TerraGreen® 400G

Halogen-free, Extremely Low Loss Material

Revision No: C | July 24, 2023

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

Core Data

Construction	Resin Content %	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)				
					10 GHz	15 Ghz	20 Ghz	30 Ghz	30 Ghz D
1x1035	65.0%	Standard	0.0020	0.051	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
1x1035	72.0%	Standard	0.0025	0.064	3.11 0.0017	3.10 0.0017	3.09 0.0017	3.08 0.0017	2.88 0.0017
1x1078	65.0%	Standard	0.0030	0.076	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
1x1027/1x1035	67.0%	Alternate	0.0035	0.089	3.16 0.0017	3.15 0.0017	3.14 0.0017	3.13 0.0017	2.93 0.0017
1x1078	69.0%	Standard	0.0035	0.089	3.14 0.0017	3.13 0.0017	3.12 0.0017	3.11 0.0017	2.91 0.0017
1x3313	57.0%	Standard	0.0040	0.102	3.26 0.0018	3.25 0.0018	3.24 0.0018	3.23 0.0018	3.03 0.0018
2x1035	65.0%	Standard	0.0040	0.102	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
1x1035/1x1067	65.0%	Alternate	0.0040	0.102	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
1x1078	72.5%	Standard	0.0040	0.102	3.11 0.0017	3.10 0.0017	3.09 0.0017	3.08 0.0017	2.88 0.0017
1x3313	60.5%	Standard	0.0045	0.114	3.22 0.0018	3.21 0.0018	3.20 0.0018	3.19 0.0018	2.99 0.0018
2x1035	69.0%	Standard	0.0045	0.114	3.14 0.0017	3.13 0.0017	3.12 0.0017	3.11 0.0017	2.91 0.0017
1x1035/1x1067	69.0%	Alternate	0.0045	0.114	3.14 0.0017	3.13 0.0017	3.12 0.0017	3.11 0.0017	2.91 0.0017
1x3313	64.5%	Standard	0.0050	0.127	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
2x1035	72.0%	Standard	0.0050	0.127	3.11 0.0017	3.10 0.0017	3.09 0.0017	3.08 0.0017	2.88 0.0017
1x1035/1x1067	72.0%	Alternate	0.0050	0.127	3.11 0.0017	3.10 0.0017	3.09 0.0017	3.08 0.0017	2.88 0.0017
2x1078	65.0%	Standard	0.0060	0.152	3.18 0.0017	3.17 0.0017	3.16 0.0017	3.15 0.0017	2.95 0.0017
2x1078	69.0%	Standard	0.0070	0.178	3.14 0.0017	3.13 0.0017	3.12 0.0017	3.11 0.0017	2.91 0.0017
2x3313	57.0%	Standard	0.0080	0.203	3.26 0.0018	3.25 0.0018	3.24 0.0018	3.23 0.0018	3.03 0.0018

3x1078	67.8%	Standard	0.0100	0.254	3.17 0.0017	3.16 0.0017	3.15 0.0017	3.14 0.0017	2.94 0.0017

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

Prepreg Data

Glass	Resin Content %	Offering	Thickness (inch)	Thickness (mm)	Dielectric Constant (DK)/ Dissipation Factor (DF)			
					10 GHz	15 GHz	20 GHz	30 GHz
1035	65.0%	Standard	0.0020	0.051	3.18 0.0017	3.18 0.0017	3.18 0.0017	3.18 0.0017
1035	72.0%	Standard	0.0025	0.064	3.11 0.0017	3.11 0.0017	3.11 0.0017	3.11 0.0017
1035	76.5%	Standard	0.0030	0.076	3.08 0.0017	3.08 0.0017	3.08 0.0017	3.08 0.0017
1078	69.0%	Standard	0.0035	0.089	3.14 0.0017	3.14 0.0017	3.14 0.0017	3.14 0.0017
1078	72.5%	Standard	0.0040	0.102	3.11 0.0017	3.11 0.0017	3.11 0.0017	3.11 0.0017
1078	74.0%	Standard	0.0043	0.109	3.10 0.0017	3.10 0.0017	3.10 0.0017	3.10 0.0017
3313	60.5%	Standard	0.0045	0.114	3.22 0.0018	3.22 0.0018	3.22 0.0018	3.22 0.0018
3313	64.5%	Standard	0.0051	0.130	3.18 0.0017	3.18 0.0017	3.18 0.0017	3.18 0.0017
3313	67.5%	Standard	0.0056	0.142	3.15 0.0017	3.15 0.0017	3.15 0.0017	3.15 0.0017
2116	60.5%	Standard	0.0058	0.147	3.22 0.0018	3.22 0.0018	3.22 0.0018	3.22 0.0018
2116	63.5%	Standard	0.0064	0.163	3.19 0.0017	3.19 0.0017	3.19 0.0017	3.19 0.0017

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NOTE

Revisions:
A-Original-3/23
B-Corrected target thickness and RC% values for Prepreg and Laminate -6/23
C- Adjusted Dk values based on test data - 7/23
All TerraGreen 400G glass is Spread Weave in both directions
Standard-Commonly available
Alternate-Available, but not stocked
The Dk referred to as 30GHz D is extracted based on VNA measurements of coupled differential lines