



Tachyon[®] 100G - Typical Values

Property		Typical Value	Units Metric (English)	Test Method IPC-TM-650 (or as noted)
Glass Transition Temperature (Tg) by DSC		200	°C	2.4.25C
Glass Transition Temperature (Tg) by DMA		220	°C	2.4.24.4
Glass Transition Temperature (Tg) by TMA		180	°C	2.4.24C
Decomposition Temperature (Td) by TGA @ 5% weight loss		360	°C	2.4.24.6
Time to Delaminate by TMA (Copper removed)	A. T260	>60	Minutes	2.4.24.1
	B. T288	>60		
	C. T300	>20		
Z-Axis CTE	A. Pre-Tg	45	ppm/°C	2.4.24C
	B. Post-Tg	250	ppm/°C	
	C. 50 to 260°C, (Total Expansion)	2.5	%	
X/Y-Axis CTE	Pre-Tg	15	ppm/°C	2.4.24C
Thermal Conductivity		0.42	W/mK	ASTM E1952
Thermal Stress 10 sec @ 288°C (550.4°F)	A. Unetched	Pass	Pass Visual	2.4.13.1
	B. Etched			
Dk, Permittivity	A. @ 2 GHz	3.04	—	2.5.5.5
	B. @ 5 GHz	3.02		
	C. @ 10 GHz	3.02		
Df, Loss Tangent	A. @ 2 GHz	0.0021	—	2.5.5.5
	B. @ 5 GHz			
	C. @ 10 GHz			
Volume Resistivity	C-96/35/90	1.33x10 ⁷	M?-cm	2.5.17.1
Surface Resistivity	C-96/35/90	1.33x10 ⁵	M?	2.5.17.1
Dielectric Breakdown		60	kV	2.5.6B
Arc Resistance		125	Seconds	2.5.1B
Electric Strength (Laminate & laminated prepreg)		60 (1500)	kV/mm (V/mil)	2.5.6.2A
Comparative Tracking Index (CTI)		3	Class (Volts)	UL 746A ASTM D3638
Peel Strength	A. Low profile copper foil and very low profile copper foil all copper foil >17 ?m [0.669 mil]	0.79 (4.5)	N/mm (lb/inch)	2.4.8C
	B. Standard profile copper	0.96 (5.5)		2.4.8.2A
	1. After thermal stress			

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Property		Typical Value	Units Metric (English)	Test Method IPC-TM-650 (or as noted)
Flexural Strength	A. Length direction	44.0	ksi	2.4.4B
	B. Cross direction	41.0		
Tensile Strength	A. Length direction	30.0	ksi	ASTM D3039
	B. Cross direction	25.0		
Young's Modulus	A. Length direction	2,551	ksi	ASTM D790-15e2
	B. Cross direction	2,417		
Taylor's Modulus	A. Length direction	2,264	ksi	ASTM D790-15e2
	B. Cross direction	2,197		
Poisson's Ratio	A. Length direction	0.165	—	ASTM D3039
	B. Cross direction	0.156		
Moisture Absorption		0.1	%	2.6.2.1A
Flammability (Laminate & laminated prepreg)		V-0	Rating	UL 94
Relative Thermal Index (RTI)		130	°C	UL 796

The data, while believed to be accurate and based on analytical methods considered to be reliable, is for information purposes only. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.