370HR

High Performance Laminate and Prepreg

Revision No : E

Last Update : September 30 , 2020

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

Core Data

Constructions	Resin Content %	Weave Type	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%	Open	Standard	0.0020	0.051	3.89 0.018	3.84 0.021	3.81 0.024	3.77 0.025	3.63 0.030	3.63 0.030
1x1067	65.0%	Open	Alternate	0.0020	0.051	3.99 0.017	3.94 0.020	3.91 0.022	3.88 0.023	3.74 0.028	3.74 0.028
1x1080	58.0%	Open	Standard	0.0025	0.064	4.11 0.016	4.06 0.018	4.04 0.021	4.00 0.022	3.88 0.026	3.88 0.026
1x1080	59.0%	Open	Standard	0.0030	0.076	4.09 0.016	4.04 0.018	4.02 0.021	3.99 0.022	3.86 0.026	3.86 0.026
1x2113	46.0%	Open	Alternate	0.0030	0.076	4.34 0.014	4.30 0.016	4.28 0.018	4.25 0.019	4.14 0.022	4.14 0.022
1x1086	60.0%	Spread	Alternate	0.0030	0.076	4.07 0.016	4.02 0.019	4.00 0.021	3.97 0.022	3.84 0.026	3.84 0.026
1x2113	54.0%	Open	Standard	0.0035	0.089	4.18 0.016	4.14 0.017	4.11 0.020	4.08 0.021	3.96 0.024	3.96 0.024
1x3313	51.0%	Open	Alternate	0.0035	0.089	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
2x106	68.0%	Open	Standard	0.0035	0.089	3.94 0.018	3.89 0.020	3.86 0.023	3.82 0.024	3.68 0.029	3.68 0.029
1x2116	47.0%	Open	Standard	0.0040	0.102	4.32 0.014	4.27 0.016	4.26 0.018	4.23 0.019	4.17 0.022	4.17 0.022
1x106/1x1080	60.0%	Open	Standard	0.0040	0.102	4.07 0.016	4.02 0.019	4.00 0.021	3.97 0.022	3.84 0.026	3.84 0.026
1x106/1x1080	62.0%	Open	Alternate	0.0043	0.109	4.04 0.017	3.99 0.019	3.97 0.022	3.93 0.023	3.80 0.027	3.80 0.027

Constructions	Resin Content %	Weave Type	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)					
						100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
1x2116	51.0%	Open	Standard	0.0045	0.114	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
2x1080	55.0%	Open	Standard	0.0045	0.114	4.16 0.016	4.12 0.018	4.10 0.020	4.05 0.021	3.99 0.024	3.99 0.025
1x2116	54.0%	Open	Standard	0.0050	0.127	4.18 0.015	4.14 0.017	4.11 0.020	4.08 0.021	3.96 0.024	3.96 0.024
1x1652	43.0%	Open	Alternate	0.0050	0.127	4.40 0.014	4.36 0.015	4.34 0.017	4.32 0.018	4.21 0.021	4.21 0.021
2x1080	58.0%	Open	Standard	0.0050	0.127	4.11 0.016	4.06 0.018	4.04 0.021	4.00 0.022	3.88 0.026	3.88 0.026
1x106/1x2113	57.0%	Open	Alternate	0.0053	0.135	4.13 0.016	4.08 0.018	4.06 0.021	4.02 0.021	3.90 0.025	3.90 0.025
1x1652	46.0%	Open	Alternate	0.0055	0.140	4.34 0.014	4.30 0.016	4.28 0.018	4.25 0.019	4.14 0.022	4.14 0.022
2x1080	59.0%	Open	Standard	0.0060	0.152	4.09 0.016	4.04 0.018	4.02 0.021	3.99 0.022	3.86 0.026	3.86 0.026
1x1652	51.0%	Open	Standard	0.0060	0.152	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
2x1086	59.0%	Spread	Alternate	0.0060	0.152	4.09 0.016	4.04 0.018	4.02 0.021	3.99 0.022	3.86 0.026	3.86 0.026
1x7628	42.0%	Open	Standard	0.0070	0.178	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020
2x2113	54.0%	Open	Standard	0.0070	0.178	4.18 0.016	4.14 0.017	4.11 0.020	4.08 0.021	3.96 0.024	3.96 0.024
2x3313	51.0%	Open	Alternate	0.0070	0.178	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
1x7628	44.0%	Open	Alternate	0.0075	0.191	4.38 0.014	4.34 0.015	4.32 0.017	4.29 0.018	4.19 0.021	4.19 0.021
2x2116	47.0%	Open	Standard	0.0080	0.203	4.32 0.014	4.27 0.016	4.26 0.018	4.23 0.019	4.17 0.022	4.17 0.022
2x3313	55.0%	Open	Alternate	0.0080	0.203	4.16 0.016	4.12 0.018	4.10 0.020	4.05 0.021	3.99 0.024	3.99 0.025

Constructions	Resin Content %	Weave Type	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)					
						100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
1x7628	46.0%	Open	Standard	0.0080	0.203	4.34 0.014	4.30 0.016	4.28 0.018	4.25 0.019	4.14 0.022	4.14 0.022
2x2116	51.0%	Open	Alternate	0.0090	0.229	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
2x2116	54.0%	Open	Standard	0.0100	0.254	4.18 0.016	4.14 0.017	4.11 0.020	4.08 0.021	3.96 0.024	3.96 0.024
2x1652	43.0%	Open	Alternate	0.0100	0.254	4.40 0.014	4.36 0.015	4.34 0.017	4.32 0.018	4.21 0.021	4.21 0.021
2x1652	51.0%	Open	Standard	0.0120	0.305	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
2x1080/1x7628	48.0%	Open	Alternate	0.0120	0.305	4.30 0.015	4.25 0.016	4.24 0.018	4.21 0.019	4.09 0.022	4.09 0.022
2x7628	42.0%	Open	Standard	0.0140	0.356	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020
2x7628	46.0%	Open	Standard	0.0160	0.406	4.34 0.014	4.30 0.016	4.28 0.018	4.25 0.019	4.14 0.022	4.14 0.022
1x1080/2x7628	41.0%	Open	Alternate	0.0180	0.457	4.44 0.013	4.40 0.014	4.39 0.017	4.36 0.017	4.26 0.020	4.26 0.020
2x7628/1x2116	45.0%	Open	Standard	0.0180	0.457	4.36 0.014	4.32 0.016	4.30 0.018	4.27 0.019	4.15 0.021	4.15 0.021
3x7628	42.0%	Open	Standard	0.0210	0.533	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020
3x7628	46.0%	Open	Standard	0.0240	0.610	4.34 0.014	4.30 0.016	4.28 0.018	4.25 0.019	4.14 0.022	4.14 0.022
4x7628	42.0%	Open	Standard	0.0280	0.711	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020
4x7628/1x1080	44.0%	Open	Standard	0.0310	0.787	4.38 0.014	4.34 0.015	4.32 0.017	4.30 0.018	4.19 0.021	4.19 0.021
5x7628	42.0%	Open	Alternate	0.0350	0.889	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020
5x7628/1x2116	43.0%	Open	Alternate	0.0390	0.991	4.40 0.014	4.36 0.015	4.34 0.017	4.34 0.018	4.24 0.020	4.24 0.020

Constructions	Resin Content %	Weave Type	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)					
						100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
6x7628	42.0%	Open	Alternate	0.0420	1.067	4.42 0.014	4.38 0.015	4.36 0.017	4.34 0.018	4.24 0.020	4.24 0.020

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High Performance Laminate and Prepreg

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Last Update : September 30 , 2020

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

Prepreg Data

Construction	Resin Content %	Weave Type	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)					
						100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
1067	70.0%	Spread	Alternate	0.0023	0.058	3.91 0.018	3.85 0.020	3.83 0.024	3.79 0.025	3.65 0.029	3.65 0.029
106	76.0%	Open	Standard	0.0024	0.061	3.81 0.019	3.75 0.022	3.73 0.025	3.69 0.026	3.54 0.031	3.54 0.031
1067	75.0%	Spread	Alternate	0.0027	0.069	3.83 0.019	3.77 0.021	3.75 0.025	3.71 0.026	3.56 0.031	3.56 0.031
1080	66.0%	Open	Standard	0.0030	0.076	3.97 0.017	3.92 0.020	3.90 0.023	3.86 0.024	3.72 0.028	3.72 0.028
1086	63.0%	Spread	Alternate	0.0031	0.079	4.02 0.017	3.95 0.019	3.91 0.022	3.91 0.023	3.78 0.027	3.78 0.027
1080	68.0%	Open	Standard	0.0032	0.081	3.94 0.018	3.89 0.020	3.86 0.023	3.82 0.024	3.68 0.029	3.68 0.029
1086	65.0%	Spread	Alternate	0.0033	0.084	3.99 0.017	3.94 0.020	3.92 0.022	3.88 0.023	3.75 0.028	3.74 0.028
1086	67.0%	Spread	Alternate	0.0035	0.089	3.96 0.018	3.90 0.020	3.88 0.023	3.84 0.024	3.70 0.028	3.70 0.028
1080	71.0%	Open	Standard	0.0036	0.091	3.89 0.018	3.83 0.021	3.81 0.024	3.77 0.025	3.63 0.030	3.63 0.030
3313	55.0%	Open	Alternate	0.0038	0.097	4.16 0.016	4.12 0.018	4.10 0.020	4.06 0.021	3.95 0.024	3.95 0.025
3313	59.0%	Open	Standard	0.0042	0.107	4.09 0.016	4.04 0.018	4.02 0.021	3.99 0.022	3.86 0.026	3.86 0.026
2113	59.0%	Open	Standard	0.0040	0.102	4.09 0.016	4.04 0.018	4.02 0.021	3.99 0.022	3.86 0.026	3.86 0.026

Construction	Resin Content %	Weave Type	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK) / Dissipation Factor (DF)					
						100 MHz	500 MHz	1 GHz	2 GHz	5 GHz	10 GHz
2116	56.0%	Open	Standard	0.0048	0.122	4.14 0.016	4.10 0.018	4.08 0.020	4.04 0.021	3.92 0.025	3.92 0.025
1652	51.0%	Open	Standard	0.0057	0.145	4.24 0.015	4.19 0.017	4.17 0.019	4.14 0.020	4.03 0.023	4.03 0.023
7628	45.0%	Open	Standard	0.0073	0.185	4.36 0.014	4.32 0.016	4.30 0.018	4.27 0.018	4.16 0.021	4.16 0.021
7628	50.0%	Open	Standard	0.0082	0.208	4.26 0.015	4.21 0.017	4.19 0.019	4.16 0.020	4.05 0.023	4.05 0.023

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
Standard - Commonly available with the best availability.
Alternate - Available, but not stocked with longer lead time