

## 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	60.00%	Standard	0.0025	0.064	4.06 0.0164	3.98 0.0185	3.96 0.0201	3.93 0.021	3.81 0.0247	3.80 0.0248
1x1067	73.00%	Alt/Spread	0.0025	0.064	3.84 0.0184	3.77 0.021	3.74 0.0231	3.70 0.0241	3.55 0.0287	3.54 0.0289
1x1080	66.00%	Standard	0.003	0.076	3.96 0.0173	3.89 0.0197	3.86 0.0215	3.82 0.0224	3.68 0.0266	3.68 0.0267
1x1086	61.00%	Alt/Spread	0.003	0.076	4.04 0.0166	3.97 0.0187	3.94 0.0204	3.91 0.0213	3.78 0.025	3.78 0.0252
1x3313	52.00%	Alternate	0.0035	0.089	4.20 0.0152	4.13 0.017	4.11 0.0183	4.09 0.0191	3.97 0.0222	3.98 0.0223
1x2113	54.00%	Standard	0.0035	0.089	4.19 0.0155	4.10 0.0174	4.07 0.0188	4.04 0.0195	3.92 0.0229	3.92 0.023
2x106	68.00%	Standard	0.0035	0.089	3.92 0.0136	3.88 0.0154	3.86 0.0177	3.84 0.0185	3.69 0.019	3.69 0.019
1x2116	48.00%	Standard	0.004	0.102	4.28 0.0145	4.21 0.0162	4.20 0.0175	4.18 0.0181	4.05 0.021	4.05 0.0211
1x3313	57.00%	Alternate	0.004	0.102	4.11 0.016	4.04 0.0179	4.03 0.0194	3.99 0.0203	3.86 0.0238	3.86 0.0238
2x106	72.00%	Standard	0.004	0.102	3.86 0.0183	3.78 0.0208	3.76 0.0228	3.72 0.0238	3.57 0.0284	3.56 0.0285
1x2116	53.00%	Standard	0.0045	0.114	4.18 0.0153	4.11 0.0172	4.10 0.0185	4.07 0.0193	3.94 0.0225	3.94 0.0226
1x106 / 1x1080	65.00%	Alternate	0.0045	0.114	3.97 0.0172	3.90 0.0195	3.87 0.0213	3.84 0.0222	3.70 0.0262	3.70 0.0264

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					100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
1x2116	57.00%	Standard	0.005	0.127	4.11 0.016	4.04 0.0179	4.03 0.0194	3.99 0.0203	3.86 0.0238	3.86 0.0238
2x1080	60.00%	Standard	0.005	0.127	4.06 0.0164	3.98 0.0185	3.96 0.0201	3.93 0.021	3.81 0.0247	3.80 0.0248
2x1067	73.00%	Alt/Spread	0.005	0.127	3.84 0.0184	3.77 0.021	3.74 0.0231	3.70 0.0241	3.55 0.0287	3.54 0.0289
2x1080	63.00%	Alternate	0.0055	0.14	4.00 0.0169	3.93 0.0191	3.91 0.0208	3.87 0.0218	3.74 0.0257	3.74 0.0257
1x106 / 1x2113	60.00%	Alternate	0.0055	0.14	4.06 0.0164	3.98 0.0185	3.96 0.0201	3.93 0.021	3.81 0.0247	3.80 0.0248
1x1652	52.00%	Standard	0.006	0.152	4.20 0.0152	4.13 0.017	4.11 0.0183	4.09 0.0191	3.97 0.0222	3.98 0.0223
2x1080	65.00%	Standard	0.006	0.152	3.97 0.0172	3.90 0.0195	3.87 0.0213	3.84 0.0222	3.70 0.0262	3.70 0.0264
2x1086	61.00%	Alt/Spread	0.006	0.152	4.04 0.0166	3.97 0.0187	3.94 0.0204	3.91 0.0213	3.78 0.025	3.78 0.0252
1x7628	43.00%	Alternate	0.007	0.178	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197
2x2113	54.00%	Alternate	0.007	0.178	4.19 0.0155	4.10 0.0174	4.07 0.0188	4.04 0.0195	3.92 0.0229	3.92 0.023
2x3313	52.00%	Alternate	0.007	0.178	4.20 0.0152	4.13 0.017	4.11 0.0183	4.09 0.0191	3.97 0.0222	3.98 0.0223
1x7628	46.00%	Alternate	0.0075	0.191	4.32 0.0142	4.27 0.0158	4.24 0.017	4.21 0.0177	4.10 0.0204	4.10 0.0205
1x7628	48.00%	Standard	0.008	0.203	4.28 0.0145	4.21 0.0162	4.20 0.0175	4.18 0.0181	4.05 0.021	4.05 0.0211
2x2116	48.00%	Standard	0.008	0.203	4.28 0.0145	4.21 0.0162	4.20 0.0175	4.18 0.0181	4.05 0.021	4.05 0.0211
2x3313	57.00%	Alternate	0.008	0.203	4.11 0.016	4.04 0.0179	4.03 0.0194	3.99 0.0203	3.86 0.0238	3.86 0.0238
2x2116	53.00%	Alternate	0.009	0.229	4.18 0.0153	4.11 0.0172	4.10 0.0185	4.07 0.0193	3.94 0.0225	3.94 0.0226

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	57.00%	Standard	0.01	0.254	4.11 0.016	4.04 0.0179	4.03 0.0194	3.99 0.0203	3.86 0.0238	3.86 0.0238
2x1652	52.00%	Standard	0.012	0.305	4.20 0.0152	4.13 0.017	4.11 0.0183	4.09 0.0191	3.97 0.0222	3.98 0.0223
3x2116	48.00%	Alternate	0.012	0.305	4.28 0.0145	4.21 0.0162	4.20 0.0175	4.18 0.0181	4.05 0.021	4.05 0.0211
2x7628	43.00%	Standard	0.014	0.356	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197
2x7628	47.00%	Standard	0.016	0.406	4.33 0.0142	4.30 0.0158	4.28 0.017	4.26 0.0177	4.16 0.0204	4.16 0.0205
2x7628 / 1x2116	44.00%	Standard	0.018	0.457	4.36 0.0139	4.30 0.0154	4.29 0.0166	4.25 0.0172	4.14 0.0198	4.13 0.0199
3x7628	43.00%	Standard	0.021	0.533	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197
3x7628	45.00%	Standard	0.024	0.61	4.31 0.0142	4.30 0.016	4.26 0.0175	4.24 0.0184	4.15 0.0218	4.15 0.0218
4x7628	43.00%	Standard	0.028	0.711	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197
4x7628	45.00%	Standard	0.031	0.787	4.31 0.0142	4.30 0.016	4.26 0.0175	4.24 0.0184	4.15 0.0218	4.15 0.0218
5x7628	43.00%	Alternate	0.035	0.889	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197
5x7628	45.00%	Alternate	0.039	0.991	4.31 0.0142	4.30 0.016	4.26 0.0175	4.24 0.0184	4.15 0.0218	4.15 0.0218
8x7628	43.00%	Alternate	0.059	1.499	4.38 0.0138	4.32 0.0152	4.31 0.0164	4.27 0.017	4.16 0.0196	4.15 0.0197

## 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

## NOTE

Revisions:

A - Original

B - Added Availability

C - Added 2116 59% RC

D - Added 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