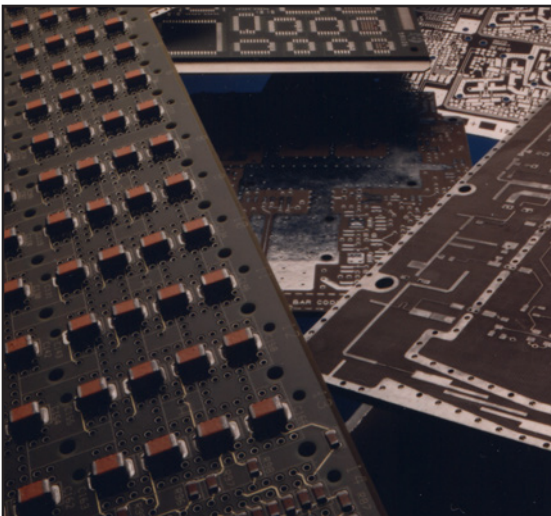
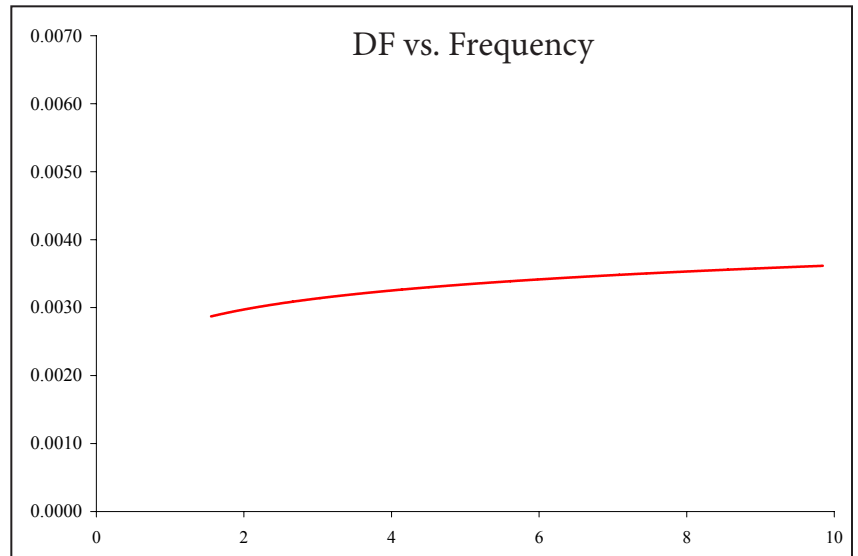
High Performance Laminates

Features:

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

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 ⁸ | 6.6 x 10 ⁷ | 1.4 x 10 ⁸ |
| Surface Resistivity | IPC-TM-650 2.5.17.1 | Mohm | 1.2 x 10 ⁷ | 6.2 x 10 ⁵ | 3.3 x 10 ⁶ |
| 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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