

## Dielectric Constant (DK) / Dissipation Factor (DF) Table

### Core Data

Construction	Resin Content %	Standard/ Alternative	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)							
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
1x1035	67.0%	Standard	0.0020	0.051	3.57 0.0048	3.56 0.0052	3.56 0.0057	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059
1x1067	72.0%	Standard	0.0025	0.064	3.47 0.0047	3.46 0.0051	3.46 0.0056	3.45 0.0058	3.45 0.0058	3.45 0.0059	3.45 0.0059	3.45 0.0059
1x1080	66.0%	Standard	0.0030	0.076	3.59 0.0048	3.58 0.0052	3.58 0.0057	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059
1x1086	62.0%	Standard	0.0030	0.076	3.68 0.0049	3.67 0.0053	3.67 0.0058	3.66 0.0059	3.66 0.0059	3.66 0.0060	3.66 0.0060	3.66 0.0060
2x1067	62.0%	Standard	0.0035	0.089	3.68 0.0049	3.67 0.0053	3.67 0.0058	3.66 0.0059	3.66 0.0059	3.66 0.0060	3.66 0.0060	3.66 0.0060
1x1078	69.5%	Standard	0.0035	0.089	3.52 0.0047	3.51 0.0051	3.51 0.0057	3.50 0.0058	3.50 0.0058	3.50 0.0059	3.50 0.0059	3.50 0.0059
1x3313	52.0%	Standard	0.0035	0.089	3.91 0.0052	3.90 0.0055	3.90 0.0059	3.89 0.0060	3.89 0.0060	3.89 0.0061	3.89 0.0061	3.89 0.0061
2x1035	67.0%	Standard	0.0040	0.102	3.57 0.0048	3.56 0.0052	3.56 0.0057	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059
2x1067	66.0%	Alternate	0.0040	0.102	3.59 0.0048	3.58 0.0052	3.58 0.0057	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059
1x3313	57.0%	Alternate	0.0040	0.102	3.79 0.0051	3.78 0.0054	3.78 0.0058	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060
1x2116	52.5%	Alternate	0.0045	0.114	3.89 0.0052	3.89 0.0055	3.89 0.0059	3.88 0.0060	3.88 0.0060	3.88 0.0061	3.88 0.0061	3.88 0.0061
2x1067	69.3%	0.00 Standard	0.0045	0.114	3.53 0.0048	3.52 0.0052	3.52 0.0057	3.51 0.0059	3.51 0.0059	3.51 0.0059	3.51 0.0059	3.51 0.0059

Construction	Resin Content %	Standard/ Alternative	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)							
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
1x2116	56.5%	Standard	0.0050	0.127	3.80 0.0051	3.79 0.0054	3.79 0.0058	3.79 0.0060	3.79 0.0060	3.79 0.0060	3.78 0.0060	3.78 0.0060
2x1067	72.0%	Standard	0.0050	0.127	3.47 0.0047	3.46 0.0051	3.46 0.0056	3.45 0.0058	3.45 0.0058	3.45 0.0059	3.45 0.0059	3.45 0.0059
2x1086	62.0%	Standard	0.0060	0.152	3.68 0.0049	3.67 0.0053	3.67 0.0058	3.66 0.0059	3.66 0.0059	3.66 0.0060	3.66 0.0060	3.66 0.0060
2x1080	66.0%	Alternate	0.0060	0.152	3.59 0.0048	3.58 0.0052	3.57 0.0057	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059
2x3313	57.0%	Standard	0.0080	0.203	3.79 0.0051	3.78 0.0054	3.78 0.0058	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060
2x2116	56.5%	Standard	0.0100	0.254	3.80 0.0051	3.79 0.0054	3.79 0.0058	3.79 0.0060	3.79 0.0060	3.79 0.0060	3.78 0.0060	3.78 0.0060
3x3313	57.0%	Standard	0.0120	0.305	3.79 0.0051	3.78 0.0054	3.78 0.0058	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060	3.77 0.0060
2x2116/1x3313	56.6%	Standard	0.0140	0.356	3.80 0.0051	3.79 0.0054	3.79 0.0058	3.79 0.0060	3.79 0.0060	3.79 0.0060	3.78 0.0060	3.78 0.0060
3x2116	53.9%	Alternate	0.0140	0.356	3.87 0.0052	3.86 0.0055	3.86 0.0059	3.86 0.0060	3.86 0.0060	3.86 0.0061	3.86 0.0061	3.85 0.0061
4x2116	56.5%	Alternate	0.0200	0.508	3.80 0.0051	3.79 0.0054	3.79 0.0058	3.79 0.0060	3.79 0.0060	3.79 0.0060	3.78 0.0060	3.78 0.0060
2x2116/2x1652	52.5%	Alternate	0.0210	0.533	3.89 0.0052	3.89 0.0055	3.89 0.0059	3.88 0.0060	3.88 0.0060	3.88 0.0061	3.88 0.0061	3.88 0.0061
2x3313/3x1652	50.6%	Alternate	0.0240	0.610	3.94 0.0053	3.94 0.0056	3.93 0.0059	3.93 0.0060	3.93 0.0060	3.93 0.0061	3.93 0.0061	3.93 0.0061
2x2116/3x1652	53.9%	Alternate	0.0280	0.711	3.87 0.0052	3.86 0.0055	3.86 0.0059	3.86 0.0060	3.86 0.0060	3.86 0.0061	3.86 0.0061	3.85 0.0061

## Dielectric Constant (DK) / Dissipation Factor (DF) Table

### Prepreg Data

Glass Style	Resin content %	Standard/ Alternate	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)							
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
106	72.5%	Standard	0.0020	0.051	3.46 0.0047	3.45 0.0051	3.45 0.0056	3.44 0.0058	3.44 0.0058	3.44 0.0059	3.44 0.0059	3.44 0.0059
1035	67.0%	0.00 Alternate	0.0020	0.051	3.57 0.0048	3.56 0.0052	3.56 0.0057	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059	3.55 0.0059
1067	66.0%	0.00 Standard	0.0020	0.051	3.59 0.0048	3.58 0.0052	3.58 0.0057	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059
1067	70.0%	0.00 Standard	0.0023	0.058	3.51 0.0047	3.50 0.0051	3.50 0.0057	3.49 0.0058	3.49 0.0058	3.49 0.0059	3.49 0.0059	3.49 0.0059
106	76.0%	Standard	0.0024	0.061	3.39 0.0046	3.38 0.0050	3.38 0.0056	3.37 0.0058	3.37 0.0058	3.37 0.0058	3.37 0.0058	3.37 0.0058
1035	71.5%	0.00 Standard	0.0024	0.061	3.48 0.0047	3.47 0.0051	3.47 0.0056	3.46 0.0058	3.46 0.0058	3.46 0.0059	3.46 0.0059	3.46 0.0059
1067	72.0%	0.00 Standard	0.0025	0.064	3.45 0.0047	3.44 0.0051	3.44 0.0056	3.43 0.0058	3.43 0.0058	3.43 0.0059	3.43 0.0059	3.43 0.0059
1067	74.0%	0.00 Standard	0.0027	0.069	3.43 0.0046	3.42 0.0050	3.42 0.0056	3.41 0.0058	3.41 0.0058	3.41 0.0059	3.41 0.0059	3.41 0.0059
1035	74.5%	0.00 Standard	0.0027	0.069	3.42 0.0046	3.41 0.0050	3.41 0.0056	3.40 0.0058	3.40 0.0058	3.40 0.0059	3.40 0.0059	3.40 0.0059
106	78.5%	Alternate	0.0027	0.069	3.34 0.0045	3.33 0.0049	3.33 0.0055	3.32 0.0057	3.32 0.0057	3.32 0.0058	3.32 0.0058	3.32 0.0058
1035	77.0%	0.00 Alternate	0.0031	0.079	3.37 0.0045	3.36 0.0050	3.36 0.0056	3.35 0.0058	3.35 0.0058	3.35 0.0058	3.35 0.0058	3.35 0.0058
1067	76.5%	0.00 Alternate	0.0031	0.079	3.38 0.0045	3.37 0.0050	3.37 0.0056	3.36 0.0058	3.36 0.0058	3.36 0.0058	3.36 0.0058	3.36 0.0058

Glass Style	Resin content %	Standard/ Alternate	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)							
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
1080	66.0%	Standard	0.0031	0.079	3.59 0.0048	3.58 0.0052	3.58 0.0057	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059	3.57 0.0059
1086	62.0%	0.00 Alternate	0.0031	0.079	3.68 0.0049	3.67 0.0053	3.67 0.0058	3.66 0.0059	3.66 0.0059	3.66 0.0060	3.66 0.0060	3.66 0.0060
1086	64.0%	0.00 Standard	0.0033	0.084	3.63 0.0049	3.63 0.0053	3.62 0.0057	3.62 0.0059	3.62 0.0059	3.62 0.0060	3.62 0.0060	3.61 0.0060
1080	69.0%	Standard	0.0034	0.086	3.53 0.0048	3.52 0.0052	3.52 0.0057	3.51 0.0059	3.51 0.0059	3.51 0.0059	3.51 0.0059	3.51 0.0059
1086	66.5%	0.00 Standard	0.0035	0.089	3.58 0.0048	3.57 0.0052	3.57 0.0057	3.56 0.0059	3.56 0.0059	3.56 0.0059	3.56 0.0059	3.56 0.0059
1078	69.5%	0.00 Standard	0.0036	0.091	3.52 0.0047	3.51 0.0051	3.51 0.0057	3.50 0.0058	3.50 0.0058	3.50 0.0059	3.50 0.0059	3.50 0.0059
1080	72.5%	Alternate	0.0039	0.099	3.46 0.0047	3.45 0.0051	3.45 0.0056	3.44 0.0058	3.44 0.0058	3.44 0.0059	3.44 0.0059	3.44 0.0059
1086	70.0%	0.00 Standard	0.0040	0.102	3.51 0.0047	3.50 0.0051	3.50 0.0057	3.49 0.0058	3.49 0.0058	3.49 0.0059	3.49 0.0059	3.49 0.0059
3313	57.0%	Alternate	0.0040	0.102	3.79 0.0051	3.78 0.0054	3.78 0.0058	3.78 0.0060	3.78 0.0060	3.78 0.0060	3.77 0.0060	3.77 0.0060
2113	59.0%	Standard	0.0041	0.104	3.74 0.0050	3.74 0.0054	3.73 0.0058	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060
1078	73.5%	0.00 Standard	0.0042	0.107	3.44 0.0046	3.43 0.0051	3.43 0.0056	3.42 0.0058	3.42 0.0058	3.42 0.0059	3.42 0.0059	3.42 0.0059
3313	59.0%	Standard	0.0043	0.109	3.74 0.0050	3.74 0.0054	3.73 0.0058	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060
3313	63.5%	Standard	0.0049	0.125	3.64 0.0049	3.64 0.0053	3.63 0.0057	3.63 0.0059	3.63 0.0059	3.63 0.0060	3.63 0.0060	3.63 0.0060
2116	56.5%	Standard	0.0051	0.130	3.80 0.0051	3.79 0.0054	3.79 0.0058	3.79 0.0060	3.79 0.0060	3.79 0.0060	3.78 0.0060	3.78 0.0060
2116	59.0%	Standard	0.0055	0.140	3.74 0.0050	3.74 0.0054	3.73 0.0058	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060	3.73 0.0060

Revisions:

A-Original-4/17

B-Added Standard & Alternate construction-8/18

C- Corrected 3.5 core 2x1078 to 1x1078

D - Removed Weave Type 9/20

All I-Speed glass is Spread Weave in both directions

Standard-Commonly available

Alternate-Available, but not stocked