tec-speed 30.0 VT-6706

UL Approval: E214381 Version: PRELIM

High-Frequency Laminate

General Information

- Ceramic-filled PTFE Composites
- High Dk and Low Loss
- Tight Dk and Thickness Control
- Low CTE
- Low Moisture Absorption

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Application

- Military and Space Radar
- Power Amplifier
- Patch Antenna
- Satellite Communication

Availability

- Dielectric Thickness: 0.025" (0.635mm), 0.050'' (1.270mm), 0.075'' (1.905mm)
- Panel size: 10"*10" (254*254mm), 20"*10" (508*254mm), 18"*12" (457*305mm), 18"*24" (457*610mm)
- Copper Foil: Hoz & 1oz, HTE & RTF & Resistive Foil
- Metal Base: Al 5052 & 6061, 1~4mm, Cu C1100, 1~3mm

Remark: Additional options maybe available upon request.

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Properties

Properties	Test Method	Units	Conditions	Typical Value
Electrical Properties				
Dk	IPC-TM-650 2.5.5.5	-	10GHz	6.15±0.15
Design Dk	Differential Phase Length Method	-	8~40GHz	6.45
Thermal Coefficient of Dk	IPC-TM-650 2.5.5.5	ppm/°C	10GHz	-400
Df	IPC-TM-650 2.5.5.5	-	10GHz	0.0025
Surface Resistivity	IPC-TM-650 2.5.17.1	MΩ	After Moisture	4.00E+07
Volume Resistivity	IPC-TM-650 2.5.17.1	MΩ-cm	After Moisture	7.00E+07
Thermal Properties				
Td (@5% weight loss)	ASTM D3850	°C	2 hrs @105°C	520
Thermal Conductivity	ASTM D5470	W/mK	As Received	0.70
X/Y-axis CTE	IPC-TM-650 2.4.24.5	ppm/°C	0~100 °C	45/32
Z-axis CTE	IPC-TM-650 2.4.24	ppm/°C	0~100 °C	50
Mechanical Properties				
Thermal stress @288°C	IPC-TM-650 2.4.13.1	Second	10sec/cycle	>300
Peel Strength (1oz)	IPC-TM-650 2.4.8	lb/in (N/mm)	After thermal stress	14.5 (2.54)
Tensile Modulus X/Y-axis	ASTM D638	MPa	As Received	1350/1220
Physical Properties				
Density	ASTM D792	g/m^3	As Received	2.7
Moisture Absorption	IPC-TM-650 2.6.2.1	%	D48/50	0.05
Flammability	UL-94	-	-	V-0
Lead free process compatible	-	-	-	YES
IPC-4103	-	-	-	/07

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

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.