

tec-speed 20.0 - VTM1000i

Hydrocarbon Ceramic based Laminate

UL Approval: E214381 Version: Prelim 1

General Information

- > Hydrocarbon & ceramic based laminate
- > High Dk (9.8) and Low Df (0.0023)
- > Excellent thermal reliability

Application

- > Satellite Communication Systems
- > Power Amplifiers
- > Global Positioning System Antennas
- > Filters and Couplers
- > RF and Microwave Circuitry

Availability

Core Thickness	0.015", 0.020", 0.025", 0.030", 0.050", 0.060", 0.075", 0.100", 0.125", and 0.150"
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Default Copper Type	Copper Thickness
HVLP	Hoz and 1oz
HTE	2oz

* Additional copper types are available upon request.

- > Copper base or aluminum base laminate is available.

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.

Storage Condition

Properties	Laminate	
Storage Condition	Temperature	Room
	Relative humidity	/

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Properties Sheet

Properties		Test Method	Units	Typical Value
Electrical Properties				
Dielectric Constant	@ 10GHz	IPC-TM-650 2.5.5.5 Clamped Stripline	-	9.8 ± 0.245
Design Dk	8~40GHz	Differential phase length method	-	9.9
Dissipation Factor	@ 10GHz	IPC-TM-650 2.5.5.13 Clamped Stripline	-	0.0023
TcDk	After Moisture Resistance	IPC-TM-650 2.5.5.5 Clamped Stripline	ppm/°C	-40
Thermal Properties				
Td		ASTM D3850	°C	426
Z-CTE	50~140°C	IPC-TM-650 2.4.24	ppm/°C	25
x, y-CTE	50~140°C	IPC-TM-650 2.4.24	ppm/°C	24
Thermal Stress	@ 288°C	IPC-TM-650 2.4.13.1	Second	>600
Thermal Conductivity		ASTM D5470	W/mK	1.00
Mechanical Properties				
Peel Strength (1oz)	As received	IPC-TM-650 2.4.8	lb/in (N/mm)	5.0 (0.88)
	After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	5.0 (0.88)
Flexural Modulus		ASTM D790	Mpsi	2.05
Physical Properties				
Moisture Absorption		ASTM D547	%	0.15
Lead free process compatible		-	-	YES

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

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