

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

Core Data

Constructions	Resin Content %	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%	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
1x1080	58.0%	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%	0.0030	0.076	3.98 0.0160	3.93 0.0180	3.90 0.0210	3.87 0.0220	3.74 0.0260	3.74 0.0260
1x1086	60.0%	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%	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
2x106	68.0%	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
1x3313	55.0%	0.0040	0.102	4.16 0.0160	4.12 0.0180	4.10 0.0200	4.05 0.0210	3.99 0.0240	3.99 0.0250
1x106/1x1080	60.0%	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%	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%	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%	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%	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
2x1080	58.0%	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
2x1080	64.0%	0.0055	0.140	4.02 0.0170	3.97 0.0190	3.94 0.0220	3.91 0.0220	3.78 0.0270	3.78 0.0270
2x1080	65.0%	0.0060	0.152	4.00 0.0160	3.95 0.0180	3.92 0.0210	3.89 0.0220	3.76 0.0260	3.76 0.0260
1x1652	51.0%	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
1x7628	42.0%	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%	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

1x7628	44.0%	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
2x3313	55.0%	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%	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%	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%	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	51.0%	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
2x7628	42.0%	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
1x2116/2x7628	45.0%	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%	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%	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%	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
1x1080/4x7628	44.0%	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%	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	45.0%	0.0390	0.991	4.36 0.0140	4.32 0.0160	4.30 0.0180	4.27 0.0190	4.15 0.0210	4.15 0.0210
6x7628	46.0%	0.0470	1.194	4.34 0.0140	4.30 0.0160	4.28 0.0180	4.25 0.0190	4.14 0.0220	4.14 0.0220
8x7629	42.5%	0.0590	1.499	4.41 0.0140	4.37 0.0150	4.35 0.0170	4.33 0.0180	4.23 0.0200	4.23 0.0200
11X7628	42.0%	0.0930	2.362	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	Resin Content %	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%	0.0020	0.051	3.90 0.0180	3.84 0.0210	3.82 0.0240	3.79 0.0250	3.64 0.0290	3.64 0.0290
106	74.0%	0.0022	0.056	3.85 0.0190	3.79 0.0220	3.77 0.0250	3.73 0.0250	3.58 0.0300	3.58 0.0300
106	76.0%	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
1080	62.0%	0.0028	0.070	4.06 0.0170	4.01 0.0190	3.99 0.0220	3.95 0.0220	3.82 0.0260	3.82 0.0260
1067	75.0%	0.0030	0.069	3.83 0.0190	3.77 0.0220	3.75 0.0250	3.71 0.0260	3.56 0.0310	3.56 0.0310
1080	66.0%	0.0032	0.076	3.99 0.0170	3.94 0.0200	3.92 0.0230	3.88 0.0230	3.74 0.0280	3.74 0.0280
1080	68.0%	0.0034	0.081	3.96 0.0180	3.90 0.0200	3.88 0.0230	3.84 0.0240	3.70 0.0290	3.70 0.0290
1080	71.0%	0.0038	0.091	3.90 0.0180	3.84 0.0200	3.82 0.0230	3.79 0.0240	3.64 0.0280	3.64 0.0280
3313	55.0%	0.0038	0.097	4.18 0.0160	4.14 0.0180	4.12 0.0200	4.08 0.0210	3.96 0.0240	3.96 0.0240
2113	57.0%	0.0039	0.098	4.16 0.0160	4.12 0.0180	4.10 0.0210	4.06 0.0210	3.95 0.0250	3.95 0.0250
2113	59.0%	0.0042	0.102	4.11 0.0160	4.06 0.0190	4.04 0.0210	4.01 0.0220	3.88 0.0260	3.88 0.0260
2116	52.0%	0.0047	0.119	4.22 0.0150	4.17 0.0170	4.15 0.0200	4.12 0.0200	4.01 0.0230	4.01 0.0230
2116	54.0%	0.0048	0.122	4.20 0.0150	4.16 0.0180	4.14 0.0200	4.10 0.0200	3.98 0.0240	3.98 0.0240
2116	56.0%	0.0052	0.122	4.17 0.0160	4.12 0.0180	4.10 0.0200	4.07 0.0210	3.94 0.0250	3.94 0.0250
2116	60.0%	0.0058	0.147	4.05 0.0160	4.03 0.0190	3.99 0.0210	3.86 0.0220	3.86 0.0260	3.94 0.0260
7628	45.0%	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	48.0%	0.0082	0.208	4.31 0.0140	4.27 0.0170	4.25 0.0190	4.21 0.0190	4.10 0.0220	4.10 0.0220
7628	50.0%	0.0086	0.218	4.27 0.0150	4.23 0.0170	4.21 0.0190	4.18 0.0190	4.06 0.0230	4.06 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

G - Removed core: 1x1067 2.0 mil, 1x2113 3.0 mil, 1xx3313 3.5 mil, 1x2116 4.0 mil, 1x1652 5.0 mil, 1x106/1x2113 5.3 mil, 1x1080/1x2113 6.0 mil, 2x1086 6.0 mil, 1x7628 7.5 mil, 2x1080 8.0 mil, 2x1652 10.0 mil, 2x1080/1x7628 12.0 mil, 3x1652 16.0 mil, 2x7628 16.0 mil, 1x1080/2x7628 18.0 mil, 1x2116/5x7628 39.0 mil, 42.0 mil

Added core: 1x3313 4.0 mil, 2x106 4.0 mil, 2x1080 5.5 mil, 1x1080/1x2113 6.0 mil, 1x1080/2x7628 16.0 mil, 3x1652 16.0 mil, 5x7628 39.0 mil, 6x7628 56.0 mil, 8x7628 59.0 mil, 13x7628 93.0 mil

Removed prepreg: 1067 70% RC, 1080 61% RC, 1086 63% RC, 1086 64.5% RC, 1086 67% RC, 2113 55% RC, 3313 55% RC, 1652 51% RC

Added prepreg: 106 74% RC, 1080 62% RC, 1080 64% RC, 2113 60% RC, 2116 54%RC, 2116 60% RC,

All 370HR glass is Spread Weave in both directions

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