

RF-30A2 Stable Performance Laminate

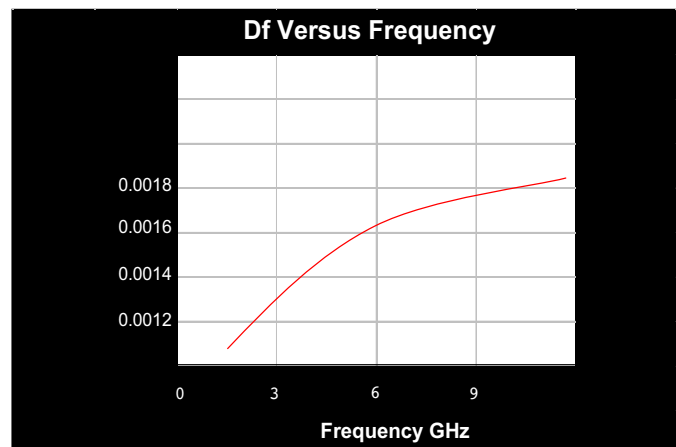
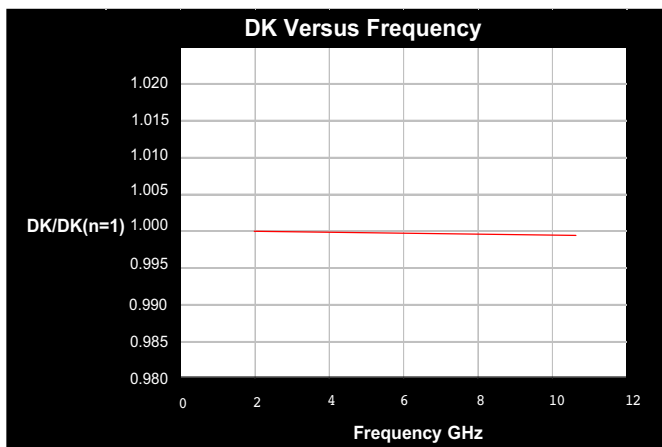
RF-30A2 is an organic-ceramic laminate based on woven glass reinforcement in AGC's family of RF substrates designed from our expertise in ceramic filler and PTFE coating technology.

RF-30A2 is the best choice for low cost, high volume commercial microwave and radio frequency applications. RF-30A2 exhibits more stable electrical and mechanical properties than designers need. This low loss dielectric substrate with smoother surface leads to stable electrical properties and lower insertion loss over broadband frequency range. More stable mechanical properties, better dimensional stability and harder rigidity can make RF components less affected by other factors. Less dimensional movement also contributes to stable phase or impedance properties over broadband frequency range.

Ultra low moisture absorption rate with stable loss tangent helps minimize phase shift or signal distortion along different temperature or humidity conditions. Additionally, with PTFE's low surface energy and hydrophobic properties, RF-30A2 can be less affected by most environmental challenges thereby offering more stable performance.

Benefits & Applications:

- Stable Mechanical Properties
 - Stable at High Frequencies
 - Stable at High Temperatures
 - Low Moisture Absorption
 - Excellent Etchability with Hydrophobic PTFE Surface
 - Clean, White Surface
 - Excellent Price/Performance Ratio
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- Antennas and Subcomponents
 - RF Passive Components



RF-30A2 Typical Values					
Property	Test Method	Unit	Value	Unit	Value
Dk @ 1.9 GHz	IPC-650 2.5.5.5.1 Mod.	-	2.97 ± 0.05	-	2.97 ± 0.05
Df @ 1.9 GHz	IPC-650 2.5.5.5.1 Mod.	-	0.0013	-	0.0013
Df @ 10 GHz	IPC-650 2.5.5.5.1 Mod.	-	0.0019	-	0.0019
Moisture Absorption	IPC-650 2.6.2.1	%	0.03	%	0.03
Volume Resistivity	IPC-650 2.5.17.1	Mohm/cm	4.0 x 10 ⁸	Mohm/cm	4.0 x 10 ⁸
Surface Resistivity	IPC-650 2.5.17.1	Mohm	2.5 x 10 ⁸	Mohm	2.5 x 10 ⁸
Flexural Strength (MD)	IPC-650 2.4.4	psi	13,000	N/mm ²	89.63
Flexural Strength (CD)	IPC-650 2.4.4	psi	9,000	N/mm ²	62.05
Tensile Strength (MD)	IPC-650 2.4.18.3	psi	13,500	N/mm ²	93.08
Tensile Strength (CD)	IPC-650 2.4.19	psi	10,000	N/mm ²	68.95
Dimensional Stability (MD)	IPC-650 2.4.39 (After Bake)	% (20 mil)	-0.024	% (40 mil)	-0.021
Dimensional Stability (CD)	IPC-650 2.4.39 (After Bake)	% (20 mil)	-0.027	% (40 mil)	-0.022
Dimensional Stability (MD)	IPC-650 2.4.39 (After Stress)	% (20 mil)	-0.029	% (40 mil)	-0.025
Dimensional Stability (CD)	IPC-650 2.4.39 (After Stress)	% (20 mil)	-0.030	% (40 mil)	-0.026
Density (Specific Gravity)	IPC-650 2.3.5	g/cm ³	2.26	g/cm ³	2.26
Specific Heat	IPC-650 2.4.50	J/gK	0.91	J/gK	0.91
Thermal Conductivity	IPC-650 2.4.50	W/M*K	0.30	W/M*K	0.30
CTE (X axis) (50°C - 150°C)	IPC-650 2.4.41	ppm/°C	9	ppm/°C	9
CTE (Y axis) (50°C - 150°C)	IPC-650 2.4.41	ppm/°C	12	ppm/°C	12
CTE (Z axis) (50°C - 150°C)	IPC-650 2.4.41	ppm/°C	110	ppm/°C	110
Flammability Rating	Internal		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 ¹	
		Inches	mm
RF-30A2	2.97 ± 0.05	0.020	0.51
		0.040	1.02

Available Sheet Sizes ²	
Inches	mm
12 x 18	305 x 457
16 x 18	406 x 457
18 x 24	457 x 610
36 x 48	914 x 1220

¹ Standard RF-30A2 Series can be manufactured in increments of 0.020". Please call for availability of additional thicknesses.

² Standard sheet size is 18" x 24" (457 mm x 610 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-30A2-0200-CL1/CL1 - 18" x 24" (457 mm x 610 mm)

