

tec-speed 30.0 - VT-6710

UL Approval: E214381 Version: 24/04/2025

Laminate

General Information

- > Ceramic-filled PTFE composites
- > Higher Dk (10.7) with low Df (0.0022)
- > Low CTE for x, y and z axis
- > Low moisture absorption
- > Tight Dk and thickness tolerance control

Application

- > Military Radar
- > Power Amplifiers
- > Patch Antenna
- > Satellite Communications

Availability

Laminate	VT-6710
Dielectric Thickness	0.005" (0.127mm) 0.010" (0.254mm) 0.020" (0.508mm) 0.025" (0.625mm) 0.050" (1.270mm) 0.075" (1.905mm) 0.100" (2.540mm)
Available Copper Type	HTE, RTF
Copper Thickness	Hoz, 1oz and 2oz
Panel Size	10"*10" (254x254mm) 10"*20" (254x508mm) 18"*12" (457x305mm) *20"*20" (508x508mm) - non standard *18"*24" (457x610mm) - non standard *note: the above two panel sizes are available in >.025" only

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Storage Condition & Shelf Life

Properties		Laminate
Storage Condition	Temperature	Room
	Relative humidity	/
Shelf Life		24 months (airproof)

Note: The prepreg exceeding shelf life should be retested.

Properties Sheet IPC-4103 /08

Properties	Test Method	Units	VT-6710
Electrical Properties			
Dielectric Constant @10GHz	IPC-TM-650 2.5.5.5 Clamped Stripline	-	10.20 ± 0.25
Design Dk	Differential phase method 8~40GHz	-	10.70
Dissipation Factor @10GHz	IPC-TM-650 2.5.5.5	-	0.0022
Thermal Coefficient of Dk	IPC-TM-650 2.5.5.5 -50~150 °C	-	-420
Volume Resistivity	IPC-TM-650 2.4.24	MΩ-cm	5*10 ⁶
Surface Resistivity	IPC-TM-650 2.4.24	MΩ	5*10 ⁵
Thermal Properties			
Td	ASTM D3850	°C	520
Thermal Conductivity	ASTM D5470	W/mK	0.87
x, y-axis CTE	IPC-TM-650 2.4.24.5	ppm/°C	24/24
z-axis CTE	IPC-TM-650 2.4.24	ppm/°C	47
Specific Heat	Calculated	J/g/K	1.00
Mechanical Properties			
Peel Strength (1oz) After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	12.5 (2.19)
Tensile Modulus	ASTM D638	MPa	932 / 560
Physical Properties			
Density	ASTM D792	gm/m ³	3.1
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.01
Flammability	UL-94	Rating	V-0
Lead free process compatible	-	-	YES
IPC-4103	-	-	/08

All test data provided are preliminary typical values and not intended to be specification values.

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