VT-47 HP PP

UL Approval: E214381 Version: 12/2024

No Flow / Low Flow Prepreg

A generation of phenolic cured Low and No Flow products using Ventec's VT-47 HP resin technology with optimized resin rheology designed to enhance bond strength, specifically designed for lead free assembly processes. It has good bonding and thermal performance in heatsink bonding and rigid-flex board applications, and offers controlled flow ranges and constancy through the lamination process.

General Information

- High Tg & High Td
- Lead Free Compatible
- IPC-4101E 126

Availability

Product	Type	Glass Type	Resin Content	Flow Range (mil)	Pressed Thickness (mm)
VT-47 HP LFNF PP	1067NF	1067	61%	10~50	0.045
	1078NF	1078	63%	10~50	0.075
	1067LF	1067	66%	60~120	0.051
	1078LF	1078	64%	60~120	0.076

* Measured by micrometer "NFLF" ---- No Flow/Low Flow PP

1) Press Temperature ---- 171°C
2) 3plys per pressing
3) Press Pressure ---- 200psi Built per IPC-TM-6502.3.17.2

Storage Condition

Properties		Prepreg	
Storage Condition	Temperature	Below 23°C (73°F)	Below 5°C (41°F)
	Relative humidity	Below 55%	/
Shelf Life		3 months	6 months

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Properties Sheet

Properties		Test Method	Units	VT-47 HP
Tg	TMA	IPC-TM-650 2.4.24	°C	170
Td	TGA	ASTM D3850	°C	366
Electrical Strength		-	KV/mm	54
Peel Strength	1oz Cu	IPC-TM-650 2.4.8	lb/in	9-10
	CVL	IPC-TM-650 2.4.8	lb/in	6
Moisture Absorption	D24/23	IPC-TM-650 2.6.21	%	0.10
	After PCT	1atm.,121°C,1hour	%	0.12
XY-axis CTE	30-125°C	IPC-TM-650 2.4.24	ppm/°C	12-14
Z-axis CTE	Before Tg	IPC-TM-650 2.4.24	ppm/°C	60
	After Tg	IPC-TM-650 2.4.24	ppm/°C	290
Thermal Stress	Solder Dip 288°C	-	Second	>300
Breakdown Voltage	D48/50+D0.5/23	IPC-TM-650 2.5.6	KV	>60
Arc Resistance	D48/50+D0.5/23	IPC-TM-650 2.5.1	Second	120
Dk (RC 60% @ 1GHz)	C24/23/50	-	–	3.88
Df (RC 60% @ 1GHz)	C24/23/50	-	–	0.016
Flammability	As Received	UL-94	Rating	V-0

All test data provided are 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.

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Press Condition

1. Heating rate (Rate of Rise) of material [Material Temperature]: Programmable Press: 3.0-5.0˚C/min (5~10˚F/min)
2. Curing Temperature & Time: >60min at more than 185ºC [Material Temperature]
3. Pressure on Materials: Start with 100psi, Full pressure: 250~450psi
4. Vacuuming should be continued until over 140ºC (284ºF) [Material Temperature]
5. Cold Press condition: Keep Plate @ Room Temperature by water; Pressure:100psi; Keep Time: 60minutes

Contact Ventec technical service to discuss the specific condition.