

### Dielectric Constant(Dk) / Dissipation factor (Df) Table

#### Core Data

Constructions	Resin Content %	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)					
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
1x106	71.0%	Standard	0.0020	0.051	3.89 0.0180	3.84 0.0210	3.81 0.0240	3.77 0.0250	3.63 0.0300	3.63 0.0300
1x1067	65.0%	Alternate	0.0020	0.051	3.99 0.0170	3.94 0.0200	3.91 0.0220	3.88 0.0230	3.74 0.0280	3.74 0.0280
1x1080	58.0%	Standard	0.0025	0.064	4.11 0.0160	4.06 0.0180	4.04 0.0210	4.00 0.0220	3.88 0.0260	3.88 0.0260
1x1080	66.0%	Standard	0.0030	0.076	4.09 0.0160	4.04 0.0180	4.02 0.0210	3.99 0.0220	3.86 0.0260	3.86 0.0260
1x2113	46.0%	Alternate	0.0030	0.076	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
1x1086	60.0%	Alternate	0.0030	0.076	4.07 0.0160	4.02 0.0190	4.00 0.0210	3.97 0.0220	3.84 0.0260	3.84 0.0260
1x2113	54.0%	Standard	0.0035	0.089	4.18 0.0160	4.14 0.0170	4.11 0.0200	4.08 0.0210	3.96 0.0240	3.96 0.0240
1x3313	51.0%	Alternate	0.0035	0.089	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
2x106	68.0%	Standard	0.0035	0.089	3.94 0.0180	3.89 0.0200	3.86 0.0230	3.82 0.0240	3.68 0.0290	3.68 0.0290
1x2116	47.0%	Standard	0.0040	0.102	4.32 0.0140	4.27 0.0160	4.26 0.0180	4.23 0.0190	4.17 0.0220	4.17 0.0220
1x106/1x1080	60.0%	Standard	0.0040	0.102	4.07 0.0160	4.02 0.0190	4.00 0.0210	3.97 0.0220	3.84 0.0260	3.84 0.0260
1x106/1x1080	62.0%	Alternate	0.0043	0.109	4.04 0.0170	3.99 0.0190	3.97 0.0220	3.93 0.0230	3.80 0.0270	3.80 0.0270
1x2116	51.0%	Standard	0.0045	0.114	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
2x1080	55.0%	Standard	0.0045	0.114	4.16 0.0160	4.12 0.0180	4.10 0.0200	4.05 0.0210	3.99 0.0240	3.99 0.0250
1x2116	54.0%	Standard	0.0050	0.127	4.18 0.0150	4.14 0.0170	4.11 0.0200	4.08 0.0210	3.96 0.0240	3.96 0.0240
1x1652	43.0%	Alternate	0.0050	0.127	4.40 0.0140	4.36 0.0150	4.34 0.0170	4.32 0.0180	4.21 0.0210	4.21 0.0210
2x1080	58.0%	Standard	0.0050	0.127	4.11 0.0160	4.06 0.0180	4.04 0.0210	4.00 0.0220	3.88 0.0260	3.88 0.0260
1x106/1x2113	57.0%	Alternate	0.0053	0.135	4.13 0.0160	4.08 0.0180	4.06 0.0210	4.02 0.0210	3.90 0.0250	3.90 0.0250

1x1652	46.0%	Alternate	0.0055	0.140	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
2x1080	65.0%	Standard	0.0060	0.152	4.09 0.0160	4.04 0.0180	4.02 0.0210	3.99 0.0220	3.86 0.0260	3.86 0.0260
1x1652	51.0%	Standard	0.0060	0.152	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
2x1086	59.0%	Alternate	0.0060	0.152	4.09 0.0160	4.04 0.0180	4.02 0.0210	3.99 0.0220	3.86 0.0260	3.86 0.0260
1x7628	42.0%	Standard	0.0070	0.178	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200
2x2113	54.0%	Standard	0.0070	0.178	4.18 0.0160	4.14 0.0170	4.11 0.0200	4.08 0.0210	3.96 0.0240	3.96 0.0240
2x3313	51.0%	Alternate	0.0070	0.178	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
1x7628	44.0%	Alternate	0.0075	0.191	4.38 0.0140	4.34 0.0150	4.32 0.0170	4.29 0.0180	4.19 0.0210	4.19 0.0210
2x2116	47.0%	Standard	0.0080	0.203	4.32 0.0140	4.27 0.0160	4.26 0.0180	4.23 0.0190	4.17 0.0220	4.17 0.0220
2x3313	55.0%	Alternate	0.0080	0.203	4.16 0.0160	4.12 0.0180	4.10 0.0200	4.05 0.0210	3.99 0.0240	3.99 0.0250
1x7628	46.0%	Standard	0.0080	0.203	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
2x2116	51.0%	Alternate	0.0090	0.229	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
2x2116	54.0%	Standard	0.0100	0.254	4.18 0.0160	4.14 0.0170	4.11 0.0200	4.08 0.0210	3.96 0.0240	3.96 0.0240
2x1652	43.0%	Alternate	0.0100	0.254	4.40 0.0140	4.36 0.0150	4.34 0.0170	4.32 0.0180	4.21 0.0210	4.21 0.0210
2x1652	51.0%	Standard	0.0120	0.305	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
2x1080/1x7628	48.0%	Alternate	0.0120	0.305	4.30 0.0150	4.25 0.0160	4.24 0.0180	4.21 0.0190	4.09 0.0220	4.09 0.0220
2x7628	42.0%	Standard	0.0140	0.356	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200
2x7628	46.0%	Standard	0.0160	0.406	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
1x1080/2x7628	41.0%	Alternate	0.0180	0.457	4.44 0.0130	4.40 0.0140	4.39 0.0170	4.36 0.0170	4.26 0.0200	4.26 0.0200
2x7628/1x2116	45.0%	Standard	0.0180	0.457	4.36 0.0140	4.32 0.0160	4.30 0.0180	4.27 0.0190	4.15 0.0210	4.15 0.0210
3x7628	42.0%	Standard	0.0210	0.533	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200
3x7628	46.0%	Standard	0.0240	0.610	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
4x7628	42.0%	Standard	0.0280	0.711	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200

4x7628/1x1080	44.0%	Standard	0.0310	0.787	4.38 0.0140	4.34 0.0150	4.32 0.0170	4.30 0.0180	4.19 0.0210	4.19 0.0210
5x7628	42.0%	Alternate	0.0350	0.889	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200
5x7628/1x2116	43.0%	Alternate	0.0390	0.991	4.40 0.0140	4.36 0.0150	4.34 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200
6x7628	42.0%	Alternate	0.0420	1.067	4.42 0.0140	4.38 0.0150	4.36 0.0170	4.34 0.0180	4.24 0.0200	4.24 0.0200

## Prepreg Dielectric Constant(Dk) / Dissipation factor (Df) Table

### Prepreg Data

Construction	ResinContent %	Offering	Thickness(inch)	Thickness(mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)					
					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
106	71.0%	Alternate	0.0020	0.051	3.89 0.0160	3.83 0.0180	3.81 0.0200	3.77 0.0210	3.63 0.0240	3.63 0.0250
1067	70.0%	Alternate	0.0023	0.058	3.91 0.0180	3.85 0.0200	3.83 0.0240	3.79 0.0250	3.65 0.0290	3.65 0.0290
106	76.0%	Standard	0.0024	0.061	3.81 0.0190	3.75 0.0220	3.73 0.0250	3.69 0.0260	3.54 0.0310	3.54 0.0310
1067	75.0%	Alternate	0.0027	0.069	3.83 0.0190	3.77 0.0210	3.75 0.0250	3.71 0.0260	3.56 0.0310	3.56 0.0310
1080	61.0%	Alternate	0.0028	0.070	4.03 0.0160	3.96 0.0180	3.92 0.0200	3.92 0.0210	3.79 0.0250	3.80 0.0250
1080	66.0%	Standard	0.0030	0.076	3.97 0.0170	3.92 0.0200	3.90 0.0230	3.86 0.0240	3.72 0.0280	3.72 0.0280
1086	63.0%	Alternate	0.0031	0.079	4.02 0.0170	3.95 0.0190	3.91 0.0220	3.91 0.0230	3.78 0.0270	3.78 0.0270
1080	68.0%	Standard	0.0032	0.081	3.94 0.0180	3.89 0.0200	3.86 0.0230	3.82 0.0240	3.68 0.0290	3.68 0.0290
1086	65.0%	Alternate	0.0033	0.084	3.99 0.0170	3.94 0.0200	3.92 0.0220	3.88 0.0230	3.75 0.0280	3.74 0.0280
1086	67.0%	Alternate	0.0035	0.089	3.96 0.0180	3.90 0.0200	3.88 0.0230	3.84 0.0240	3.70 0.0280	3.70 0.0280
1080	71.0%	Standard	0.0036	0.091	3.89 0.0180	3.83 0.0210	3.81 0.0240	3.77 0.0250	3.63 0.0300	3.63 0.0300
2113	55.0%	Alternate	0.0039	0.098	4.16 0.0160	4.12 0.0180	4.10 0.0200	4.06 0.0210	3.95 0.0240	3.95 0.0250
3313	55.0%	Standard	0.0038	0.097	4.16 0.0160	4.12 0.0180	4.10 0.0200	4.06 0.0210	3.95 0.0240	3.95 0.0250
2113	59.0%	Standard	0.0040	0.102	4.09 0.0160	4.04 0.0180	4.02 0.0210	3.99 0.0220	3.86 0.0260	3.86 0.0260
2116	52.0%	Alternate	0.0047	0.119	4.22 0.0160	4.17 0.0180	4.15 0.0200	4.12 0.0210	4.01 0.0250	4.01 0.0250
2116	56.0%	Standard	0.0048	0.122	4.14 0.0160	4.10 0.0180	4.08 0.0200	4.04 0.0210	3.92 0.0240	3.92 0.0250
1652	51.0%	Standard	0.0057	0.145	4.24 0.0150	4.19 0.0170	4.17 0.0190	4.14 0.0200	4.03 0.0230	4.03 0.0230
7628	45.0%	Standard	0.0073	0.185	4.36 0.0140	4.32 0.0160	4.30 0.0180	4.27 0.0180	4.16 0.0210	4.16 0.0210
7628	50.0%	Standard	0.0082	0.208	4.26 0.0150	4.21 0.0170	4.19 0.0190	4.16 0.0200	4.05 0.0230	4.05 0.0230

### NOTE

Revisions:

A - Original - 4/17

B - Added Standard & Alternate construction, Corrected 106 76% RC and 1067 70% RC prepreg thickness values - 8/18

C - Corrected 18 mil construction and 5 Ghz typo in prepreg table - 1/20

D - Remove 1x2113 55% 4 mil - 7/20

E - Added 3313 59% RC prepreg, Removed weave type- 9/20

F - Corrected 2x1080 6 mil core RC% from 59% to 65% - 6/23

All 370HR glass is Spread Weave in both directions

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