

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

Core Data

Constructions	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
1x1080	60%	Standard	0.0025	0.064	4.06 0.016	3.98 0.019	3.96 0.020	3.93 0.021	3.81 0.025	3.80 0.025
1x1067	73%	Alt/Spread	0.0025	0.064	3.84 0.018	3.77 0.021	3.74 0.023	3.70 0.024	3.55 0.029	3.54 0.029
1x1080	66%	Standard	0.0030	0.076	3.96 0.017	3.89 0.020	3.86 0.022	3.82 0.022	3.68 0.027	3.68 0.027
1x1086	61%	Alt/Spread	0.0030	0.076	4.04 0.017	3.97 0.019	3.94 0.020	3.91 0.021	3.78 0.025	3.78 0.025
1x3313	52%	Alternate	0.0035	0.089	4.20 0.015	4.13 0.017	4.11 0.018	4.09 0.019	3.97 0.022	3.98 0.022
1x2113	54%	Standard	0.0035	0.089	4.19 0.016	4.10 0.017	4.07 0.019	4.04 0.020	3.92 0.023	3.92 0.023
2x106	68%	Standard	0.0035	0.089	3.92 0.014	3.88 0.015	3.86 0.018	3.84 0.019	3.69 0.019	3.69 0.019
1x2116	48%	Standard	0.0040	0.102	4.28 0.015	4.21 0.016	4.20 0.018	4.18 0.018	4.05 0.021	4.05 0.021
1x3313	57%	Alternate	0.0040	0.102	4.11 0.016	4.04 0.018	4.03 0.019	3.99 0.020	3.86 0.024	3.86 0.024
2x106	72%	Standard	0.0040	0.102	3.86 0.018	3.78 0.021	3.76 0.023	3.72 0.024	3.57 0.028	3.56 0.029
1x2116	53%	Standard	0.0045	0.114	4.18 0.015	4.11 0.017	4.10 0.019	4.07 0.019	3.94 0.023	3.94 0.023
1x106 / 1x1080	65%	Alternate	0.0045	0.114	3.97 0.017	3.90 0.020	3.87 0.021	3.84 0.022	3.70 0.026	3.70 0.026

Constructions	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
1x2116	57%	Standard	0.0050	0.127	4.11 0.016	4.04 0.018	4.03 0.019	3.99 0.020	3.86 0.024	3.86 0.024
2x1080	60%	Standard	0.0050	0.127	4.06 0.016	3.98 0.019	3.96 0.020	3.93 0.021	3.81 0.025	3.80 0.025
2x1067	73%	Alt/Spread	0.0050	0.127	3.84 0.018	3.77 0.021	3.74 0.023	3.70 0.024	3.55 0.029	3.54 0.029
2x1080	63%	Alternate	0.0055	0.140	4.00 0.017	3.93 0.019	3.91 0.021	3.87 0.022	3.74 0.026	3.74 0.026
1x106 / 1x2113	60%	Alternate	0.0055	0.140	4.06 0.016	3.98 0.019	3.96 0.020	3.93 0.021	3.81 0.025	3.80 0.025
1x1652	52%	Standard	0.0060	0.152	4.20 0.015	4.13 0.017	4.11 0.018	4.09 0.019	3.97 0.022	3.98 0.022
2x1080	65%	Standard	0.0060	0.152	3.97 0.017	3.90 0.020	3.87 0.021	3.84 0.022	3.70 0.026	3.70 0.026
2x1086	61%	Alt/Spread	0.0060	0.152	4.04 0.017	3.97 0.019	3.94 0.020	3.91 0.021	3.78 0.025	3.78 0.025
1x7628	43%	Alternate	0.0070	0.178	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020
2x2113	54%	Alternate	0.0070	0.178	4.19 0.016	4.10 0.017	4.07 0.019	4.04 0.020	3.92 0.023	3.92 0.023
2x3313	52%	Alternate	0.0070	0.178	4.20 0.015	4.13 0.017	4.11 0.018	4.09 0.019	3.97 0.022	3.98 0.022
1x7628	46%	Alternate	0.0075	0.191	4.32 0.014	4.27 0.016	4.24 0.017	4.21 0.018	4.10 0.020	4.10 0.021
1x7628	48%	Standard	0.0080	0.203	4.28 0.015	4.21 0.016	4.20 0.018	4.18 0.018	4.05 0.021	4.05 0.021
2x2116	48%	Standard	0.0080	0.203	4.28 0.015	4.21 0.016	4.20 0.018	4.18 0.018	4.05 0.021	4.05 0.021
2x3313	57%	Alternate	0.0080	0.203	4.11 0.016	4.04 0.018	4.03 0.019	3.99 0.020	3.86 0.024	3.86 0.024
2x2116	53%	Alternate	0.0090	0.229	4.18 0.015	4.11 0.017	4.10 0.019	4.07 0.019	3.94 0.023	3.94 0.023

Constructions	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
2x2116	57%	Standard	0.0100	0.254	4.11 0.016	4.04 0.018	4.03 0.019	3.99 0.020	3.86 0.024	3.86 0.024
2x1652	52%	Standard	0.0120	0.305	4.20 0.015	4.13 0.017	4.11 0.018	4.09 0.019	3.97 0.022	3.98 0.022
3x2116	48%	Alternate	0.0120	0.305	4.28 0.015	4.21 0.016	4.20 0.018	4.18 0.018	4.05 0.021	4.05 0.021
2x7628	43%	Standard	0.0140	0.356	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020
2x7628	47%	Standard	0.0160	0.406	4.33 0.014	4.30 0.016	4.28 0.017	4.26 0.018	4.16 0.020	4.16 0.021
2x7628 / 1x2116	44%	Standard	0.0180	0.457	4.36 0.014	4.30 0.015	4.29 0.017	4.25 0.017	4.14 0.020	4.13 0.020
3x7628	43%	Standard	0.0210	0.533	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020
3x7628	45%	Standard	0.0240	0.610	4.31 0.014	4.30 0.016	4.26 0.018	4.24 0.018	4.15 0.022	4.15 0.022
4x7628	43%	Standard	0.0280	0.711	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020
4x7628	45%	Standard	0.0310	0.787	4.31 0.014	4.30 0.016	4.26 0.018	4.24 0.018	4.15 0.022	4.15 0.022
5x7628	43%	Alternate	0.0350	0.889	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020
5x7628	45%	Alternate	0.0390	0.991	4.31 0.014	4.30 0.016	4.26 0.018	4.24 0.018	4.15 0.022	4.15 0.022
8x7628	43%	Alternate	0.0590	1.499	4.38 0.014	4.32 0.015	4.31 0.016	4.27 0.017	4.16 0.020	4.15 0.020

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
1067	71.0%	Alt/Spread	0.0023	0.058	3.88 0.018	3.84 0.021	3.82 0.023	3.79 0.024	3.65 0.028	3.65 0.028
106	77.0%	Standard	0.0025	0.064	3.79 0.019	3.71 0.022	3.69 0.024	3.65 0.025	3.50 0.030	3.49 0.030
1086	64.0%	Alt/Spread	0.0032	0.081	3.99 0.017	3.96 0.019	3.94 0.021	3.91 0.022	3.78 0.026	3.78 0.026
1080	67.0%	Standard	0.0032	0.081	3.94 0.017	3.86 0.020	3.84 0.022	3.78 0.023	3.66 0.027	3.66 0.027
1080	72.0%	Alternate	0.0039	0.099	3.86 0.018	3.78 0.021	3.76 0.023	3.72 0.024	3.57 0.028	3.56 0.029
2113	60.0%	Standard	0.0042	0.107	4.06 0.016	3.98 0.019	3.96 0.020	3.93 0.021	3.81 0.025	3.80 0.025
3313	60.0%	Alternate	0.0044	0.112	4.06 0.016	3.98 0.019	3.96 0.020	3.93 0.021	3.81 0.025	3.80 0.025
2116	57.0%	Standard	0.0051	0.130	4.11 0.016	4.04 0.018	4.03 0.019	3.99 0.020	3.86 0.024	3.86 0.024
2116	59.0%	Alternate	0.0054	0.137	4.09 0.016	4.01 0.019	4.00 0.020	3.96 0.021	3.84 0.025	3.83 0.025
1652	52.0%	Alternate	0.0060	0.152	4.20 0.015	4.13 0.017	4.11 0.018	4.09 0.019	3.97 0.022	3.98 0.023
7628	46.0%	Standard	0.0077	0.196	4.32 0.014	4.27 0.016	4.24 0.017	4.21 0.018	4.10 0.020	4.10 0.021
7628	49.0%	Alternate	0.0082	0.208	4.27 0.014	4.19 0.017	4.17 0.018	4.16 0.019	4.03 0.021	4.03 0.022

Revisions:

A - Original

B - Added Availability

C - Added 2116 59% RC

D - Addd 5x7628 39 mil construction option

"Standard or Std" - Commonly available with the best availability.

"Alternate or Alt" - Available, but not stocked with longer lead time

"Spread" - Glass is spread in both directions