Tachyon® 100G

Ultra Low Loss Laminate and Prepreg

Revision No: M | June 23, 2026

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

Core Data

Construction	Resin Content %	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)					
				1 GHz	2 Ghz	5 Ghz	10 GHz	15 Ghz	20 Ghz
1x1067	66.50%	0.0020	0.051	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017
1x1067	72.00%	0.0025	0.064	2.98 0.0014	2.98 0.0014	2.98 0.0014	2.98 0.0014	2.98 0.0014	2.98 0.0014
1x1078	66.00%	0.0030	0.076	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018
2x1027	71.00%	0.0030	0.076	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016
1x1078	70.50%	0.0035	0.089	3.02 0.0015	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.01 0.0016
1x3313	58.50%	0.0040	0.102	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022
2x1067	66.50%	0.0040	0.102	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017
2x1067	70.00%	0.0045	0.114	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016
1x3313	66.00%	0.0050	0.127	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018
1x2116	57.00%	0.0050	0.127	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022
2x1067	72.50%	0.0050	0.127	2.98 0.0014	2.98 0.0014	2.98 0.0015	2.98 0.0015	2.98 0.0015	2.98 0.0015
2x1078	60.00%	0.0050	0.127	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021
2x1078	63.00%	0.0055	0.140	3.15 0.0019	3.15 0.0019	3.15 0.0019	3.15 0.0019	3.15 0.0019	3.15 0.0019
2x1078	66.00%	0.0060	0.152	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018
2x1078	70.50%	0.0070	0.178	3.02 0.0015	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.01 0.0016
2x3313	58.50%	0.0080	0.203	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022
3x1078	68.50%	0.0100	0.254	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016
2x2116	57.00%	0.0100	0.254	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022
3x3313	58.50%	0.0120	0.305	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022
3x3313	62.50%	0.0140	0.356	3.15 0.0020	3.15 0.0020	3.15 0.0020	3.15 0.0020	3.15 0.0020	3.15 0.0020

4x2116	57.00%	0.0200	0.508	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022	3.25 0.0022
7x3313	58.50%	0.0280	0.711	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022	3.24 0.0022

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

Prepreg Data

Glass Style	Resin Content %	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)					
				1 GHz	2 Ghz	5 Ghz	10 GHz	15 Ghz	20 Ghz
1027	71.00%	0.0015	0.038	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016	3.03 0.0016
1035	69.00%	0.0020	0.051	3.06 0.0017	3.06 0.0017	3.06 0.0017	3.06 0.0017	3.06 0.0017	3.06 0.0017
1067	70.00%	0.0022	0.056	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017	3.05 0.0017
106	76.00%	0.0023	0.058	2.95 0.0013	2.95 0.0013	2.95 0.0014	2.95 0.0014	2.95 0.0014	2.95 0.0014
1067	71.50%	0.0024	0.061	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016
1035	75.00%	0.0026	0.066	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014
1067	74.00%	0.0026	0.066	2.98 0.0014	2.98 0.0014	2.98 0.0015	2.98 0.0015	2.98 0.0015	2.98 0.0015
1067	76.50%	0.0029	0.074	2.94 0.0013	2.94 0.0013	2.94 0.0013	2.94 0.0013	2.94 0.0013	2.94 0.0013
1078	67.50%	0.0031	0.079	3.09 0.0018	3.09 0.0018	3.09 0.0018	3.09 0.0018	3.09 0.0018	3.09 0.0018
1078	70.50%	0.0035	0.089	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016	3.04 0.0016
1078	72.00%	0.0037	0.094	3.02 0.0015	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.01 0.0016
1080	72.00%	0.0038	0.097	3.02 0.0015	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.02 0.0016	3.01 0.0016
1078	75.00%	0.0042	0.107	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014
1080	75.00%	0.0043	0.109	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014	2.97 0.0014
1078	78.00%	0.0046	0.117	2.92 0.0014	2.92 0.0014	2.92 0.0014	2.92 0.0014	2.92 0.0014	2.92 0.0014
3313	63.50%	0.0046	0.117	3.16 0.0020	3.16 0.0020	3.16 0.0020	3.16 0.0020	3.16 0.0020	3.16 0.0020
3313	66.50%	0.0051	0.129	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018	3.11 0.0018
3313	69.50%	0.0055	0.140	3.05 0.0019	3.05 0.0019	3.05 0.0019	3.05 0.0019	3.05 0.0019	3.05 0.0019
2116	62.00%	0.0058	0.147	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021	3.19 0.0021
2116	65.00%	0.0064	0.163	3.14 0.0019	3.14 0.0019	3.14 0.0019	3.14 0.0019	3.14 0.0019	3.14 0.0019

Tachyon® 100G

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NOTE

Revisions:
A - Original-4/17
B - Adjusted prepreg thickness values-6/18
C - Added Standard & Alternate construction-8/18;
D - Added 9 mil core 5/19
E - Optimized construction set 6/19
F - Clarified Weave and Offering, eliminated low Frequency data 1/20
G - Removed Weave Type 9/20
H - Removed Core: 2.5 mil 1x1035, 4.0 2x1035, 5.0 mil 1x1078, 10 mil 2x3313
I - Added Prepreg: 3313 62% RC, 3313 69.5% RC 1/25
Added Core: 2.5 mil 1x1067, 5.0 mil 1x2116, 5.5 mil 2x1078, 10.0 mil 2x2116, 28.0 mil 7x3313
J - Added Prepreg, 1078 78% RC, removed core 9.0mil
K - Removed Prepreg 3316 62%
L - Added 1027 core and prepreg offering 7/25
M - Corrected Df values laminate 1x2116 and prepreg 1078 78%
All Tachyon 100G glass is Spread Weave in both directions

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