

tec-speed 20.0 - VT-870 H1000

UL Approval: E214381 Version: 22/11/2023

Hydrocarbon Ceramic based Laminate

General Information

- > Hi-Tg ceramic filled hydrocarbon laminate
- > High Dk (10.2) and Low Df (0.003)
- > Excellent thermal reliability

Application

- > Cellular base station antennas and power amplifiers
- > Patch antennas
- > LNB (Low Noise Block) for broadcast satellites
- > RF Identification Tags (RFID)

Availability

Core Thickness	0.020", 0.025", 0.050" and 0.100"	
Default Copper Type	Copper Thickness	Remark
HTE	Hoz, 1oz and 2oz	-
HVLP	Hoz and 1oz	PIM Sensitive Application & Lower insertion loss application

Storage Condition

Properties	Laminate	
Storage Condition	Temperature	Room
	Relative humidity	/

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.

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Properties Sheet

Properties		Test Method	Units	Typical Value
Thermal Properties				
Tg	TMA	IPC-TM-650 2.4.24	°C	280
Td		ASTM D3850	°C	410
T288		IPC-TM-650 2.4.24.1	Minute	>120
X Y-CTE	50~140°C	IPC-TM-650 2.4.24	ppm/°C	8, 9
Z-CTE	50~140°C	IPC-TM-650 2.4.24	ppm/°C	31
Thermal Stress	@ 288°C	IPC-TM-650 2.4.13.1	Second	>600
Thermal Conductivity		ASTM D5470	W/mK	0.85
Electrical Properties				
Dielectric Constant	@ 10GHz	IPC-TM-650 2.5.5.5 Clamped Stripline	-	10.2 ± 0.25
Design Dk	8~40GHz	Differential phase length method	-	10.7
TCDk	After Moisture Resistance	IPC-TM-650 2.5.5.5 Clamped Stripline	ppm/°C	+50
Dissipation Factor	@ 10GHz	IPC-TM-650 2.5.5.13 Clamped Stripline	-	0.003
PIM		43dBm, 1900MHz	dBc	-160
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)
Physical Properties				
Flammability		UL-94	Rating	V-0

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

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