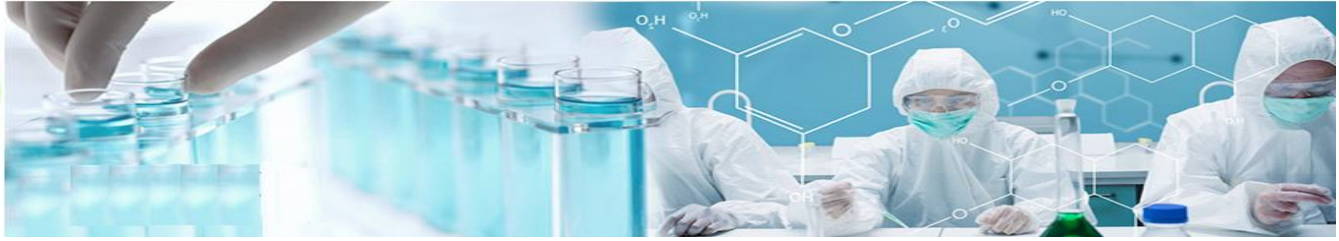

FSD350PP

High Speed Advanced Multifunctional Epoxy Hydrocarbon, Ultra Low Dk/Df Laminate & Prepreg

The FSD-PP is an advanced low CTE, high Speed multifunctional epoxy laminate. This material is designed for not only in standard multilayer PWB, but also for high electrical performance (ultralow Dk and Df), lead-free applications.

Key Features ==========

Advanced High Tg Resin Technology

Industrial standard material with high T Speed Advanced Multifunctional Epoxy and *excellent electrical properties of dielectric constant (Dk) and loss tangent(Df) properties.*

Ultra Low Dk and Low Df

Ultra low Dk=3.5& low Df=0.0020 ∽0.0037 and keep equivalent electrical properties form 1MHz to 10GHz. It contributes to designer for easier signal simulation.

Excellent Signal Integrity

Ultra low Dk and low Df provide high electrical performance device that need faster signal propagation and low signal loss for high frequency applications even more than 20GHz.

Lead-Free Assembly Compatible

RoHS compliant and *suitable for high thermal reliability needs, and Lead free assemblies with a maximum reflow temperature of 260℃.*

Friendly Processing and CAF Resistance

Friendly PCB process like high Tg FSD-PP. Low CTE and excellent CAF resistance even after multiple lead-free assembly. Provide long-term reliability for both RF and digital applications.

Available in Variety of Constructions

Available in a various of constructions, copper weights and glass styles, including standard(HTE), RTF and VLP copper foil.

Applications

Backplanes

Multilayer PCB

Line Card

High Speed Servers

High Speed Storage Networks

Routing and Switching Systems

Antenna

RF and Wireless Communication

Industrial Approval

UL 94 V-0

IPC-4101C Spec /99/101/126

RoHS Compliant

一.Nominal pressed thickness value tested under 100% copper retention. Multiply ply-up design is recommend, especially for thickness of the copper foil below 1 oz with thin prepreg.

富仕德编码	Laminated Prepreg		按照 1oz 双面填铜计算				
	Prepreq Type	Thickness (mil)	残铜率 90%	残铜率 80%	残铜率 70%	残铜率 60%	残铜率 50%
FSD350PP	1080	4.0±0.1	3.96	3.94	3.93	-0.8	-0.4

富仕德编码	Laminated Prepreg		DK			DF		
	Prepreg Type	Thicknees(mil)	1GHz	5GHz	10GHz	1GHz	5GHz	10GHz
FSD350PP	1080	4	3.48	3.5	3.5	0.0020	0.0025	0.0027

二. Press Cycle Parameters

Temp (℃)	time (min)	Pressure (PSI)	time (min)
145	1	120	1
160	5	300	5
180	5	500	5
220	10	600	10
220	20	620	20
220	90	620	90
160	15	300	15
60	35	280	35

Item	Recommendations
Vacuum	Vacuum lower than 40mmHg before applying heat andpressure
Platen Temperature	190~220°C depends on the difference between platen & product temperature
Heat up rate	2.8~3.5°C/min (measured product temperature from 70°C~140°C)
Pressure	Kiss pressure: 8~20kgf/cm2 Full pressure: 40~45kgf/cm2 (Ramp to full pressure when product temperature is between 80~90°C)
Cure time	90min, @190°C – product temperature
Cool down rate	<3°C/min

Above is the actual customer usage parameters, it is recommended to use pressing film use two symmetrical production as far as possible (our hf film can be in accordance with the pressing LOWFLOW film program), the high pressure of 40-45 kg/CM3, set the temperature of 220 ℃, the curing temperature 200 ℃ for 50 minutes, the heating rate more than 2.5 ℃ / min.

三. High-Frequency Microwave Clad Substrate Quality Test Report And Certifacte

LotNO.:	Test Item	Unit	Specificantion	Test Value	Judgment
1	Visual	-----	IPC-4101 3.8.3.2	OK	pass
2	Board Thickness	mil	4.1 +/- 0.06	OK	pass
3	Volatile Content	%	≦ 0.05	OK	pass

Note: 1.Test 5 points for average

2.We certify the above material conforming to the specification of IPC-4101C,and test method follows IPC-TM-650 strictly.

四. Storage for Prepreg：

6 months shelf-life at 25°C/65% R.H. is recommended,but 23°C/50% R.H. follows IPC recommendation is preferableStore at lower temp. for extended shelf-life Avoid high humidity environment as it causes the deterioration of properties Open packaging prior to application and repack unused materials to minimize water absorption，Note: The prepreg exceeding shelf life should be retested.

Properties Prepreg	
Storage Condition	Temperature ≤5 ℃ Room
Shelf Life	6 months