

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

#### Core 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
1x106	72.0%	0.0020	0.051	3.37 0.0075	3.36 0.0089	3.34 0.0096	3.32 0.0101	3.30 0.0107	3.30 0.0107
1x1080	57.0%	0.0025	0.064	3.67 0.0071	3.64 0.0079	3.62 0.0089	3.61 0.0092	3.60 0.0097	3.59 0.0095
1x1080	63.0%	0.0030	0.076	3.54 0.0074	3.52 0.0082	3.50 0.0092	3.48 0.0096	3.47 0.0102	3.47 0.0101
2x106	67.0%	0.0035	0.089	3.46 0.0074	3.45 0.0083	3.42 0.0094	3.40 0.0098	3.38 0.0104	3.37 0.0102
1x3313	50.0%	0.0035	0.089	3.82 0.0068	3.79 0.0076	3.77 0.0084	3.77 0.0087	3.74 0.0092	3.74 0.0090
1x106/1x1080	59.0%	0.0040	0.102	3.63 0.0072	3.61 0.0080	3.58 0.0090	3.57 0.0093	3.55 0.0098	3.54 0.0096
1x3313	55.0%	0.0040	0.102	3.72 0.0071	3.70 0.0077	3.68 0.0087	3.66 0.0090	3.65 0.0095	3.65 0.0094
1x2116	50.0%	0.0045	0.114	3.82 0.0068	3.81 0.0075	3.80 0.0083	3.79 0.0086	3.78 0.0091	3.76 0.0089
2x1080	57.0%	0.0050	0.127	3.67 0.0071	3.64 0.0079	3.62 0.0089	3.61 0.0092	3.60 0.0097	3.59 0.0095
1x2116	54.0%	0.0050	0.127	3.72 0.0070	3.71 0.0077	3.70 0.0086	3.69 0.0089	3.67 0.0095	3.67 0.0093
1x1652	50.0%	0.0060	0.152	3.82 0.0068	3.81 0.0075	3.80 0.0083	3.79 0.0086	3.78 0.0091	3.76 0.0089
2x3313	50.0%	0.0070	0.178	3.82 0.0068	3.81 0.0075	3.80 0.0083	3.79 0.0086	3.78 0.0091	3.76 0.0089
2x3313	55.0%	0.0080	0.203	3.72 0.0071	3.70 0.0077	3.68 0.0087	3.66 0.0090	3.65 0.0095	3.65 0.0094
2x2116	54.0%	0.0100	0.254	3.72 0.0070	3.71 0.0077	3.70 0.0086	3.69 0.0089	3.67 0.0095	3.67 0.0093
2x1652	50.0%	0.0120	0.305	3.82 0.0075	3.81 0.0083	3.80 0.0086	3.79 0.0091	3.78 0.0089	3.76 0.0085
3x3313	55.0%	0.0120	0.305	3.72 0.0071	3.70 0.0077	3.68 0.0087	3.66 0.0090	3.65 0.0095	3.65 0.0094
1x1080/2x1652	49.0%	0.0140	0.356	3.86 0.0068	3.83 0.0074	3.81 0.0083	3.80 0.0086	3.78 0.0090	3.78 0.0089
3x1652	45.0%	0.0160	0.406	3.95 0.0066	3.92 0.0072	3.91 0.0080	3.90 0.0083	3.89 0.0086	3.88 0.0085

3x1652	50.0%	0.0180	0.457	3.82 0.0068	3.81 0.0075	3.80 0.0083	3.79 0.0086	3.78 0.0091	3.76 0.0089
2x2116/2x1652	47.0%	0.0200	0.508	3.89 0.0067	3.88 0.0074	3.87 0.0083	3.85 0.0085	3.84 0.0089	3.83 0.0088
2x2116/3x1652	52.0%	0.0280	0.711	3.77 0.0073	3.76 0.0080	3.76 0.0088	3.75 0.0091	3.73 0.0093	3.73 0.0093

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

#### Prepreg Data

Glass Style	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	70.0%	0.0019	0.048	3.40 0.0080	3.38 0.0090	3.36 0.0100	3.34 0.0100	3.32 0.0110	3.31 0.0110
106	75.0%	0.0023	0.058	3.30 0.0080	3.27 0.0090	3.26 0.0100	3.23 0.0110	3.22 0.0110	3.22 0.0110
1067	69.0%	0.0023	0.058	3.42 0.0080	3.40 0.0080	3.38 0.0100	3.36 0.0100	3.34 0.0110	3.33 0.0100
1067	73.0%	0.0027	0.069	3.33 0.0080	3.32 0.0090	3.30 0.0100	3.28 0.0100	3.26 0.0110	3.26 0.0110
1086	62.0%	0.0032	0.081	3.55 0.0070	3.54 0.0080	3.52 0.0090	3.50 0.0100	3.48 0.0100	3.48 0.0100
1086	65.0%	0.0035	0.089	3.50 0.0070	3.49 0.0080	3.46 0.0090	3.44 0.0100	3.42 0.0100	3.42 0.0100
1080	71.0%	0.0040	0.102	3.37 0.0080	3.36 0.0090	3.34 0.0100	3.32 0.0100	3.30 0.0110	3.30 0.0110
2113	57.5%	0.0041	0.104	3.67 0.0070	3.64 0.0080	3.62 0.0090	3.61 0.0090	3.60 0.0100	3.59 0.0100
3313	57.0%	0.0042	0.102	3.67 0.0070	3.64 0.0080	3.62 0.0090	3.61 0.0090	3.60 0.0100	3.59 0.0100
3313	59.0%	0.0044	0.107	3.63 0.0070	3.61 0.0080	3.58 0.0090	3.57 0.0090	3.55 0.0100	3.54 0.0100
2116	55.0%	0.0049	0.124	3.72 0.0070	3.70 0.0080	3.68 0.0090	3.66 0.0090	3.65 0.0100	3.65 0.0090
2116	58.0%	0.0054	0.137	3.65 0.0070	3.63 0.0080	3.60 0.0090	3.59 0.0090	3.57 0.0100	3.56 0.0100
1652	50.0%	0.0060	0.152	3.82 0.0068	3.81 0.0075	3.80 0.0083	3.79 0.0086	3.78 0.0091	3.76 0.0089

### NOTE

Revisions:

A-Original-4/17

B-Added Standard & Alternate construction-8/18

C-Removed Low Dk glass option 10/18

D-1086 71% PP changed to Std/Spread-2/19

E-Corrected RC% on 3 mil 1086 from 58% to 59% 11/22

F-Corrected RC% on 2113 prepreg to 57.5% 2/23

G-Removed core: 1x1067 2.5 mil, 1x1086 3.0 mil, 1x106/1x1080 4.3 mil, 1x106/1x1080 4.5 mil, 2x1067 5.0 mil, 2x1080 5.5 mil, 2x1086 6.0 mil, 2x1652 10.mil, 2x2116/2x1652 21.0 mil

Added core: 2x1067 4.3 mil, 2x1080 6.0 mil, 2x1652 12.0 mil

Removed Prepreg: 1080 65% RC, 2313 56% RC

Added Prepreg: 1080 65.5%RC. 1652 50% RC

All FR408HR glass is Spread Weave in both directions

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